FINAL CROP REPORT, 1902—CONTINUED.

COUNTIES.	CORN. Yield per acre.	CORN. Total yield, bushels.	WINTER WHEAT. Yield per acre.	WINTER WHEAT. Total yield, bushels.	SPRING WHEAT. Yield per acre.	SPRING WHEAT. Total yield, bushels.	OATS. Yield per acre.	OATS. Total yield, bushels.	RYE. Yield per acre.	RYE. Total yield, bushels.
Shelby	30	3,274,500		......	12	398,520	27	580,500	15	1,050
Sioux	35	4,204,200	..	.	10	802,400	33	1,161,900		......
Story	32	3,330,320	..	......	17	75,300	32	1,251,200	17	8,670
Tama	31	3,352,310		......	12	123,600	32	1,027,840	12	1,320
Taylor	33	2,711,910	15	38,850	13	5,330	25	453,000	13	7,540
Union	38	2,272,040	15	1,050	12	7,310	35	524,550	16	640
Van Buren	43	2,158,170	18	31,120		......	40	730,000	20	31,600
Wapello	35	1,965,250	20	14,600	23	2,210	29	493,580	16	18,720
Warren	38	3,442,400	19	1,710	13	90,220	28	612,990	15	4,750
Washington	40	3,914,800	20	15,600	16	5,200	40	1,124,800	20	23,200
Wayne	40	2,843,000	16	1,440	15	1,050	35	388,550	18	9,360
Webster	38	3,850,020		......	14	146,850	33	1,521,630	14	2,160
Winnebago	30	1,400,100		......	12	224,520	40	916,400		......
Winneshiek	33	2,224,870	16	2,400	15	114,300	32	1,963,800	20	5,820
Woodbury	33	4,749,630	...	...	10	587,800	30	680,750	15	2,100
Worth	23	891,240	...	......	9	50,310	35	1,940,800	18	3,000
Wright	25	1,976,500	....	......	8	84,320	30	1,303,500	15	1,950
Total for state		290,950,230	...	832,045	...	12,680,800		92,937,980	...	832,830
Average per acre	34	....	18	......	13	......	31	......	17	.

COUNTIES.	BARLEY. Yield per acre.	BARLEY. Total yield, bushels.	FLAX SEED. Yield per acre.	FLAX SEED. Total yield, bushels.	POTATOES. Yield per acre.	POTATOES. Total yield, bushels.	TAME HAY. Yield per acre.	TAME HAY. Total yield, tons.	WILD HAY. Yield per acre.	WILD HAY. Total yield, tons.
Shelby	23	60,030			72	115,920	1.8	52,530	1.2	12,900
Sioux	24	725,000	10	6,850	90	132,300	1.5	16,200	1.5	27,340
Story	25	20,250	..	......	8	90,100	2.3	18,750	1.2	6,400
Tama	24	531,360		......	93	147,870	1.7	49,670	1.7	9,300
Taylor	24	27,120	..	....	130	141,600	2.4	81,100	2.0	3,140
Union	25	7,250	...	.	110	123,200	1.8	75,280	1.2	1,560
Van Buren		......	..	.	150	73,500	1.5	52,200	1.0	1,925
Wapello	22	7,700	...	......	90	120,600	1.8	55,600	1.0	310
Warren	20	2,800	...	.	85	104,550	2.0	68,650	1.3	420
Washington	32	116,160	...	....	87	73,080	1.8	57,000	1.0	200
Wayne	...	......		......	15	74,750	1.0	94,560	1.2	720
Webster	22	45,980	..	.	80	105,600	1.2	18,350	1.0	40,220
Winnebago	20	81,400	9	27,000	40	70,200	1.5	17,110	1.2	33,120
Winneshiek	27	201,330	10	72,300	8	107,200	1.8	71,280	1.5	17,150
Woodbury	28	64,400	11	5,940	120	177,600	1.5	17,440	1.2	14,210
Worth	26	229,580	10	104,100	58	87,030	2.0	34,900	1.5	16,240
Wright	25	115,150	9	17,170	57	59,850	2.0	30,510	1.6	27,110
Total for state	..	15,380,900	...	755,350	...	12,051,670	.	1,430,940	...	1,292,830
Average per acre	25	....	8	.	9	......	1.8	....	1.3	....

APPENDIX.

IOWA CLIMATE AND CROPS.

CLIMATIC DATA COMPILED FROM ALL AVAILABLE RECORDS, AND STATISTICS OF THE SOIL PRODUCTS OF THE STATE.

PREFATORY NOTES.

In response to a constantly increasing public demand for climatic data and statistics of farm products, the following pages have been appended to this report. In this age of intensive scientific investigation and far-reaching statistical inquiry the matter herein presented is of vital interest to students of climatology, producers and consumers of foodstuffs, and men of affairs who direct the operations of our complex industrial and commercial system.

Meteorological records have been made at stations of observation well distributed throughout the state, and cover sufficient periods of time to illustrate fairly the general characteristics and permanent conditions of the climate of Iowa, and the statistics of farm crops afford ample proof of the marvelous productivity of its soil. To answer questions being the special purpose of this compilation of data, the tables of climatic means and crop averages and totals have been placed in convenient form for reference and comparison.

In the systematic collection of climatic data the medical department of the United States army took the initiative in the early part of the last century. The surgeons or hospital stewards at all military posts were directed to keep a diary of the weather, and to note everything of importance relating to the climate. And the records made in pursuance of this general order afford all the accurate knowledge we have of the climate of the northwest in the years antedating the general settlement of the country. Observations were made and recorded at Council Bluffs military post in 1820-25; at Fort Armstrong (Rock Island), in 1824-35; at Fort Des Moines in 1843-46; at Fort Atkinson in 1844-46; and at Fort Dodge in 1851-53. These somewhat fragmentary records have a special value as evidence of the fact that the climate of this region has been practically permanent for more than three-quarters of the past century.

To the late Prof. Theodore S. Parvin belongs the honor of being the pioneer voluntary meteorological observer of this state. His service in that

line was begun at Muscatine in January, 1839, and continued at that place until 1850. After his removal in the latter year to Iowa City to accept a professorship in the state university, his observations were resumed and continued until 1873, when the service was transferred to Dr. Gustavus Hinrichs, who began the organization of the Iowa weather service. The records made by Professor Parvin, covering a third of a century, were used by him in the preparation of articles on the climate of Iowa, contributed to various scientific publications, rendering valuable service by setting forth the climatic advantages of this then comparatively unknown and sparsely settled region. At Muscatine the observations were continued by the Rev. John Ufford and J. P. Walton, making a consecutive record of more than fifty years, of much public value.

In 1849 the Smithsonian Institution, aided by the general government, established stations of observation in all parts of the Union, wherever amateurs of science could be found to serve as voluntary observers. An issue of instruments was made to observers, and about twenty fairly well equipped stations were established in Iowa. The records of mean temperature and precipitation are to be found in the voluminous reports of that institution. The first attempt to predict the course of general storm movements in the United States was made previously to 1850 by the Smithsonian Institution, which secured telegraphic reports upon temperature, atmospheric pressure and rainfall from a number of stations east of the Missouri river. This was the inception of the system of daily weather forecasting which has become so popular and useful to the public.

Upon the foundation thus prepared by series of observations covering a period of fifty years, the structure of the National Weather Bureau was erected by the general government in 1870. In Iowa five regular and fully equipped stations have been established by the government, as follows: At Davenport in 1872; at Keokuk and Dubuque in 1873; at Des Moines in 1878, and at Sioux City in 1889. The Iowa weather Service was organized in 1874, the special object being to collect climatic data from a much larger number of stations than were provided for by the national service. In 1878 the general assembly made an appropriation to defray a portion of the expense of the state service, and named Dr. Hinrichs as director. In 1890 the service was re-organized and made co-operative with the National Weather Bureau, and its scope was enlarged by providing for the collection and tabulation of statistics of the acreage and yield of staple farm crops in addition to the climatic records. By this system of co-operation it is believed, the state is recipient of a much larger measure of benefits than might be secured by the independent operation of either the national or state service.

Climatology is properly included as a branch of physical geography, correlated to geology; and, therefore, as a fitting prelude to the study of climate and crops, the following paper on "The Physiography of Iowa" has been generously contributed by Prof Samuel Calvin, chief of the state geological department. In this most excellent paper we have a clear presentation of some of the results of surveys and studies made by the able scientists of the geological corps. The foundations of agricultural empire appear to have been laid deeply and securely in this central valley during the far distant

glacial epoch, when the ponderous ice mills were grinding the primeval rocks, "slowly but exceeding fine," to provide a covering of drift as the bed of the richest deposits of soil found on earth.

PHYSIOGRAPHY OF IOWA.

By Prof. Samuel Calvin, State Geologist.

General Statement.—It would seem that a very short chapter ought to be sufficient to include all that can be said concerning the physical features of Iowa; for the state is simply an extensive plain—over large areas a very monotonous plain—lying between the great rivers and rising but little above them at any point. The relief is small. The zero point on the river gauge at Keokuk has an elevation above tide of 477 feet; the elevation of Sibley, the highest important railway station in Iowa, is 1,572 feet. It is possible that Ocheyedan mound or some of the morainic prominences in Osceola county rises 100 feet higher than Sibley, but even then there is less than 1,200 feet of difference between the lowest and the highest points in the state. One hundred feet is gained at once by ascending the bluffs at Keokuk and passing on to the upland a short distance northwest of the city, and so there is left but about 1,100 feet as the sum of all the variations in level occurring over the general surface of the whole great state of Iowa. There are stretches, many miles in extent, so monotonously level that differences in altitude are scarcely perceptible.

TOPOGRAPHY.

Larger Features.—Looking at the state as a whole there are a few conspicuous topographic features worthy of special note. On the eastern border the Mississippi flows in a gorge which, at New Albin and Lansing, measured from the summit of the bluffs facing the valley, is 400 feet in depth. From the level of the divides a short distance back in the interior, the depth exceeds 600 feet, an amount equal to more than half the sum of all the variations in altitude encountered in the entire state. The depth of the Mississippi gorge diminishes toward the south. Instead of measuring from 600 to 700 feet between the flood plain and the higher levels as in the northeastern corner of the state, there is a difference in altitude between Dubuque and the upland at Peosta of only 430 feet; between Davenport and Walcott the difference is 190 feet; between Keokuk and New Boston, 140 feet. Furthermore the valley is a curious patchwork of newer and older parts. At New Albin, Clinton and Burlington the valley is old, wide and deeply filled with mud. It is comparatively young at Dubuque, and younger still at Le Claire. Twice at least in the course of recent geological history the great stream has been forced to abandon parts of its old valley and cut several miles of channel relatively new. The narrow, rock-bottom gorge above and below Le Claire is yet unfinished; adjustment of stream to valley is not yet complete.

The valley of the Missouri river is very different from that of the Mississippi. It is bordered by a series of bluffs unique in appearance and more unique in structure, for they have been built up largely of fine dust transported by the winds. The constantly shifting meanders of the stream and the great width of the level alluvial flood plain are among the striking characteristics of this peculiar valley.

Another of the larger topographic features is the great watershed. This is the ill defined ridge which extends in a sinuous course from Dickinson county to Wayne and forms the line of parting between the waters flowing to the Mississippi on the one side and to the Missouri on the other. The watershed is in reality the southward extension of the noted ridge of the Dakotas and southwestern Minnesota, known as the *Coteau des Prairies*. An area somewhat greater than two-thirds of the state lies east of the watershed; less than one-third lies on the west.

In the eastern area there is a comparatively short but rather important ridge which is followed for some distance by the railway passing through Calmar, Ridgeway, Cresco and Bonair. At Bonair the altitude is more than 1,300 feet. On one side the general slope is toward the Upper Iowa and the Mississippi; on the other side the surface inclines strongly toward the southwest, the inclination being continued as far as the Cedar river. The stream last named occupies the bottom of a broad trough which has the Cresco-Calmar ridge for one margin, while Wesley in Kossuth county is situated on the divide which forms the western rim. The eastern side of the trough presents the interesting anomaly of a region drained by streams which flow at an angle of but little less than 90° with the general inclination of the surface. For example, the direction followed by Crane creek and the numerous branches of the Wapsipinicon is toward the southeast, but there is a much greater fall to the mile toward the southwest. The southwesterly slope of the surface is indicated by the following series of altitudes taken along a line nearly at right angles to the present drainage: Arlington, 1,113; Oelwein, 1,049; Fairbank, 1,000; Dunkerton, 945; Dewar, 889; Waterloo, 841. In this direction, across the drainage courses, the average fall is more than seven feet to the mile. Between Oelwein and Waterloo the fall per mile is exactly eight feet. In the direction of the drainage the average slope of the surface is less than four feet to the mile. That the Cedar river flows in the axis of a great trough is farther illustrated by such a series of altitudes as the following, taken along the line of the Chicago, Milwaukee & St. Paul railway: Calmar, 1,263; New Hampton, 1,169, Charles City, at the bottom of the trough, 1,014; Nora Springs, 1,070; Mason City, 1,132; Garner, 1,223; Britt, 1,235; Wesley, 1,258. Clear Lake is omitted from this last series for the reason that it is located in the morainic ridge of the Wisconsin drift and so stands above the general level of the surface sloping toward the Cedar river.

Minor and More Localized Features.—On the basis of the effects produced by the great ice sheets of the glacial epoch, the surface of Iowa may be divided into two parts, to be known respectively as the Driftless Area and the Drift-covered Area. So far as size is concerned the driftless area is quite unimportant, for it covers only the small fraction of the state embraced in Allamakee county, and parts of Winneshiek, Fayette, Clayton, Dubuque and Jackson. But, small as it is, it presents topographic features in some respects more interesting than all the rest of the state together. As the name implies, this area was not invaded by the ice sheets of any of the stages of the glacial epoch. Its soils are largely residual, for they have resulted directly, in place, from the decay of the local limestones, sandstones and shales. Its topography is a product of erosion acting upon indurated rocks of varying degrees of hardness and varying degrees of elevation above base

level. The driftless area is a land of thin soils, high, rocky precipices, long steep hills and deep rock-cut valleys. It is a picturesque land. The main streams have made valleys that are from 600 to 700 feet in depth, measured from the higher points to the divides. The upper Iowa—or the Oneota as it might better be called—flows between rocky bluffs which in places rise almost sheer to a height of 300 feet above the level of the water, and from their summits the surface, in many long swells and undulations, rise 300 feet higher to the tops of the dividing ridges which are back some miles from the stream. The whole surface of the driftless area has been carved into an elaborate system of branching and re-branching trenches separated by steep-sided ridges. The details of topography resulting from erosion are governed to no small extent by the geological structure of the region. The picturesque escarpments, buttresses, towers and castles which crown the bluffs and give charm to the scenery along the lower courses of the upper Iowa are due to the effects of the weathering on the hard, resistant, dolomitic formation called the Oneota limestone. We owe the impressive scenery above and below Decorah, culminating in those majestic cliffs at Bluffton, to the presence and characteristics of the Trenton limestone. The Galena limestone gives us the splendid castles, towers and other grand scenic effects about Dubuque. For the great Niagara escarpment, probably one of the most striking of the topographic features of the driftless area, we are indebted to another hard dolomite, the Niagara limestone. The Niagara escarpment forms the steep acclivity, looking like a line of bold hills, which curves around Dubuque at a distance of six or seven miles to the west and culminates toward the southwest in the high, promontory-like salient known as Table Mound. The escarpment makes up those conspicuous cliffs seen crowning the long slopes which form the walls of the valley of the little Maquoketa in the vicinity of Graf. It zigzags back and forth to accommodate itself to the rims of numerous small valleys opening to the Mississippi, between Table Mound and Bellevue. North of Dubuque the escarpment forming Niagara expresses itself in the steep slopes of Sherrill's Mound, and in a number of other prominent and symmetrical buttes of circumdenudation; and across the river, over yonder in Wisconsin, the eastern sky line is broken by another mass of Niagara, the far famed Sinsinewa.

The Maquoketa shales are the most important of the slope making formations coming to the surface in the driftless area. The gently inclined and largely cultivated plain, more or less trenched by erosion, which lies between the summit of the precipitous bluffs of Galena limestone at Dubuque and the foot of the steep Niagara escarpment six or seven miles to the west, is due to the presence of the Maquoketa shales. At some points near Graf the slope due to the Maquoketa is less than a mile in width, and detached blocks of Niagara limestone, loosened by frosts and other agencies from the escarpment above, gradually creep down the inclined surface to be at last precipitated into the stream over a cliff of Galena limestone. At no points are there better illustrations of the effects of structure on topography. Here are two hard limestones separated by shale; two steep escarpments separated by cultivated slopes.

Had it not been for the incursion of glaciers and the distribution of drift, the whole face of Iowa would have resembled the driftless area in many particulars. Thin soils, bare rocks, steep precipices and deep valleys would

have prevailed everywhere. The effect of the successive ice sheets which in turn covered nearly the whole of Iowa, was to tone down and conceal the preglacial, rock carved topography by spreading over it a deep mantle of drift. The drift-covered area occupies much the larger part of the state. In this region the topography is young as compared with that of the driftless area; it is in no way related to geological structure; its characteristic features are due partly to the manner in which the load of glacial detritus was distributed and deposited by the ice, and partly to the effects of erosion and other modifying influences acting on the mantle of loose materials since the glaciers disappeared. There were, however, not less than five different episodes of ice invasion for Iowa, each of long continuance, and separated one from the other by still longer interglacial periods, from which it follows that among the different sheets of drift consequent on the successive stages of glaciation, there are enormous differences in age. The glaciers of the later stages were not so strong and did not extend so far as those belonging to the earlier part of the glacial epoch. On many accounts it may be regarded as a fortunate circumstance that the geographical position of Iowa was so exactly related to the magnitude and movements of the later ice sheets that not less than three of them successively entered her borders and terminated by melting before advancing over more than a small fraction of her entire area. The terminal margins of these later glaciers have been mapped with a high degree of accuracy, and it turns out, fortunately again, that the particular parts of the state which the invading lobes of the later glaciers occupied, were not twice the same. The drift-covered portion of Iowa presents four well-defined areas, each having at the surface a sheet of drift differing in age and, to some extent, in origin, from the drift of either of the others. In some places, as, for example, south of a line drawn through Des Moines and Iowa City, the drift is very old; in other places, as in the middle northern counties of the state, the drift is very young. The topographic features of the several glacial areas vary with their age. The older drift, which has been long exposed to the action of weathering and drainage waters, has the upper zone profoundly changed, and the whole surface has been carved into an elaborate system of drainage trenches and deep stream valleys. The withdrawal of the latest ice sheet from Iowa is an event so recent that the surface of the younger drift is yet unaltered; it has not been affected in any way; it remains precisely as the waning glaciers left it.

The oldest glacial deposit known in the state does not appear at the surface anywhere. It is effectually covered by the drift of the second ice invasion, and is revealed only through the erosion of stream valleys and the making of artificial excavations. The second glacial invasion and the resulting sheet of till have come to be known in geological literature as the Kansan. The Kansan ice, flowing in this region from the northwest, covered the whole of Iowa except the small fraction belonging to the driftless area; it extended southward half way across Missouri; it spread westward into Nebraska and Kansas; eastward it joined other glaciers which radiated from centers of accumulation into Labrador, and so formed a continuous sea of ice reaching from central Nebraska to the Atlantic ocean. Outside of the comparatively small areas occupied by the younger sheets of till, the Kansan drift gives character to the surface of Iowa. The topography of the Kansan

has been developed by erosion of the drift mantle. Valleys have been cut in the loose glacial clays to depths ranging from eighty to two hundred feet. The great age of the Kansan valleys is further indicated by the fact that they are broadly U-shaped, and their sloping sides are trenched by numerous lateral channels which branch and re-branch repeatedly until traced to their origin in a multitude of minute twigs up on the divides. The whole surface has been carved and shaped by flowing water and developed into an intricate system of rounded hills and ridges separated by steep-sided ravines. (Pl. I, Fig. 1.) Every foot of the surface is thoroughly drained. While the Kansan areas everywhere present the same fundamental type of topography, the erosional features are probably most strikingly developed in the counties drained by the forks of the Grand, Nodaway, Nishnabotna and other rivers of southwestern Iowa.

It is a wholly different type of topography from that noted above, that is seen between Wilton and Walcott, around Morning Sun and Mediapolis, between West Burlington and New London. These points all lie in an area of drift which rests upon and overlaps the weathered and eroded surface of the Kansan. An ice sheet having its origin in the Laurentian highlands south of Hudson Bay, flowed outward until it crossed Illinois and pushed over for a short distance into Iowa. This was the Illinoian stage of glaciation, and the detritus left on the surface when the ice melted is the Illinoian drift. The Illinoian drift is more or less trenched around its edges; near the larger river valleys, as between Walcott and Davenport, it has been carved by erosion so as to develop young, narrow and steeply graded ravines. But over the greater part of its area the surface is unchanged; the topographic features are due, not to the carving effect of drainage waters, but to the leveling and moulding influences of glacier ice. The drift of this small area in southeastern Iowa is young as compared with the Kansan.

The flow of the Illinoian ice across the Mississippi river into Iowa is responsible for another interesting bit of topography. Nichols is located in the midst of a level undrained area, the bed of an extinct lake. The Illinoian ice choked up the channel of the Mississippi from the mouth of the Wapsipinicon to the mouth of the Des Moines, and the waters of the great stream were diverted around the glacier front. Southward from West Liberty and Atalissa there was a low, wide basin which was hemmed in on one side by the high bluffs seen a mile or two west of Nichols, and on the other side by the thick margin of the Illinoian ice. The waters were ponded in this basin and formed an extensive glacial lake in which sediments composed of mud, sand and gravel accumulated. When the ice melted and the Mississippi returned nearly to its old course, the lake was drained, but the level floor of sedimentary deposits remains to bear testimony to former conditions. Lake Calvin, the name given to this ancient body of water, has been mapped and described by Udden; the level floor of the old Illinoian glacial basin attracts the attention of all observant travelers between West Liberty and Columbus Junction.

Embracing Buchanan, Black Hawk, Bremer, Chickasaw, Mitchell and a number of the other counties in northeastern Iowa, is an area of what is known to geologists as the Iowan drift. The evidences of newness, of youth, are much more strongly marked in the Iowan than in the Illinoian drift. There has been no alteration of the till and practically no erosion of

the surface anywhere since the Iowan glaciers retreated from the state. It is true that, in places, the surface is more or less undulating and irregular, but such inequalities as do exist were brought about by the erratic and disorderly way in which the transported materials were distributed at the time the ice disappeared. Prior to the general occupation of the region by the white man, there were extensive undrained sloughs covering a large percentage of the entire area. The rivers of the Iowan region illustrate in an ideal way the characteristics of young streams. They have cut no valleys; they simply flow in narrow, shallow trenches at the level of the drift plain. The minor drainage courses are very largely broad sags in which there is not, as yet, even the beginning of a definite stream channel. Cultivation and artificial drainage have wrought greater changes in the surface, in the last score or two of years, than had been accomplished in all the preceding centuries since the Iowan stage came to a close. Large granite bowlders ranging up to thirty, forty, or even fifty feet in diameter, are characteristic features of the Iowan area. The outer margin of the Iowan plain is usually quite sharply defined by a thickened ridge of the fine silt-like clay called loess. (Pl. I, Fig. 2.) From the summit of such a marginal ridge the observer looks outward upon the billowy and deeply eroded surface of the older Kansan (Pl. I, Fig 1); in the other direction the young, uneroded Iowan plain extends away to the horizon, as level as the surface of the sea. (Pl. I, Fig. 3.)

Younger than the Iowan is the Wisconsin drift, which, so far as our own state is concerned, covers an area nearly triangular in shape. The base of the triangle, where the comparatively narrow ice lobe crossed from Minnesota to Iowa, extends from Worth county to Osceola; the apex is at Des Moines. Through the western part of Worth, Cerro Gordo, Franklin and Hardin counties the edge of the Wisconsin drift overlaps the Iowan; the apex of the Wisconsin lobe rests at Des Moines on the older Kansan. The Wisconsin area is in general a level ill-drained plain. The traveler may go for scores of miles without seeing a definite drainage trench so much as a foot in width or depth. Saucer-shaped depressions or "kettle holes," varying from a rod or two, to an eighth or a quarter of a mile in diameter, are common features of the Wisconsin plain.

The Wisconsin, more than any of its predecessors, was a moraine forming ice sheet. Part of the transported materials was piled up around the margin of the lobe in a bewildering series of disorderly hills or knobs, varying from eighty to one hundred and fifty feet in height. A well characterized belt of lawlessly heaped up morainic knobs six to ten miles wide, extends from the north line of Worth county to the south line of Cerro Gordo, from which point southward the knobby character of the Wisconsin margin becomes less pronounced. Pilot Knob, near the northeastern corner of Hancock, is the most noted and the most prominent of these great morainic heaps of drift. The marginal moraine is well developed at many points along the western edge of the Wisconsin lobe. It forms a belt of more or less prominent hillocks and knobs passing through Osceola, Clay, Buena Vista, Sac and Carroll counties. As on the eastern margin, the morainic characters gradually fade out toward the south. While the Wisconsin ice lobe was slowly melting and disappearing from the state, the retreating margin halted at intervals for periods long enough to pile up con-

FIG. 1

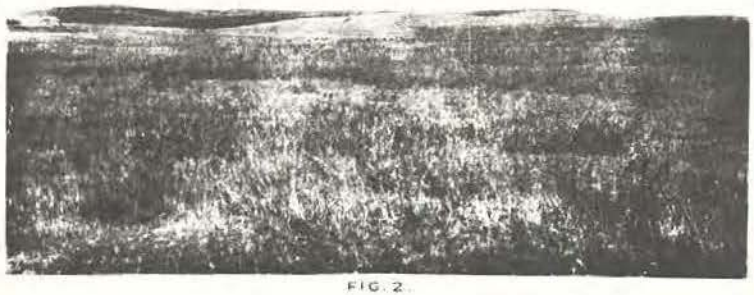

FIG. 2.

FIG. 3.

spicuous recessional moraines; and so areas of knobby drift of considerable extent are distributed in the Wisconsin area at varying distances from the outermost margin. Recessional moraines are especially well developed in Palo Alto, Emmet and Dickinson counties.

Intimately related to the subject of Wisconsin moraines are the many charming lakes of Iowa. There are no lakes worthy of note in the Kansan, Illinoian or Iowan areas. All our lakes are of Wisconsin age, and most of them occupy basins in the irregularly piled morainic ridges. Indeed it was the very lawlessness accompanying the deposition of the morainic materials that left the enclosed basins in which imprisoned waters might accumulate. Clear Lake lies in such a basin in the eastern moraine, surrounded by prominent constructional hills and knobs. Spirit Lake, the Okobojis and a number of beautiful but less important sheets of water in the same part of the state, are all located in an extensive morainic belt belonging to the recessional series. The beauty and charm of all these delightful bodies of water are greatly enhanced by the eccentricities of distribution, and the ever varying curves and slopes and outlines, of the surrounding morainic knobs.

Among the interesting, though rather inconspicuous topographic features of the lake region are the walls, embankments and causeways which coincide in position and direction with lake margins, and often present the deceptive appearance of railway grades or other artificial structures. So common are these that they may be expected to occur somewhere, in some form, along the margin of every considerable sheet of water in northern Iowa. The conspicuous ridge of sand, gravel and bowlders lying along the lake shore in front of the Assembly grounds at Clear lake, must be familiar to every visitor. When this marginal feature of our northern lakes assumes the form of a rude wall of cobbles and bowlders, it seems to be capable of taking a stronger hold on popular attention and popular imagination. Hence it is that our Walled Lakes have long been famous, descriptions of them occupying column after column in newspaper and magazine, while other lakes bordered by embankments of plain sand and clay, though equally as interesting and instructive, equally as worthy of investigation and comment, have suffered the neglect and inattention that usually falls to modest, unobtrusive merit.

These marginal ridges and walls, along the shores of northern lakes with shallow basins, have been heaped up by the expansion of ice in winter. In our severe climate, particularly if the snowfall be not great, quite an extent of shoal water near the shore freezes to the bottom. Indeed the effects of freezing go deeper than the water, and bottom sands and clays and bowlders become a part of the frozen sheet. The alternations of temperature, such as take place between colder and warmer days or between noon and midnight, affect the volume of the ice in such wise that from day to day it expands and is thrust shoreward with tremendous energy. The resistance is least on the low, gradually sloping shores, and here the movements are most pronounced. The marginal ice, with all the materials frozen in its lower surface, is shoved up on the slope, and stones and earth are left as a contribution to the growing ridge or wall when melting takes place in the following spring. The process has been going on for centuries, and where the conditions have been most favorable, the results are somewhat surprising.

The curious peaks and knobs of the wind-drift topography, developed on the bluffs facing the Missouri river, need only be mentioned. There is here a perpetual contest between erosion and construction, which has resulted in many erratic forms. This type of land surface is best seen in Iowa in a narrow belt extending from Sioux City to Hamburg.

DRAINAGE.

The rivers of Iowa fall naturally into two systems—the Mississippi system and the Missouri system. The headwaters of the two systems are separated by the great divide. The Upper Iowa, or Oneota, has a more than usually distinct drainage basin, for in its upper courses it is separated from the other rivers of the eastern slope by the Cresco-Calmar ridge. Looking at the rivers of the state as a whole, there are only a few points deserving special mention. The streams and stream valleys of the driftless area are unique. They are comparatively old. The waters began working on their present channels before the beginning of the earliest glacial stage. The valleys, in places ten or fifteen miles in width from crest to crest of the divides, have been cut to depths of 500, 600, or even 700 feet. Near their mouths the process of down-cutting, or corrasion, has brought the streams to base level, and the walls of the valleys have receded so as to give broad alluvial flood plains covered with what is probably the most productive soil in this great fertile state. In the upper courses of the streams of the driftless area, and in all the smaller tributaries, the gradients of the valleys are steeper, flood plains are absent, adjustments are not yet perfect. In some portions of this area the minor drainage is largely underground, a fact well demonstrated by the numerous springs which pour out copious volumes of water along the hillsides and the steep river bluffs. In the area of the Kansan drift, water-cut channels have been developed everywhere, and practically every foot of the surface is thoroughly drained. None of the basins and sags which must have been present in the original surface of the Kansan drift have been left undivided. The whole area of this drift sheet, where not concealed by younger deposits, is characterized by a miniature type of mature erosional topography; but surface drainage has worked to best effect on the shorter and steeper slope west of the great divide. Here the river valleys are deeper and wider, and the numerously branched lateral channels have cut back and become deeply entrenched in the higher plateaus. The rivers of the Iowan area have done but little work since they began to flow in their present courses. Lateral drainage is not well developed; there are large areas in which the surface remains just as it was left by the glaciers; not a little of this surface is yet without effective means for getting rid of the surplus storm waters. On the east slope of the great Cedar valley trough the several streams drain areas which are remarkably narrow in proportion to their length. Apart from the branches of the Des Moines river, there are no important streams in the area of the young Wisconsin drift. Over the greater part of the Wisconsin plain even the rudiments and beginnings of effective drainage have not yet been established.

The physical features of Iowa are conspicuously lacking in the rugged and impressive types which characterize many of the states. The relief forms are relatively tame. The scale on which they are designed is an exceedingly modest one. What is lost in the matter of bold and massive

grandeur, however, is more than compensated for in the quiet charm of our rock-walled river valleys and other erosion forms of the driftless area; in the beauty of our clear crystal lakes nestling among morainic hills; in the hope and joy inspired by fertile plains loaded with bounteous harvests and stretching on in endless vistas to the far horizon; in all the evidences of peace, comfort, intelligence, wealth and prosperity which everywhere abound within our borders. The uniformity of the surface of our state, and the physical agencies which produced this uniformity, are to be reckoned among the fundamental causes of Iowa's marvelous success, a success which states of more rugged topographic forms could not possibly attain. But a full discussion of the causes of the physical features of Iowa, and their consequences in connection with the progress and development of her people, while making an interesting chapter, would make one too long for our present purpose.

IOWA CLIMATE AND CROPS.

Iowa easily holds the foremost place among agricultural states. Statistics of its soil products and live stock industry justify this claim, and a careful study of climatic records and vast resources of soil fertility will reveal the cause of its primacy in agriculture. Its location within the greatest corn-producing area in this country or the world is especially favorable. In fact, it may be claimed without exaggeration that Iowa constitutes the most productive portion of the far-famed corn belt of America; the statistical records of the past thirteen years will sustain it. The distinctive feature of this state is the fact that about 95 per cent of its area may be made to produce something of value. And fully 90 per cent of its surface is exceedingly rich in the elements of plant growth. In a paper entitled "What Glaciers have done for Iowa," Professor Calvin wrote as follows concerning the value of its soils:

> The soils of Iowa have a value equal to all the gold and silver mines of the world combined. In fact it is difficult to find sources of wealth with which our soils may properly be compared. And for all this rich heritage of soils we are indebted to great rivers of ice that overflowed Iowa from the north and northwest. The glaciers in their long journey ground up the rocks over which they moved and mingled the fresh rock flour, derived from granites and other crystalline rocks of British America and northern Minnesota with pulverized limestones and shales of more southern regions, and used these rich materials in covering up the bald rocks and leveling the irregular surface of preglacial Iowa. The materials are, in places, hundreds of feet in depth. They are not oxidized or leached, but retain the carbonates and other soluble constituents that contribute so largely to the growth of plants. The physical condition of the materials is ideal, rendering the soil porous, facilitating the distribution of moisture, and offering unmatched opportunities for the employment of improved machinery in all the processes connected with cultivation.
>
> In their appointed time those ancient glaciers wrought well in preparing the material and overspreading the rocky valley with drift. That formative period in earth-building was succeeded by more genial climatic conditions, with alternations of wet and dry seasons like those of recent years, with fervent heat of summer and intense cold of winter, producing growth and decay of vegetation for unnumbered thousands of centuries, and transform-

ing the surface of the drift deposits into a mantle of humus as rich in the elements of plant growth as the famed valley of the Nile. There is no continent on earth that contains so large an area of exceedingly fertile lands as we have in the great corn belt of America.

CLIMATE THE CHIEF FACTOR.

In crop production the prime factors are fertility of soil and a congenial climate; and climate is the chief factor. There are millions of acres in this country, now comparatively worthless though containing abundant supplies of fertility, the one thing lacking being a favorable climate. Nothing can fully compensate for the lack of ample moisture in the growing season, as only a small part of any arid region may be made productive by irrigation. And prevalent low temperature, or frequent occurrence of frosts in the crop growing season, will render nugatory the most fertile soil and abundant rainfall. The true tests of climatic excellence are found in the tables of mean temperature and precipitation, and the average number of days between killing frosts in the crop season. Iowa has attained its present unrivaled position as an agricultural state by its heritage of vast wealth of soil and its generally favorable climate. In attestation of that claim the appended tables of annual crop yield may be cited. There has been nothing near a total failure of the staple farm crops in the worst season experienced since its settlement by civilized people. There have been lean and fat years, but the products of the leanest season would be fatness to the people of less favored regions. This is the result of the fine texture and great depth of soil, whereby it is able to endure the greatest extremes in form of wet or dry seasons.

GENERAL CLIMATIC FEATURES.

Situated near the geographical center of the United States, too far inland to receive the equalizing thermal effects of winds blowing directly from the oceans, the climate of Iowa is strictly continental in type. This implies a very wide range in temperature, winters of considerable severity, summers of almost tropical heat, and a large percentage of sunshine as compared with insular regions. As there are no mountain ranges, nor considerable differences in the altitude of the several sections, the climate of the state is quite homogenous, with only such variations of temperature and rainfall as result from latitude and location with reference to the pathway of the cyclones which traverse the continent. Despite its remoteness from the oceans, the seasonal constants of temperature, humidity and precipitation afford a guaranty of ample production in the future as in the past. In fact, it is the best watered and most productive mid-continent region known on earth. Its worst droughts and seasons of floods have never been famine breeders.

Climate is the product of certain elements and properties of the atmosphere, and physical features of the earth's surface. The sun's energy produces in the air and earth the threefold forms of force termed light, heat and electricity, and causes the varied phenomena of evaporation and precipitation. The climate of this section differs from that of other midland regions because of material differences in the topographic features of the western continent. The great mountain ranges that gridiron the western third of the continent, stretching from the Arctic Sea to the isthmus and enclosing numerous valleys of the semi-arid or desert type, effectually cutting off the

rain-bearing winds that blow inland from the Pacific Ocean; as a result the eastern slope of the Rockies receives a scant and irregular supply of rainfall, and the Mississippi valley practically receives no moisture from that source. The western and northwestern winds in this section are cool and dry, while the southerly and easterly winds are warm and moist, affording generally an ample supply of rainfall. If the great mountain ranges had been stretched diagonally across this continent, cutting off this region from the rain-bearing wind currents from the Gulf, this section would be in reality the great American desert, instead of the richest domain of Ceres.

It appears, then, that the essential features of the climate of this region are determined by the size and general topography of the continental area at the westward, the height and location of the mountain ranges, the direction of the prevailing winds, and the general movement of the "highs" and "lows" that cross the valley.

PRECIPITATION.

Nearly the entire amount of moisture precipitated over Iowa and contiguous portions of the Mississippi valley comes directly or indirectly from the Gulf of Mexico. The mechanics of this irrigation process may be understood quite readily. By cyclonic force, or the powerful suction of low area storms of a rotary character, the warm, moist winds from the south are drawn up into the valley, and by dynamic cooling are made to deposit a goodly portion of their burden of moisture. It may be said, therefore, that this valley is watered by cyclones, which in their mechanical action and effect may be termed vast rotary pumps, and condensers of atmospheric vapors. This great central depression, which may be called the "trough of the continent," extending from the Gulf to the Arctic Sea, gives an unobstructed pathway for the warm and moist south winds and the cool waves from the north, which here commingle in the atmospheric eddies, and refresh the earth with copious showers.

The heaviest annual precipitation is deposited in the region near the Gulf, and there the bulk of it comes in the fall, winter and early spring, frequently in excessive downpours. In considerable portions of the Gulf region the mean annual rainfall is double the average in Iowa, and as a result commercial fertilizers are in demand to restore some measure of the loss of fertility caused by the washing and leaching process. This state is more fortunately located, in the region of the golden mean between the extremes of heavy precipitation at the south and east, and general deficiency at the west and northwest. In other words, the people of Iowa suffer less damage from excessive rains than their neighbors at the east and south, and very much less harm from drouth than their neighbors in the western and northwestern part of the interior valley.

At an early day in various historic and scientific publications this state was credited with a mean annual precipitation of 40 to 47 inches. This high average was obtained from insufficient climatic data, collected at a few stations in the extreme east and southeast parts of the state, where the yearly average is somewhat greater than in the west and northwest districts. Since that early period stations have been established in all parts of the state, and from the mass of observations obtained the true mean is found to be 31.40 inches. During the past thirteen years, the voluminous records

collected by the Iowa Weather and Crop Service show the state average to have been 31.07 inches.

Prof. Lorin Blodgett's hyetal chart of the continent, published in 1855, placed Iowa in the belt having a range of 25 to 40 inches, the southeastern counties showing a mean of about 40 inches, the central belt from southwest to northeast, 30 inches, and the northwestern fifth of the state, about 25 inches. The more recent observations do not show so great difference in the yearly rainfall of these sections. A bulletin issued by the Weather Bureau in 1897 contained a rain chart in which Iowa was placed in the belt having an average of 30 to 40 inches, except an area of a few thousand square miles in the belt ranging from 20 to 30 inches. Rainfall tables in the following pages show that no single station having a record for more than ten years has an average as high as 40 inches, and no station for a like period has an average below 23 inches per year.

RAINFALL DATA BY DISTRICTS.

For convenience of reference and comparison, the state is divided into three belts, or sections, on lines running east to west, each section three counties in width. These sections may be subdivided into three districts, following county lines, giving us nine districts, designated as follows: Northeast district, seven counties; North Central district, fourteen counties; Northwest district, nine counties; West Central district, nine counties; Central district, fifteen counties; East Central district, fourteen counties; Southeast district, ten counties; South Central district, thirteen counties; Southwest district, nine counties. The tables show the following yearly averages by districts: Northeast, 32.25 inches; North Central, 29.40 inches; Northwest, 28.16 inches; West Central, 29.36 inches; Central, 31.66 inches; East Central, 32.61 inches; Southeast, 33.65 inches; South Central, 32 53 inches; Southwest, 32.60 inches, It will be seen that the Southeast district has a yearly average of 5.49 inches more than the Northwest district, and only 1.05 inches more than the Southwest district.

The annual average rainfall of the three eastern or Mississippi river districts is 32.50 inches; three Missouri valley districts, 30.04 inches—a difference of 2.46 inches between the eastern and western slopes of the state. The central belt on north and south line has an average of 31.51 inches, or very nearly the state average. On the east and west line of division the averages are as follows: Northern section, 29.93 inches; central section, 31.21 inches; southern section, 32.92 inches. These figures show a quite regular gradient of decrease in yearly amount from south to north, as well as from east to west.

RAINFALL IN THE CROP SEASON.

From an agricultural point of view the most important feature of the climate of Iowa is that its maximum of rainfall comes in the crop season, April to September, inclusive. The average winter precipitation is 3.30 inches, or 10 per cent of the yearly amount; spring, 8.85 inches, 28 per cent; summer, 12.15 inches, 39 per cent; autumn, 7.10 inches, 23 per cent. In the six crop months the average rainfall is 22.48 inches, or 71 per cent of the annual total. And in the four most critical crop months, May 1st to September 1st, the average for the state is 16.29 inches, or 51 per cent. It will be seen from these figures that the bulk of precipitation is distributed

through the months when it is needed for irrigation, while in the balance of the year it is relatively dry. This feature of the climate is more in evidence in the western districts than in the balance of the state. By districts the percentages of the rainfall in the six crop months are as follows: Northeast district, 70 per cent; North Central district, 74 per cent; Northwest district, 77 per cent; West Central district, 74 per cent; Central district, 72 per cent; East Central district, 68 per cent; Southwest district, 66 per cent; South Central district, 70 per cent; Southwest district, 73 per cent. The Missouri valley receives the least amount, but gets a greater percentage in the crop season. In other words, the fall and winter precipitation is much lighter in the west than in the east. So there is in this state a wet and dry season, about as well defined as in some of the tropical countries.

Professor Blodgett, in his American Climatology, referring to this feature in this climate, said: "For the whole period of the warm months the quantity of rain distributed over the Mississippi valley is very great, and there is no great area so far in the interior which presents a similar result. The quantities are absolutely as well as relatively large, and they considerably exceed those of the plains of the Atlantic coast in the same latitude."

VARIATION OF RAINFALL.

Meteorological records in all parts of the United states show marked variation in the seasonal rainfall, and a perpetual succession of wet and dry periods, though the general averages are steadily maintained through long periods. There are some faint suggestions of periodicity in the occurrence of wet and dry seasons, but the complex problems relating to the variableness of the weather have not been solved. All long-time tables of monthly and annual precipitation show that the distribution is exceedingly erratic, though the totals for the continents and hemispheres may be about the same from year to year. During the past thirteen years the lowest yearly average for this state was 21.91 inches in 1894, and the largest amount was 43.82 inches in 1902. At single stations the range in total rainfall is much greater than for the state at large. It has occurred quite frequently that considerable portions of the state suffered from excess of moisture, while other districts were complaining of drought.

In 1894 the state average for the four critical crop months (May-August) was only 6.75 inches, or a monthly average of 1.68 inches. In 1902 the total for that period was 27.80 inches, or 6.95 inches per month. And yet portions of the state received about the normal amount of rainfall. Evaporation and precipitation are constants, but we have no means of determining in advance where the vapor will be precipitated, for that is subject to vicissitudes in the ebb and flow of the great atmospheric currents of the continent.

Since the early settlement of this section the records show that quite severe midsummer droughts have occurred at irregular intervals, averaging from one to three in each decade. The normal amount for the four critical months is 16.21 inches. During the past thirteen years this was exceeded seven times, and the average fell below the normal six times. There has been, in fact, a greater liability toward excess than deficiency in the crop months, and more real damage to crops in this state has been caused by excess in the season of planting and growth than by the reverse.

In this connection the fact may be noted, especially in seasonal rainfall, that there is a tendency in nature which causes one extreme to be followed

by another; and this oscillation from dry to wet, or vice versa, may occur quickly, or it may run through two, three or four years. In the biennial period of 1901-1902 there was a very rapid swing of the pendulum from excessive heat and drought to the opposite extreme of cold and wet weather. And in respect to quality and commercial value the soil output of 1901 was much better than that of 1902. Generally, it may be said, the predominant influence in this valley in midsummer is much stronger toward prolongation of wet weather periods than the dry weather type. A considerable portion of the summer rainfall comes in form of local showers, which irrigate narrow belts and short distances; and it not infrequently happens that a portion of a single county may be well watered, while other parts are greatly in need of moisture.

Though subject to very considerable fluctuations in the amount of rainfall in the crop season, there is a measure of compensation in the deep, rich and porous soil of this state, which has produced fairly good crops in the driest or wettest seasons. In the worst season ever experienced in this portion of the great valley there has been no near approach to a famine. The most severe drought within the past fifty years occurred in 1894, and yet this state produced in that year 256,000,000 bushels of cereals, and sufficient other soil products to swell the total value to over $121,000,000. The superior quality of Iowa soil was noted by the late Prof. T. S. Parvin, who in a contribution to the *American Journal of Science*, Vol. XIII, said: "In 1854 occurred the great drought in this and the western states generally; but owing to the porous nature of our soil the crops with us turned out much better than in the states east of the Mississippi. In 1856 the season was also very dry, the total quantity of rain in the summer months being only 6.78 inches, or 10.20 below the summer mean. The crops were, notwithstanding, more than an average yield, both of corn and small grain; and the three or four dry seasons we have had abundantly prove that the soil and climate of Iowa are unsurpassed on the continent for farming purposes."

TEMPERATURE.

On the climatological map published by the United States Weather Bureau, Iowa is situated in the isothermal belt wherein the mean annual temperature ranges from 45° to 50°. The lines inclosing this belt run nearly parallel from the Missouri valley to the Atlantic coast, and embrace a large part of the territory between 41° and 44° north latitude. The mean annual temperature of this state is 47.5°. By sections the mean temperatures are as follows: Northern section, 45.7°; central section, 47.3°; southern section, 50°. The highest yearly mean at any station is 51.7°, as shown by records of the Weather Bureau station at Keokuk; the lowest is 43.2°, according to records of voluntary stations at Osage and Cresco. From the south line of the state to the Minnesota boundary the temperature gradient is quite uniform, making due allowance for differences in altitude of stations

In this part of the Mississippi valley the summers are warmer and the winters colder than on the same parallels near the Atlantic coast. In July the 75° isotherm passes through the southern half of Iowa, dips southeastward below Cincinnati, passing between Baltimore and Philadelphia. The mean maximum of the state for July is 85°, and the midsummer temperature is about as high as that of Virginia and North Carolina. In January

the larger part of Iowa is within the isothermal belt 15° to 20°. These lines run northwestward through Wisconsin, northern Michigan, Ontario, northern New York, Vermont, New Hampshire and Maine. The midwinter temperature corresponds to that of the vicinity of Montreal, while the summers are as warm as in Washington, D. C., and Richmond, Va. The winters, however, are shorter than in the same latitude in the Atlantic states. The transition from winter to summer is usually quite rapid, the average increase in temperature in April being more than half a degree daily. The daily mean of April is 17° higher than that of March, and May averages 11° per day higher than April. The season of seeding and planting is 8 to 12 days earlier than in the eastern states. The autumns are usually drier and warmer in Iowa than in the coastal regions on the same parallels. The average duration of summer temperature, the daily means ranging from 65° to 75°, is about four months. The average duration of winter, or the period having a mean below 30°, is about three and a half months.

The highest temperature registered in Iowa by a standard thermometer was 113°, at Sigourney in July, 1901. The lowest temperature recorded was 43° below zero, at Cresco, in January, 1888. These records indicate the remarkable range of 156° from minimum to maximum temperature. These extremes of heat and cold are rendered more endurable to man and beast by the prevalent dryness of the air at the time of their occurrence. In the humid air of insular regions such extremes would be intolerable. In this connection it may be stated that both heat and cold are important factors in the production of the great crops for which this section is noted. The myriad plowshares of the frost penetrate the earth to great depths, pulverizing the clods and preparing the soil to respond to the quickening influence of the gentle rains of spring and the almost tropical heat of summer. This is not an ideal climate for invalids, who need equable temperature, but no country is better adapted to develop hardy, stalwart and brainy people than this valley, where the rigors of winter incite men to a strenuous life. Some adverse conditions seem to be necessary to develop hardiness and vigor in plants, animals and mankind. The best types of all races have been reared about midway between the tropics and the Arctic zones.

The following table shows the monthly and annual mean temperatures for the state, for the thirteen-year period, 1890 to 1902, inclusive. This is followed by a table showing the averages by districts and sections, and also for the state at large, for all the years of record. A slight difference will be noted in the state averages for the thirteen-year period, as compared with the means shown in the latter table:

MONTHLY AND ANNUAL MEAN TEMPERATURES FOR THE STATE—1870-1902 (DECADES.)

YEAR.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Annual	Winter mon.	Spring mon.	Summer mon.	Autumn mon.
1870	19.7	26	28.0	51.8	62.7	72.7	75.6	73.8	59.3	49.2	28.6	23.1	47.7	24.9	45.8	72.2	49.6
1871	25.6	19.4	36.8	50.6	59.3	69.1	68.6	69.2	60.2	50.5	32.3	37.4	48.4	25.2	45.2	69.0	49.2
1872	15.3	28.1	31.9	45.1	54.0	69.2	73.1	71.4	60.7	54.5	33.2	18.7	47.5	20.7	43.7	71.2	50.8
1873	16.0	16.4	31.9	45.5	56.6	71.2	75.4	69.4	64.7	52.4	31.6	22.0	48.5	15.9	44.6	71.7	50.3
1874	14.3	19.7	41.0	51.7	61.1	73.5	76.4	74.0	65.1	51.7	32.7	35.1	49.7	23.0	51.2	74.7	49.8
1875	25.6	16.4	34.4	48.1	61.7	72.1	71.7	69.8	60.3	51.3	25.2	45.5	48.5	14.4	48.1	71.2	49.0
1876	24.4	27.4	34.0	53.5	65.5	69.1	75.5	71.1	56.5	47.1	32.6	40.0	48.5	27.8	50.3	71.4	45.0
1877	17.9	24.0	32.0	47.9	54.0	69.1	75.6	68.8	59.7	49.5	34.3	18.0	46.7	19.9	46.1	71.2	54.3
1878	25.4	24.2	37.5	48.1	59.6	67.1	74.3	71.2	63.5	47.5	32.2	18.1	47.6	21.9	48.4	72.0	45.9
1879	19.8	12.2	24.3	48.8	59.0	72.0	74.4	69.2	59.7	48.9	32.6	37.6	47.0	18.2	41.5	72.1	51.3
1880	25.6	14.8	30.1	52.5	59.4	69.4	74.2	69.1	59.3	50.5	26.9	32.5	47.6	23.4	48.7	71.3	52.4
1881	23.7	17.5	34.3	52.4	59.0	70.7	73.5	72.4	63.5	48.8	33.3	34.2	48.8	20.5	47.9	72.2	51.1
1882	22.4	17.6	39.1	48.7	63.8	68.5	73.1	69.1	59.1	53.5	41.2	30.1	47.8	20.0	50.2	69.1	51.2
Means	19.9	20.3	32.5	49.9	59.5	70.2	74.3	71.6	61.0	52.3	31.6	24.2	47.7	21.2	47.2	72.0	49.9

MONTHLY AND ANNUAL MEAN TEMPERATURES BY DISTRICTS AND SECTIONS.

DISTRICTS.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.	Annual.
Northeast District	17.0	16.6	30.4	47.	59.4	68.2	72.7	70.6	62.2	51.0	33.0	20.5	45.7
North Centra District	17.5	16.2	29.2	46.4	59.3	68.3	73.7	70.1	61.9	50.4	32.1	9.5	45.4
Northwest District	17.8	16.9	29.8	48.4	59.6	68.4	73.3	71.2	63.0	51.1	31.8	20.6	46.2
North section averages	17.4	16.5	29.6	47.3	59.3	68.3	73.0	70.5	62.3	50.7	32.3	20.1	45.7
West Central District	18.8	19.4	31.9	49.4	59.9	69.3	73.9	71.5	63.4	51.3	33.7	23.5	47.2
Central District	18.9	19.4	32.4	49.4	60.4	69.7	74.1	71.9	63.5	52.2	34.8	22.8	47.5
East Central District	18.0	21.3	32.1	48.1	60.1	69.5	74.2	71.3	62.9	50.8	34.8	25.4	47.1
Central section averages	18.5	20.3	32.2	48.8	60.2	69.5	74.1	71.6	63.2	51.4	34.6	23.9	47.2
Southeast District	23.5	23.7	36.8	51.7	62.8	72.0	76.2	74.2	66.4	54.7	38.5	29.7	50.6
South Central District	22.1	21.7	35.4	52.1	61.6	70.7	75.3	73.2	65.6	54.1	37.5	25.2	49.6
Southwest District	22.8	22.2	35.6	52.8	61.6	71.4	75.4	73.3	65.1	54.8	37.2	25.4	49.9
Southern section averages	22.8	21.5	35.9	52.2	62.0	71.3	75.6	73.6	65.7	54.5	37.7	25.7	50.0
State averages	18.2	19.6	32.4	49.3	60.4	69.6	74.2	71.8	63.6	52.1	34.7	22.9	47.5

LATE AND EARLY KILLING FROSTS.

In common with other portions of this country, this state is subject in the crop growing season to occasional depression of temperature down to the frost line. On the average, however, there is immunity from killing frosts for a period of about 170 days. The records of the United States Weather Bureau stations, covering a period of about thirty years, show that the average date of the latest killing frost in the spring has been April 20th, and the earliest in autumn, October 9th. In every season there have been light frosts at later and earlier dates, causing no appreciable damage to vegetation, but extensive injury to staple crops by heavy frost has occurred at very infrequent intervals within the past thirty years. In 1870 Prof. T. S Parvin wrote as follows: "It has happened but once or twice in the last thirty years that the frost has, over a great extent, seriously injured the corn crop. When the spring is late, the fall is either quite hot or lengthened so as to afford time for the crop to mature." The records covering the period since 1870 confirm this statement. The following tables show the dates on which the latest and earliest frosts have occurred at the United States Weather Bureau stations since their establishment:

DES MOINES FROST DATA

YEAR.	LATEST KILLING FROST IN SPRING. MONTH.	Day.	Temperature (Fahrenheit degrees).	EARLIEST KILLING FROST IN AUTUMN. MONTH.	Day.	Temperature (Fahrenheit degrees).	Number days between Killing Frosts.
1870	No record			September	22		
1871	April	28		September	24		155
1872	April	11		November	4		220
1873	April	23		November	9		230
1874	May	1		November	15	32	175
1875	April	22	32	October	30		202
1876	May	1	32	October	23		198
1877	April	18		October	4		159
1878	April	22	32	October	1		161
1879	April	25		October	3		163
1880	April	4		September	25		155
1881	May	16	32	September	17		162
1882	May	11		September	11		170
1883	April	29	32	October	5		147
1884	April	23		September	25		163
1885	May	19		October	12		155
1886	May	14		September	14		148
1887	April	30		September	30		141
1888	April	19	32	September	28		178
1889	April	4		October	24		113
1890	April	16		September	14		161
1900	April	4		October	19		166
1901	April	20		October	8		187
1902	April	4		October	4		167
					14		193
Average.	April	21		October	9		171 days.

DAVENPORT FROST DATA.

YEAR.	LATEST KILLING FROST IN SPRING. MONTH.	Day.	EARLIEST KILLING FROST IN AUTUMN. MONTH.	Day.	Days between frosts.
1872			October	10	
1873	April	8	October	22	196
1874	April	28	October	12	166
1875	May	6	September	18	135
1876	May	1	October	5	148
1877	April	30	October	11	163
1878	March	24	October	27	212
1879	April	11	October	30	201
1880	April	1	October	4	185
1881	April	14	November	10	209
1882	May	2	November	2	161
1883	May	22	October	8	159
1884	April	22	October	23	182
1885	May	9	October	6	149
1886	April	8	October	1	176
1887	April	26	October	12	169
1888	May	13	October	3	142
1889	April	6	October	6	182
1890	May	9	September	28	145
1891	May	5	October	8	155
1892	April	15	October	19	180
1893	April	13	October	15	184
1894	April	8	October	6	180
1895	May	14	September	30	137
1896	April	8	October	7	181
1897	April	17	October	29	194
1898	April	7	October	23	198
1899	April	16	September	30	167
1900	April	5	November	8	216
1901	April	21	October	4	165
1902	April	15	October	28	196
Average date.	April	21	October	13	174

DUBUQUE FROST DATA.

YEAR.	LATEST KILLING FROST IN SPRING. MONTH.	Day.	Temperature degrees.	EARLIEST KILLING FROST IN AUTUMN. MONTH.	Day.	Temperature degrees.
1873				October	20	29
1874	April	17	32	October	13	26
1875	May	2	32	October	7	29
1876	May		32	October	15	32
1876	May	1	31	October	30	31
1877	March	18	32	October	23	30
1878	April	5	24	October	14	27
1879	April	15	32	October	17	30
1880	April	1	30	November	3	32
1881	May	2	31	October	19	30
1882	May	5	31	October	1	31
1883	April	21	32	October	23	28
1884	May	11	26	October	6	26
1885	April	8	32	October	1	32
1886	April	16	32	October	12	32
1887	May	13	30	September	25	32
1888	April	6	26	September	26	32
1889	May	6	30	September	28	32
1890	April	12	32	October	25	32
1891	April	15	32	October	23	32
1892	April	23	30	September	25	32
1893	April	8	32	October	7	32
1894	May	14	30	October	9	26
1895	April	8	32	October	18	28
1896	April	20	27	October	17	32
1897	April	7	28	October	15	32
1899	April	16	32	September	29	32
1900	April	9	28	November	4	31
1901	April	21	30	October	4	31
1902	April	15	32	October	14	30
Average	April	10		October	12	

KEOKUK FROST DATA.

YEAR.	LATEST KILLING FROST IN SPRING. MONTH.	Day.	EARLIEST KILLING FROST IN AUTUMN. MONTH.	Day.	Number days between frosts.
1873			October	6	
1874	April	23	October	31	190
1875	March	2	September	18	229
1876	April	2	October	7	187
1876	April	3	November	5	215
1877	April	4	October	19	228
1878	March	13	October	24	193
1879	April	17	October	4	169
1880	April	16	October	24	190
1881	April	22	November	13	235
1882	March	24	October	15	172
1883	April	8	October	23	197
1884	April	8	October	6	166
1885	April	6	October	1	177
1886	April	5	September	29	206
1887	April	20	September	27	160
1888	April	6	September	27	174
1889	April	10	October	19	191
1890	April	7	October	20	196
1891	April	6	October	23	199
1892	April	23	October	15	174
1893	April	12	October	9	179
1894	April	14	September	30	169
1895	April	4	October	20	198
1896	April	19	October	29	192
1897	April	6	October	14	190
1898	April	16	September	29	196

KEOKUK FROST DATA—CONTINUED.

YEAR.	LATEST KILLING FROST IN SPRING. MONTH.	Day.	EARLIEST KILLING FROST IN AUTUMN. MONTH.	Day.	Number days between frosts.
1900	April	13	November	3	208
1901	April	18	November	3	200
1902	April	8	October	14	188
Average	April		October	15	190

SIOUX CITY FROST DATA.

1889			September	17	
1890	May	2	September	13	129
1891	April	7	October	8	182
1892	May	7	October	8	154
1893	May	5	September	25	145
1894	May	10	September	26	134
1895	May	21	September	27	129
1896	April	18	September	19	153
1897	April	20	September	17	141
1898	April	20	October	6	163
1899	May	4	September	20	139
1900	May	4	September	17	136
1901	April	19	September	17	150
1902	April	23	September	13	143
Averages	May	1	September	23	145

SUNSHINE AND CLOUDINESS.

Iowa enjoys the advantage of a good average amount of sunshine. The mean for the year is 50 to 60 per cent, and this average is maintained in midwinter as well as in midsummer. A distinctive feature of the climate as compared with the eastern states is the large percentage of clear skies in the winter season. The coldest periods in winter are generally cloudless, as a result of the low percentage of humidity during prevalence of north and west winds. For the year the average for the state is as follows: 156 clear, 107 partly cloudy, and 102 cloudy days. The following table shows the yearly averages for the state from 1892 to 1902, inclusive. It will be seen that in the hot and dry years, 1894 and 1901, the number of clear days much exceeded the normal:

YEAR	No. of clear days.	No. of partly cloudy days.	No. of cloudy days.
1892	146	102	117
1893	93	108	164
1894	184	109	72
1895	169	108	88
1896	145	115	105
1897	158	105	102
1899	160	105	100
1900	160	116	89
1900	172	101	92
1901	178	103	84
1902	145	109	111
Average	156	107	102

DESTRUCTIVE STORMS.

Cyclones of the transcontinental type, which move in rapid succession across this central valley and irrigate the larger part of the continent, are

moderate in force in comparison with the tropical cyclones or hurricanes that occasionally devastate portions of the Gulf and Atlantic coast. The most severe storms that visit this region are of the minor or local class of disturbances, and their destructive effects are usually limited to narrow tracks and small areas. The earth is watered and made fruitful by the expenditure of tremendous energy in the operation of nature's rain making machinery, and the most destructive storms are incidental ills resulting from conditions which promote the general good. Hailstorms, windsqualls, thunderstorms and tornadoes are exceptional products of the benign elements of heat and moisture which have made this valley a paradise of abundance. There are regions of wide extent, which enjoy well nigh perfect immunity from these severe storms, but they are mostly deserts or arid sections which must be irrigated to yield even a scanty support to their inhabitants.

In Iowa the heaviest damage to crops has been caused by hail, and lightning is the element that causes greatest destruction of human life, farm animals and buildings. Wind squalls have wrought considerable destruction to farm buildings, windmills and frail structures in exposed localities. Tornadoes have caused more general alarm among people at home and abroad, but in reality they have been relatively infrequent, and have caused less real damage than has resulted from ordinary thunderstorms. The area devastated by tornadoes in this state is quite insignificant in comparison with the whole state; in fact, it may be stated that not exceeding one half of one per cent of the entire surface of the state has been swept over by tornadoes within the past half century. There have been scores of windstorms that were miscalled tornadoes in sensational reports, but the real, deadly tornado is an infrequent visitor, and when one comes its path is very narrow. There has been a vast deal of exaggeration in relation to that class of storms.

Gen. A. W. Greeley, chief signal officer of the United States army, in his book on American Weather, said that about three thousand persons in the United States have been killed by tornadoes, and the loss of life has been greatest in the following states, in the relative order named: Missouri, Mississippi, Iowa, Illinois, Minnesota, Wisconsin and Ohio. In his annual report for 1890, General Greeley gave the following estimate of the total area visited annually by violent storms of all classes: In Alabama one square mile of limited destruction to 8,866 square miles of area; Arkansas, 1 to 14,418; Georgia, 1 to 6,696; Illinois, 1 to 8,162; Indiana, 1 to 6,210; Iowa, 1 to 7,164; Kansas, 1 to 9,720; Missouri, 1 to 5,336; Ohio, 1 to 4,554; Wisconsin, 1 to 12,042 miles.

The mean velocity of the wind over this state is about the average for the United States eastward of the one hundredth meridian. The average hourly movement is seven to eight miles. In recent years the force of the wind has been measurably broken, or modified, by artificial timber belts, hedges, etc. The prevailing winds in summer are southerly, and westerly at other seasons.

IS THE CLIMATE PERMANENT?

All records of weather observations in this state for the past fifty years give an affirmative answer to the above inquiry, though there are some who still regard it as an open question. The chief value of records covering considerable periods is that they illustrate not only the seasonal variability but also the permanent conditions of climate. There is as much weight of testimony to sustain the theory that the climate is becoming wetter and

cooler as that it is changing towards the opposite extreme. Every table of extremes and means is a prophecy of what may be expected in future years. The constants of temperature, humidity, atmospheric pressure and precipitation appertain as much to the realty of this state as the soil and nether deposits of clay, rock and coal. In fact, it is much easier for man to exhaust these resources of soil and mineral deposits than to cause even the slightest change in its climatic features.

IOWA'S SOIL PRODUCTS.

Iowa's primacy in agriculture is attested by the following statistical tables, compiled from the annual reports of the state Weather and Crop Service for the past thirteen years—1890 to 1902. The first table in the series of crop statistics gives the average yield per acre for each year of the period, and the average amount of rainfall for the state in the four critical months of the crop season, May 1st to September 1st. The second table shows the totals of the staple crops for the state, and the third gives the average farm price of the several products on December 1st in each year of record, with the aggregate value of all soil products. In these figures as to value of crops no account is made of the increment gained by feeding grain and hay to farm animals. The price of corn, oats and hay on December 1st is usually much less than the maximum prices for the year, and much less than the sum usually realized by consuming these crops in the manufacture of beef, pork, mutton, dairy and poultry products, etc. In very many seasons the feeding value of corn has been double the price offered in December, and in all years the sums actually realized have greatly exceeded the farm prices current at close of the harvest.

Corn is foremost, with an average yearly output of 261,200,756 bushels, and an aggregate of 3,395,609,836 bushels in the thirteen year period. The average selling value on the farms, December 1st, has been nearly $70,000,000 yearly. The highest total value for a year's product was $113,000,000 in December, 1901, and the lowest was $36,000,000 in 1894. In four seasons during the period the corn yield has amounted to more than 300,000,000 bushels, viz, in 1891, 1896, 1899 and 1900. In the latter year the product was 345,000,000 bushels, which is the maximum amount for all the years of record, according to the figures compiled by the state crop service. The United States census of 1900, however, credited this state with a total of 383,453,190 in the year 1899, produced on an acreage of 9,804,076 acres. The census figures are of value as evidence that the statistics of the Iowa crop service have been made on a conservative basis as to acreage and average yield. For the past fifteen years the total corn output of Iowa has exceeded any other state in this country, or any other country. Other states have grown more bushels per acre on very small areas; but Iowa is in the lead because it possesses the largest area of farm lands adapted to the production of this great staple. By rotation of crops, it has been possible to produce corn continually on about one-fourth of the area in farms, without exhausting the soil.

The average annual yield of corn has been 31.5 per acre for the state at large. During the past decade the yield per acre has averaged about two bushels higher than in any previous ten-year period; as a result of improved methods in selection and care of seed, preparation of seed bed and cultivation of the crop. The highest yield per acre for the state was harvested in

1900, when the average was 40.3 bushels. In that year May and June received a little less than normal and July considerably above the usual amount; thus giving relatively dry weather for planting and cultivating the fields and copious moisture during the tasseling, earing and filling stage of growth. In 1896 there was dry weather in June and ample rainfall in July for the development of an average crop of 39 bushels per acre. The temperature and rainfall of those critical months determine the output of the corn.

The hay crop ranks second in value and importance, the average yearly amount harvested being about 5,500,000 tons, averaging in value over $30,000,000. The average yield has been about one and a half tons per acre. The total forage products of the state, including cultivated and wild hay, millet, corn stover, straw and pasturage, have been more valuable year by year, than the grain product of the corn crop.

The oats crop fills an important place in the agriculture of the state, the average annual amount being 117,118,000 bushels, valued at over $25,000,000. The range in the average yield has been from 24 to 48 bushels per acre.

The average yearly output of all the cereal crops has been 408,760,000 bushels, valued at $110,541,980 at farm prices on December 1st. This would make the average yearly value of cereals about $485 per farm. The average value of corn per farm has been about $305.

The United States census report for 1900 contained the following important statistics relative to Iowa:

Total number of farms, 228,626.

Number of acres in farms, 34,574,337.

Total acreage improved, 29,897,552.

Value of land and improvements, except buildings, $1,256,751,980.

Value of farm buildings, $240,830,096.

Value of live stock on farms, $278,830,096.

Value of live stock not on farms, $12,714,320.

Value of soil products not fed to stock, $263,383,480.

Value of all farm products, including amount fed to stock, $365,411,528; an average of one million dollars per day.

Average value of products per farm, $1,598.

Average value per acre of products not fed, $7.62.

Value of animals sold and animals slaughtered on farms in 1899, $121,527,461.

Total products of animal industry, $169,858,981.

Value of milk, butter, cheese and eggs, $27,516,870.

Value of eggs produced, $10,016,707.

Value of poultry, $9,491,819.

Products of bees, $305,183.

Value of wool sold, $992,334.

Number of horses in 1900, 1,392,578.

Number of milk cows, 1,423,648.

Number of other cattle, 3,943,582.

Number of swine, 9,723,791.

Number of sheep, 657,868.

Number of mules and asses, 57,579.

Value of farm implements and machinery, $57,960,660.

Amount paid for labor on farms, 1899, $16,375,670.

CROP STATISTICS—1890-1902.

COMPILED FROM ANNUAL REPORTS OF THE IOWA WEATHER AND CROP SERVICE.

YEAR.	STATE AVERAGES OF FARM CROPS 189-1902—YIELD PER ACRE.								AVERAGE RAINFALL, INCHES—MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Spring wheat, bushels.	Oats, bushels.	Barley, bushels.	Rye, bushels.	Flax, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	28	12	29	24	16	10.5	48	1.5	3.56	7.76	1.98	3.41	16.71
1891	38	15	40	29	20	10.7	142	1.7	3.18	5.39	4.22	4.24	17.03
1892	29	12.3	25	24.3	15	8	51	2.0	8.77	5.19	5.29	2.24	21.49
1893	35.7	12.4	24	22.6	16.3	9.1	50.2	1.7	3.45	3.91	3.33	2.32	13.01
1894	14.8	12.8	24	18.4	15.1	8	40.7	0.8	1.85	2.67	.61	1.58	6.75
1895	38	19	48	41	19	11	105	1.3	3.19	4.32	3.40	4.43	15.34
1896	39	18	26	29	16	9.5	87	1.5	6.69	5.11	6.40	3.52	20.22
1897	29	13.4	30	25	15	10	60	1.6	1.12	3.81	3.20	1.80	9.85
1898	34.5	14.8	32	27.5	16	10.5	76	1.7	4.07	4.72	2.98	3.44	15.81
1899	36.3	12.7	34	25.6	16.3	11.2	98	1.5	6.23	5.04	3.07	3.68	18.02
1900	40.3	14.3	35	25.3	15.6	11.7	78	1.4	3.31	3.98	6.15	4.65	18.09
1901	36.2	15.3	32	24.2	15.8	8.8	57.4	1.4	2.31	5.71	2.34	1.29	9.69
1902	34	15	31	25	17	8	91	1.8	5.39	7.16	8.07	6.58	27.89
Averages	32.5	13.8	31.5	26.2	16.4	9.7	73.8	1.5	4.19	4.67	4.02	3.32	16.21

TOTAL YIELD IOWA STAPLE CROPS—1890-1902.

YEAR.	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Rye, bushels.	Barley, bushels.	Flax, bushels.	Potatoes, bushels.	Hay, tons
1890	230,675,150	10,041,000	80,002,725	1,008,000	3,664,398	2,570,080	8,342,852	5,698,182
1891	335,031,598	27,588,000	115,810,800	2,051,400	4,518,669	3,151,016	25,020,850	7,120,000
1892	173,867,354	7,534,952	83,495,150	1,596,270	14,040,072	5,188,104	8,729,169	6,958,000
1893	214,804,758	11,385,869	100,742,852	1,785,202	11,437,666	2,263,891	6,172,257	7,382,000
1894	120,104,880	9,470,306	107,691,460	1,654,073	8,625,040	1,371,165	7,860,321	3,220,000
1895	285,000,000	14,946,000	201,600,000	2,014,000	18,678,000	2,310,000	21,200,000	8,810,000
1896	312,602,210	10,398,756	73,450,000	1,897,716	15,881,618	1,940,720	14,814,795	5,701,440
1897	230,452,150	14,613,054	132,571,150	3,440,844	14,076,850	2,498,000	10,051,910	5,301,320
1898	280,214,850	22,321,268	139,915,340	3,370,550	14,138,000	2,376,600	12,538,410	5,498,080
1899	800,852,710	19,900,830	140,647,300	2,061,100	14,719,310	1,547,790	15,252,630	5,311,130
1900	345,055,040	21,288,350	138,832,300	1,621,130	12,695,200	1,222,980	10,850,900	5,139,000
1901	327,908,850	18,205,000	114,883,000	859,630	14,654,410	916,800	5,098,460	4,980,380
1902	290,950,230	13,512,840	92,967,900	882,830	15,380,910	755,350	12,051,670	5,641,900
Sums.	3,995,699,839	209,094,284	1,522,540,287	24,797,295	162,539,673	28,578,357	158,582,515	71,732,492
Avgs.	261,240,756	16,130,339	117,118,483	1,907,482	12,503,051	2,182,950	12,198,347	5,517,884

AVERAGE VALUES OF FARM CROPS OF IOWA—DECEMBER 1 PRICES—1890-1902.

YEAR.	CORN.		OATS.		WHEAT.		BARLEY.		RYE		POTATOES		HAY.		Value of total soil products.
	Average per bus.	Total value.	Average per bus.	Total value.	Average per bus.	Total value.	Average per bus.	Total value.	Average per bus.	Total value.	Average per bus.	Total value.	Average per ton.	Total value.	
1890	$ .41	$ 98,266,810	$ .39	$ 30,401,030	$ .78	$ 19,589,350	$ .475	1,722,250	$ .51	820,570	$ 1.10	$ 3,276,080	$ 6.00	$ 40,140,730	$ 150,375,000
1891	.30	100,509,470	.23	26,698,480	.78	25,741,020	.35	1,811,460	.65	1,333,410	.80	2,523,210	6.25	40,490,340	207,841,890
1892	.32	55,697,550	.27	22,540,990	.58	4,870,270	.50	7,024,550	.44	675,950	.90	1,969,291	5.25	38,698,000	175,727,940
1893	.25	53,701,880	.22	22,163,420	.49	5,460,000	.32	3,069,040	.35	621,820	.86	1,946,920	5.04	32,239,000	161,207,460
1894	.45	36,894,480	.27	26,112,570	.50	5,240,510	.40	3,687,510	.43	668,490	1.20	2,477,780	7.00	22,151,040	121,284,690
1895	.17	4,570,050	.13	26,208,000	.45	6,465,700	.24	4,432,720	.20	584,000	.78	1,801,800	6.00	22,312,500	168,235,420
1896	.14	43,916,900	.12	8,814,000	.57	6,620,000	.20	3,176,820	.25	486,680	.95	1,135,000	6.00	22,782,00	133,164,620
1897	.17	40,706,860	.16	21,211,380	.74	10,813,650	.23	3,237,670	.34	1,186,710	.87	2,173,782	4.10	22,304,000	151,084,060
1898	.23	66,519,400	.21	29,383,220	.53	11,602,000	.30	4,209,740	.38	1,280,800	.80	1,991,280	4.30	22,281,000	187,455,372
1899	.23	70,429,410	.19	26,722,980	.58	10,701,490	.30	4,415,570	.40	824,400	1.04	1,661,800	5.70	29,350,000	194,005,700
1900	.27	93,164,860	.20	27,796,460	.60	12,739,570	.33	4,189,410	.43	697,300	1.50	1,834,470	5.60	31,120,00	229,809,050
1901	.50	113,954,000	.35	40,909,230	.60	10,965,300	.44	6,447,940	.48	859,68	1.29	916,890	7.50	38,712,000	274,080,930
1902	.28	83,432,700	.24	22,297,900	.53	7,062,640	.33	5,075,710	.40	853,132	1.00	725,350	6.00	36,787,320	215,722,330
Sums		$905,234,220		$330,467,660		$136,821,010		$54,129,880		$10,322,950		$ 23,944,040		$380,200,800	$2,377,194,160
Avgs	$.28	69,633,410	$.25	25,420,510	$.59	10,524,690	$.34	4,163,835	$.41	794,460	$ 1.01	1,841,970	$.45	4,412,660	182,853,420

PRECIPITATION DATA FOR THE STATE AT LARGE.

The following tables contain precipitation data that will be valuable for reference. Table I shows the averages for the past thirteen years for the state at large. Table II contains the averages of meteorological stations and the counties wherein they are located grouped by districts and showing the district and section averages. The last two columns show the number of years covered by the averages of each station.

TABLE I—MONTHLY AND ANNUAL PRECIPITATION FOR THE STATE, 1890-1903.

YEAR.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annual.	INCHES. Winter months.	Spring months.	Summer months.	Autumn months.
1890	2.03	0.85	1.57	1.78	3.56	7.76	4.98	3.41	2.97	3.48	1.46	0.45	31.23	6.31	6.91	13.15	7.81
1891	1.75	1.16	2.60	2.15	3.18	5.39	4.22	4.24	1.85	2.77	1.70	2.41	32.90	5.32	7.93	13.85	5.80
1892	1.09	1.20	2.22	4.75	8.77	5.19	5.29	2.24	1.58	1.55	1.10	1.65	36.58	3.93	15.74	12.72	4.18
1893	0.74	1.39	2.14	4.21	3.45	3.9	3.39	2.93	2.34	1.28	1.17	1.31	27.59	3.44	9.80	9.56	4.79
1894	1.09	0.89	2.30	3.07	1.87	2.67	0.63	1.58	3.57	2.67	0.92	0.95	21.91	2.93	7.14	4.88	7.16
1895	0.85	0.49	0.83	2.62	3.19	4.32	3.40	4.43	3.03	0.47	1.51	1.63	26.77	2.97	6.64	12.15	5.01
1896	0.48	0.71	1.10	5.02	6.65	3.1	6.90	3.52	4.09	3.13	1.83	0.65	37.23	1.84	12.81	13.53	9.05
1897	2.01	0.88	2.89	5.35	1.92	3.81	3.26	1.86	2.04	1.14	0.66	1.65	26.97	4.54	9.06	8.93	3.84
1898	1.60	1.20	1.94	2.57	4.67	4.72	2.98	3.44	2.69	3.59	2.50	0.48	31.32	3.99	9.17	11.14	7.75
1899	0.28	0.89	1.62	2.40	3.23	5.04	3.07	3.68	0.93	1.73	1.20	1.61	28.68	2.78	10.25	11.79	3.86
1900	0.53	1.30	2.08	2.67	3.31	3.93	6.15	4.65	4.08	3.91	1.09	0.45	34.15	3.28	8.04	14.78	9.05
1901	0.74	1.01	2.64	1.79	2.35	3.71	2.34	1.29	4.77	1.98	0.86	0.93	24.41	2.68	6.78	7.34	7.61
1902	0.88	0.73	1.45	1.71	5.39	7.16	8.67	6.58	4.35	2.54	2.13	2.23	43.82	3.84	8.55	22.41	9.02
Averages													31.07	3.32	9.19	12.02	6.53

MONTHLY AND ANNUAL PRECIPITATION.

Averages by Districts, Stations and Counties, with Number of Years' Records.

NORTHEAST DISTRICT.

STATION.	COUNTY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annl.	No. of years.	Period.
Lansing	Allamakee	1.18	1.33	2.43	3.33	4.31	4.99	3.45	3.00	2.36	2.50	1.87	1.18	30.10	7	1896-1902
Waukon	Allamakee	1.59	1.39	2.21	2.34	3.77	4.83	4.30	3.43	4.44	2.37	1.27	1.74	35.24	13	1877-1889
Decorah	Winneshiek	1.08	0.98	1.56	2.69	4.52	4.26	3.21	1.78	3.44	2.34	1.59	1.36	28.05	10	1893-1902
Ridgeway	Winneshiek	1.70	2.05	2.41	2.11	5.15	4.52	5.09	2.70	4.15	3.58	1.95	2.50	38.89	5	1898-1902
Cresco	Howard	1.17	.93	1.79	2.43	3.76	4.96	4.63	2.85	3.69	2.85	1.36	1.29	30.43	22	1877-1902
New Hampton	Chickasaw	.83	1.07	1.85	1.93	4.47	4.48	3.49	2.40	3.75	2.35	1.70	0.97	31.67	6	1897-1902
Waverly	Bremer	.93	1.42	1.96	3.04	4.62	4.48	3.84	2.53	3.20	2.14	1.48	1.08	31.69	7	1896-1902
Fayette	Fayette	1.23	1.16	2.26	3.20	4.84	5.85	5.70	2.90	3.16	2.81	1.65	1.33	35.79	15	1888-1902
Clermont	Fayette	1.14	.84	1.61	2.29	4.32	4.30	4.15	2.39	3.43	2.15	1.47	1.18	29.00	26	1877-1902
Elkader	Clayton	1.35	1.72	1.83	2.85	4.15	4.20	4.31	2.80	3.82	2.71	1.68	1.63	32.72	23	1877-1902
Grand Meadow	Clayton	1.18	1.72	2.10	3.13	5.15	5.26	4.32	2.50	3.17	2.87	1.50	1.51	33.65	12	1891-1902
McGregor	Clayton	1.38	1.14	1.95	2.58	4.09	4.94	4.54	2.86	3.76	2.95	1.47	1.63	33.32	27	1876-1902
Averages		1.22	1.26	2.01	2.58	4.39	4.68	3.94	2.68	3.56	2.62	1.72	1.47	32.25	15	

NORTH CENTRAL DISTRICT.

Osage	Mitchell	.88	1.18	1.57	2.57	4.23	4.52	3.54	3.00	3.50	2.43	1.45	1.28	30.18	15	1888-1902
Northwood	Worth	.65	1.16	1.60	2.31	4.42	4.81	3.90	3.02	3.49	2.63	1.56	.91	30.70	7	1896-1902
Forest City	Winnebago	.64	.77	1.48	2.66	3.80	5.00	3.43	2.21	3.52	2.37	1.31	.91	29.42	9	1894-1902
Algona	Kossuth	.30	1.30	1.58	2.54	3.45	4.39	3.67	3.71	3.16	2.10	1.26	1.05	29.51	30	1873-1902
Estherville	Emmet	.35	.62	1.41	2.44	3.15	4.39	3.67	3.71	3.16	2.10	1.26	1.05	29.51	30	1873-1902
West Bend	Palo Alto	.62	.81	1.64	2.81	3.84	3.81	3.84	3.03	3.18	1.76	1.39	.99	27.31	10	1893-1902
Britt	Hancock	.59	.97	.91	2.07	3.69	4.48	4.32	3.17	4.05	2.18	.58	.79	24.33	6	1897-1902
Mason City	Cerro Gordo	1.19	.59	1.34	3.33	3.95	7.04	2.79	2.66	1.85	2.01	1.00	.66	28.59	6	1894-1899
Charles City	Floyd	1.11	1.22	1.75	2.90	4.13	5.11	3.24	2.93	2.87	2.04	1.49	1.29	30.07	12	1891-1902
Greene	Butler	.71	.95	1.64	1.88	4.34	4.07	4.19	3.15	3.34	2.14	1.29	.98	28.39	6	1897-1902
Hampton	Franklin	1.10	1.11	2.26	3.44	4.17	5.23	4.14	3.15	3.50	2.63	1.64	1.32	33.65	13	1890-1902
Dows	Wright	.54	.90	1.99	3.05	5.46	5.08	4.85	3.88	3.77	2.35	2.34	.80	33.21	7	1896-1902
Humboldt	Humboldt	.65	.70	1.45	2.74	3.88	4.67	3.94	3.11	3.44	1.73	1.46	.76	28.53	15	1887-1902
Plover	Pocahontas	.51	.65	1.38	1.78	3.28	4.03	5.13	4.00	4.04	2.31	1.59	.75	28.29	7	1896-1902
Averages		.70	.92	1.60	2.61	3.87	4.67	3.96	3.29	3.33	2.16	1.42	.95	29.40	10.7	

NORTHWEST DISTRICT.

Spirit Lake	Dickinson	.51	.55	.80	1.72	3.83	5.88	4.40	4.01	3.71	1.95	.56	1.15	30.50	4	1899-1902
Sibley	Osceola	.54	.47	1.17	2.69	3.85	4.13	3.01	3.25	3.16	1.67	.87	.80	28.07	10	1893-1902
Rock Rapids	Lyon	.63	.14	1.59	3.75	3.39	3.74	2.52	1.76	2.30	1.75	.99	.61	23.17	6	1897-1902
Sioux Center	Sioux	.27	.78	1.25	3.13	3.82	4.33	5.38	4.10	4.31	1.56	.56	.81	30.22	4	1899-1902
Primghar	O'Brien	.42	.42	2.03	2.82	3.07	4.31	5.11	2.44	2.32	1.68	.92	.42	26.84	8	1895-1902
Sheldon	O'Brien	.39	.64	.91	1.48	3.62	4.17	6.85	3.42	4.09	2.01	.71	.90	29.27	4	1899-1902
Spencer	Clay	.40	.48	1.07	2.70	3.75	5.13	3.18	3.05	2.55	2.5	1.05	.47	27.20	5	1897-1899
Alta	Buena Vista	.65	.75	1.82	3.24	4.22	5.09	4.71	3.84	2.67	2.17	1.17	1.03	33.03	12	1891-1902
Storm Lake	Buena Vista	.70	.65	1.58	2.30	3.52	4.88	4.28	2.92	3.02	1.79	.96	.93	27.23	13	1890-1902
Larrabee	Cherokee	.57	.75	1.65	2.91	3.95	5.00	4.66	4.34	2.88	1.84	.98	1.07	30.64	13	1890-1902
Wa-hta	Cherokee	.41	.62	1.25	1.75	3.21	4.41	5.10	2.91	3.01	1.97	1.05	1.17	27.97	5	1898-1902
LeMars	Plymouth	.49	.61	1.35	3.02	3.50	4.02	4.90	2.74	3.19	1.85	1.00	1.09	28.70	7	1896-1902
Averages	Northwest district	.51	.57	1.38	2.68	3.52	4.70	4.58	3.15	3.32	1.85	.90	.87	28.16	7.5	
Averages	*Northern section	.81	.89	1.63	2.62	3.92	4.08	4.18	3.05	3.47	2.21	1.33	1.35	29.91	11	

*Thirty-eight stations of observation.

WEST CENTRAL DISTRICT.

Sac City	Sac	.95	.82	1.65	3.39	3.63	4.89	3.81	3.36	3.20	2.56	1.11	1.15	30.21	25	1878-1902
Grant City	Sac	.52	.69	1.72	2.30	3.66	4.45	3.88	3.70	4.10	1.95	1.44	1.04	29.28	17	1886-1902
Odebolt	Sac	.82	.75	1.90	2.71	2.77	4.31	5.12	3.09	3.15	2.21	1.12	1.10	28.78	6	1897-1902
Galva	Ida	.35	.47	1.39	2.70	3.30	4.23	4.20	3.34	4.00	1.67	1.33	.84	31.01	10	1893-1902
Sioux City	Woodbury	.54	.54	1.76	2.84	3.52	3.85	3.40	2.89	2.52	.02	.77	.89	24.61	4	1899-1902
Onawa	Monona	1.14	.95	1.53	2.99	4.38	5.24	4.63	3.89	2.77	3.34	1.13	1.08	32.07	24	1877-1902
Denison	Crawford	.56	.64	1.63	3.06	3.60	3.58	4.32	3.38	3.21	1.41	.90	.60	29.88	9	1893-1902
Carroll	Carroll	.86	1.08	2.35	3.52	4.41	4.84	3.90	3.77	3.12	2.24	1.15	1.08	32.17	13	1890-1902
Hamlin	Audubon	.57	.56	.85	1.58	3.31	3.49	3.84	2.38	2.55	1.59	.85	.84	23.39	12	1891-1902
Audubon	Audubon	.66	.80	1.78	1.92	3.92	3.77	3.92	3.05	3.00	2.24	1.48	1.25	28.44	10	1893-1902
Panama	Shelby	.36	.59	1.35	4.11	4.26	3.51	3.88	4.11	2.34	1.53	1.38	1.04	28.50	16	1891-1906
Logan	Harrison	1.12	1.20	1.90	2.87	4.19	5.70	4.91	3.88	3.11	2.48	1.16	1.35	33.80	37	1866-1902
Averages	West Central District	.66	.76	1.61	2.88	3.75	4.32	4.15	3.53	3.09	2.10	1.15	1.02	29.36	15	

CENTRAL DISTRICT.

Grundy Center	Grundy	.71	.72	1.16	3.38	4.05	5.84	4.18	3.57	3.32	2.69	1.28	1.25	33.58	12	1891-1902
Iowa Falls	Hardin	.84	.95	1.61	3.15	3.55	4.77	3.84	3.40	3.22	2.30	1.28	1.16	29.86	10	1893-1902
Webster City	Hamilton	1.11	1.05	1.96	3.81	3.22	3.80	3.72	2.85	1.51	2.70	1.10	1.26	27.28	5	1893-1897
Rockwell City	Calhoun	.63	.51	2.30	2.41	3.34	4.50	4.00	3.54	3.05	2.58	.85	1.10	28.13	7	1894-1902
Ogden	Boone	.50	.50	1.52	2.95	3.16	4.48	4.12	4.06	3.80	2.66	1.11	1.01	32.15	9	1894-1902
Ames I. S. C.	Story	.97	.84	1.48	2.75	4.23	4.75	4.58	3.54	3.53	2.54	1.70	1.02	31.29	23	1876-1902
Albion	Marshall	.91	1.89	2.17	2.04	4.18	5.11	4.54	3.02	4.40	3.17	1.81	1.18	34.22	7	1897-1903
Marshalltown	Marshall	.94	.78	1.93	3.11	4.74	4.94	4.45	3.57	2.67	2.47	1.33	1.48	32.40	11	1891-1902

MONTHLY AND ANNUAL PRECIPITATION—CONTINUED.

CENTRAL DISTRICT—CONTINUED.

STATION.	COUNTY.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug	Sept.	Oct.	Nov.	Dec.	Ann'l.	No. of years.	Period.
Toledo	Tama	.81	.69	1.75	3.08	3.71	3.60	3.23	3.82	3.11	.87	1.53	1.14	28.29	9	1894-1902
Dysart	Tama	1.24	1.20	1.73	2.11	3.89	4.97	4.75	3.80	4.70	3.13	1.79	1.68	34.80	14	1876-1889
Grinnell	Poweshiek	1.16	.87	1.79	3.52	4.65	4.89	3.72	3.66	.46	2.45	1.52	1.29	31.98	13	1890-1902
Newton	Ja-per	92	1.02	1.56	3.33	4 46	4.97	3.88	3 87	3.23	2.77	1.80	1.33	33.39	16	1878-1902
Des Moines	Polk	1.23	1 11	1.56	2.95	4.60	5.07	3.70	3.48	3.09	2.85	1.50	1 38	32.52	25	1878-1902
Guthrie Center	Guthrie	.53	.67	1 40	2.47	4.57	4.06	4.54	4.56	3.46	2.22	1.05	1.27	33.54	8	1895-1902
Averages	Central District	.90	.92	1.74	2 98	4.23	4.66	4.09	3.62	3.26	2.56	1.36	1.29	31 66	12	

EAST CENTRAL DISTRICT.

Dubuque	Dubuque	1 58	1.48	2.22	2 94	4.29	4 78	4.15	2.92	3.96	2.59	1 85	1 09	34 43	30	1874-1902
Hopkinton	Delaware	1.20	1.11	.76	2.58	3.59	3.60	3 98	3.59	4.25	2.27	1.44	1.30	29.67	10	1864-1898
Delaware	Delaware	1.01	88	1 83	3.04	4 12	4.28	3.68	2 86	3.24	2 22	1.61	1.52	30.29	12	1891-1902
Independence	Buchanan	1.37	1.05	1.79	2.21	4 17	5 03	4.72	3.43	4 70	2.37	1.52	1.48	33.84	36	1867-1902
Waterloo	Black Hawk	.95	.98	1.83	2.99	4.38	4 50	4 24	3.60	3 49	2.32	1.40	1.14	31.82	8	1895-1902
Cedar Falls	Black Hawk	1.12	.93	1 42	3 32	4.86	3 80	3.95	2.90	2.78	2.52	1.31	1.02	29.93	9	1891-1899
Vinton	Benton	1.15	1.01	1.78	2.92	3.95	6.98	3.39	2.61	2.79	1.60	1.15	1 21	28.27	13	1890-1902
Belle Plaine	Benton	1.52	1.30	2.60	3.61	4 44	4.23	3.64	4 36	2.90	2.28	1.83	1.49	33.53	13	1890-1902
Mount Vernon	Linn	1 31	1 07	2 03	3.03	4 09	3.75	4.63	4.57	2 81	2.40	1.12	1.66	32.47	7	1896-1902
Cedar Rapids	Linn	1.44	1.55	2.18	2 98	4 52	3.92	3.87	3.25	2.89	2.59	1.42	1.61	32.22	21	1882-1902
Monticello	Jones	1.54	1.60	2.39	2.69	3.91	4.49	4.16	3.55	3.72	2.72	2.14	2.21	35.12	48	1855-1902
Olin	Jones	1.08	1.33	2.45	2.18	4.52	3.52	3 60	3.53	3.38	2.42	1.20	1.46	30.73	5	1898-1902
Maquoketa	Jackson	1.32	1 50	2.29	2.53	4.53	5.72	4.09	2.83	3 21	2.94	1.45	1.61	33.14	10	1890-1902
Clinton	Clinton	1.85	2.11	3.02	2 93	4 60	4.68	4.09	3.05	3.10	2 41	1.90	1 81	33 55	32	1866-1902
Davenport	Scott	1 66	1.59	2.24	2 71	4.33	4 14	3 64	3.61	3 06	2 42	1.89	1.63	32.92	32	1871-1902
Muscatine	Muscatine	1.01	2.08	2 79	3 41	4.38	4.86	3 91	4.38	3 72	3.04	2.30	2.28	38.16	46	1846-1891
Wilton	Muscatine	1 38	1 40	2 71	2.87	4 32	3 28	5 27	4.21	3.18	2.07	1.80	1.45	30 80	8	1895-1902
Mechanicsville	Cedar	1.40	1.13	2 15	2 99	4.30	4.40	3.52	2 08	2.95	1.34	1 62	1.76	30.79	5	1892-1896
Iowa City	Johnson	1.74	1 51	2.48	3.14	4.34	4.63	4.50	4.26	3.83	2.54	2.32	1.66	36.95	41	1857-1902
Amana	Iowa	1.44	1.27	2.00	2.88	4.46	4.49	4 20	3.58	3 36	2.74	1.75	1.49	33.48	27	1876-1902
Averages	East Central District	1.35	1.34	2.15	2.90	4.30	4.30	4.06	3.46	3 37	2.39	1.65	1.57	32.61	21	
Averages	*Central Section	1.03	1.06	1.88	2.90	4.09	4.42	4.09	3.53	3 26	2.88	1.43	1.34	31.47	17	

SOUTHEAST DISTRICT.

Wapello	Louisa	.71	1.46	2.52	2.24	3 59	2.92	3.09	5 25	2.92	2.22	1 46	1.34	29 95	4½	1898-1902
Washington	Washington	1.45	1 16	2.17	2.62	3.43	2.45	3.54	3.49	2.62	2.13	1.39	1.47	29.92	13	1890-1902
Sigourney	Keokuk	1.24	1.35	1.89	3.60	3.98	3.69	6.34	3.73	2.97	3 02	1.50	1.41	36.73	7	1896-1902
Ottumwa	Wapello	1.59	1.24	1.91	3.08	4 82	3.79	4 29	3 68	4.32	2.88	1 68	1.37	34.52	9	1894-1902
Fairfield	Jefferson	1.36	1 38	2.03	3.17	4.30	4 55	3.34	3.77	3.17	2.68	1.68	1.38	32.81	25	1876-1902
Brookville	Jefferson	1 26	1.26	1.99	3.06	3.83	4.97	2 82	3.39	3.00	2.95	1.77	1.62	32.24	13	1876-1888
Mt Pleasant	Henry	1.23	1.04	2.33	3.05	4 34	4.21	3.74	3.91	3.36	2.08	1 59	1.21	31 77	9	1894-1902
Keokuk	Lee	1.80	1.65	2.33	3.19	4.27	4.49	4.21	3.04	3.73	2 67	3.00	1 76	35.35	32	1871-1902
Ft. Madison	Lee	1.89	1.96	2.98	3.29	4.86	4.34	4.11	3.66	3.79	2.75	2.16	2.00	37.79	54	1848-1902
Keosauqua	Van Buren	.92	1 42	2.48	3.84	4.34	4.06	3 97	3.49	4.48	1.90	1.63	1.54	34.07	11	1892-1902
Bonaparte	Van Buren	1.57	1.24	2.68	3.33	4.03	4.34	3 60	3.83	4.01	1.82	2.00	1.45	33.80	12	1891-1902
Belknap	Davis	1 78	1.89	1 59	2.04	2 98	3 96	4.04	4 66	4.14	3.05	2.18	1.98	34.86	8	1895-1902
Averages	Southeast District	1.40	1.42	2.24	3 04	4.06	8.98	3.92	3 82	3.54	2.50	1.84	1.54	33.65	16	

SOUTH CENTRAL DISTRICT.

Oskaloosa	Mahaska	.88	1.07	1.89	2.78	3.57	4.13	4.05	3 14	3.10	2.33	1.55	1 28	29.77	27	1876-1902
Knoxville	Marion	.93	.98	1.50	3.16	3 36	3.82	4.46	4.52	3.51	2 40	1.64	1 36	31 04	10	1893-1902
Indianola	Warren	1.15	.75	1.19	3 28	4.70	4.08	3.64	4.16	3.05	2.06	1.30	1.41	30.77	13	1890-1902
Winterset	Madison	.94	.89	2 04	3.63	4.57	5 84	5.93	3.51	3 35	2 37	1.21	1.37	35.71	12	1891-1902
Greenfield	Adair	.90	1.04	2.24	3.13	4.60	5.11	4.89	2.82	3 28	2.30	1.06	1 35	32.72	12	1891-1902
Afton	Union	.81	1 04	2.30	3 67	4.71	4.30	4.80	3 51	3.87	2.96	1.11	1.28	34.36	9	1894-1902
Osceola	Clarke	1 26	1.08	1.88	3.52	5.07	4.28	5 14	3 19	4.18	3.07	1.49	1.27	31 43	9	1894-1902
Hopeville	Clarke	.90	77	1.68	3 42	4.76	4.35	4.62	3.29	3.53	2.43	.98	1.11	31.84	12	1891-1902
Chariton	Lucas	1.11	1.04	1 50	3.49	4.27	4.27	6 24	2.90	3.73	2.82	1.41	1.52	34 30	8	1895-1 02
Maxon	Monroe	.63	1.28	1.67	3.43	5.16	3.42	4 20	4.87	2.62	1.55	1.78	1.97	32.58	6	1891 1896
Centerville	Appanoose	.91	1.22	1.55	3.68	3.58	3 70	3.38	3 98	2.33	1.87	1.33	2 39	28 92	10	1893-1902
Ovid	Wayne	1.61	1.42	2 07	3.12	4.97	4.33	4.40	4.01	3 86	2.87	1.50	1 02	35.78	10	1893-1902
Mt. Ayr	Ringgold	1 08	1.16	1.93	3.15	5 39	4.44	5.11	3.32	3 17	2.39	1.28	1.32	33 69	10	1892-1902
Averages	South Central District	1 00	1.00	1.80	3.35	4 52	4.31	4.68	3.65	3.35	2 42	1.31	1.48	32 53	11.4	

SOUTHWEST DISTRICT.

Atlantic	Cass	.76	.96	1 96	3 04	4.17	5.68	4.35	3.96	2.67	2.64	.85	1.38	31.53	12	1891-1902
Council Bluffs	Pottawattamie	.69	1.00	1.53	2.51	4.45	5.38	4.81	3.45	3.30	3 04	1.10	.96	32 25	25	1871-1902
Glenwood	Mills	.85	.68	1.26	2.55	4.49	3.91	3.66	3 51	2.13	2.53	60	.78	28 69	17	1885-1902
Red Oak	Montgomery	.72	.78	2.26	2.84	3 74	5.16	4.80	3.09	2.96	3.20	1.04	1.22	31.91	6	1897-1902
Villisca	Montgomery	.62	1.05	2.43	3.41	4.15	4 99	5.11	3.82	2.89	2.17	1.08	1.37	32.09	10	1893-1902
Corning	Adams	.75	.80	1.75	3.09	4.73	4.19	4.47	3.40	2.48	2.56	.96	1.24	30 42	11	1892-1902
Lenox	Taylor	.63	.65	1.85	3.02	4 71	4.13	5.22	3.60	2 97	2 99	1.13	1.38	32 62	8	1895-1902
Clarinda	Page	.97	1.02	1.90	3.31	4.79	5.11	4 68	3.71	2.56	2.79	1.63	1.24	32 22	13	1890-1902
College Springs	Page	.56	.90	1.85	3.67	4.94	4.43	5.73	3.44	2.46	3.11	1.04	1.59	33.72	12	1891-1902
Thurman	Fremont	.71	1.32	1 78	3.44	4.71	7 54	5.48	5.43	3 21	4 04	1 09	1.78	40.53	7	1897-1902
Averages	Southwest District	.73	.92	1.86	3.09	4.49	5 05	4.83	3.65	2.76	2.97	.99	1.28	32.60	12	
Averages	*Southern Section	1.06	1.14	1.97	3.11	4.35	4.41	4.46	3.70	3 25	2.63	1.40	1.16	32.93	13.3	
Averages	State	.97	1.04	1 84	2.89	4 13	4 50	4.23	3 43	3 30	2.40	1.40	1.29	31.40	14	

*Thirty-five stations.

CLIMATE AND CROP DATA BY COUNTIES.

TEMPERATURE AND PRECIPITATION RECORDS AND CROP AVERAGES BY COUNTIES, GROUPED IN DISTRICTS.

NORTHEAST DISTRICT.

This district includes seven counties, as follows: Allamakee, Winneshiek, Howard, Chickasaw, Bremer, Fayette, and Clayton. The mean annual temperature of the district is 45.7°; average yearly precipitation, 32.25; average rainfall May 1 to September 1, 15.69; average yield of corn per acre, 32.3 bushels.

ALLAMAKEE COUNTY.

Area of the county, 615 square miles; area in farms, 383,324; number of farms, 2,368; value of farms (census of 1900), $8,389,430; value of farm buildings, $2,284,690; value of live stock, $2,110,468; value of products of the year not fed to stock, $2,268,083; acreage in cereal crops, 94,540 acres. The following tables contain meteorological records compiled at Lansing and Waukon; altitude of Lansing, 632 feet; Waukon, 1,217 feet.

LANSING TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1896	....	....	....	....	....	70.5	72.4	71.0	57.9	47.4	32.0	28 2	....	99	.....	....	.....
1897	17.3	25.2	30.6	48.8	57.9	67 6	75.0	67.8	68.7	57.0	31.2	18.2	47.2	99	.....	-25	.....
1898	23 4	23.3	37.6	47.0	61.3	71.0	72 6	70 0	65.2	48.2	34.0	17.6	47.6	95	.....	-15	.....
1899	18.5	12.2	23.7	50.2	60.3	69.5	73.2	71.9	61.9	57 0	44.2	21.8	47.0	96	.....	-31	.....
1900	24.7	14.9	29.6	51.8	63 4	69.2	72.3	77.6	65.0	58.8	32.6	26.8	48.9	97	.....	-13	.....
1901	22 6	15.8	33 0	51.4	61.5	71.8	....	....	....	....	....	....	....	....	....	....	.....
1902	....	....	....	48.4	63.0	65.6	73 0	68.6	60.1	52.8	40.9	20.4	....	94	July ..	....	.....
Mean	21.3	18.3	30.9	49.8	61.2	69.4	73.0	71.1	63.1	53.5	35.8	22 1	47.7	....	.....	....	.....

LANSING—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec	Ann'l.	Snow
1896	....	....	....	....	....	4.97	1.64	3.07	4.04	2.45	3.20	0.45	.....	....
1897	2.82	0.94	1.70	2.24	0.94	6.58	2.66	1.40	3.03	0.26	0.81	1.22	24.55	36.9
1898	0.85	1.70	2.37	3 03	2.38	3.00	3.12	2.37	2.64	5.20	1.93	0.27	28.86	33.3
1899	0.53	1.77	2.68	4.12	3.87	6.01	1.11	5.00	1.57	1.27	1.75	2.65	32.23	49.4
1900	1.05	1.14	1.69	2.84	4.35	2.03	5.28	3 02	3.55	4.62	1.92	0.37	31.86	40.2
1901	0.66	1.08	3.78	1.04	2.97	2.63	....	....	....	....	....	2.12	.....	....
1902	....	....	....	1.08	11.36	3.52	6.87	3.18	3.00	1.76	1.75	.....	.....	....
Averages	1.18	1.33	2.43	2.39	4.31	4.09	3.45	3.00	2.97	2.59	1.89	1.18	29.40	39.9

ALLAMAKEE COUNTY—CONTINUED.

WAUKON—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec	Ann'l.	Snow Fall.
1876	2.22	1.78	3.81	1.83	2.07	5.20	5.25	6 11	4.26	0 86	2 12	0 88	36 39	....
1877	3.07	0.11	3.12	1.76	1.60	6 22	3.78	1.52	2 24	5.76	2.76	2.66	33 00	....
1878	0 55	0.59	3.04	3.42	3.69	5.83	9.94	1.37	4.97	3.90	0.33	1.13	38.82	....
1879	0.61	1.09	1.54	1.92	5.83	3.03	2.85	1.50	4.57	2.38	6.22	2.46	34.00	....
1880	2.09	1.18	2 27	3.67	6.12	8.06	3.52	4 60	4.09	1.25	1.95	1 06	39.81	....
1881	1.18	3.58	1.92	1 36	1.64	2.94	9.26	2 87	3.85	7.90	2.20	0 62	45.25	....
1882	0.98	1.05	3 00	2 54	2.86	10.12	2.40	6.90	1.77	4.92	1.78	2 06	40.98	....
1883	1.37	2.06	0 38	1.48	6.33	5.10	9.64	0.81	3.69	2.14	1.57	1 06	35.57	....
1884	0.54	1 52	1.95	2.50	3.32	3.03	3.8	4.81	5 75	3.87	1.27	3.19	35 51	....
1885	1.89	0.56	0.77	3 34	2.41	3.73	3.28	5.0	4.70	1.01	1.24	1.91	31.31	....
1886	3.66	0.8	1.97	2.49	2.72	2.19	1 05	1.32	3.03	2 51	1.19	0.57	23.51	....
1887	0.74	2.48	0.95	1.87	0.70	1.31	2.41	3 78	7.08	1.97	0.84	3.93	27.66	....
1888	2.20	0 89	4 10	3.22	7.11	6.01	3 66	3.93	0.68	1.11	1.12	2.26	36 23	....
Averages	1.50	1 39	2 21	2.34	3.57	4.83	4.90	3.43	4.41	2.27	1 77	1.74	35.24	....

ALLAMAKEE COUNTY CROPS.

YEARS.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes bushels	Hay, Tons.
1890	38	14	28	31	54	1.5
1891	38	14	38	30	124	2.0
1892	31	15	28	26	48	2.2
1893	40	11	33	26	68	2.1
1894	16	10	30	21	37	0.8
1895	31	16	40	25	63	1.5
1896	56	12	34	27	113	1.6
1897	32	15	25	23	69	1.9
1898	35	16	25	20	50	1.8
1899	35	9	30	28	100	1.2
1900	43	14	35	30	90	1.2
1901	22	12	30	25	80	1.2
1902	27	9	25	25	70	1.5
Averages	34.1	12.7	30.8	26	70.5	1.6

WINNESHIEK COUNTY.

Area of the county, 636 square miles; area in farms, 423,227 acres; number of farms, 2,960; value of farms in 1900, $14,288,410; value of farm buildings, $3,626,140; value of live stock, $2,941,096; value of products not fed to stock, $3,225,513; area in cereal crops, 160,900 acres. Average altitude of the county is about 1,200 feet. The following tables contain records of precipitation and temperature at Decorah from July, 1903, to December, 1902; also at Ridgeway since January 1, 1898. At Fort Atkinson rainfall records were kept at the United States Military Post from May, 1844, to May, 1846. The yearly average for the two years was 39.74 inches. For the spring months the amount was 12.22 inches; summer, 20.43 inches; autumn, 4.82 inches; winter, 2.27 inches:

DECORAH—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar	April.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1893	...	...	...	...	...	72.0	68.0	3.0	51.0	31.0	19.0	...					
1894	16.0	17.0	37.0	...	...	71.0	74.0	73.0	62.0	50.0	30.0	23.0					
1895	7.0	11.0	30.0	42.0	60.0	68.0	70.0	71.0	57.0	43.0	34.0	23.0	44.7				
1896	18.0	23.0	29.0	53.0	64.0	68.0	70.0	70.0	55.0	46.0	27.0	27.0	45.9				
1897	14.0	21.0	27.0	46.0	56.0	66.0	74.0	68.0	58.0	55.0	34.0	14.0	44.8				
1898	20.0	21.0	37.0	49.0	59.0	69.0	72.0	69.0	54.0	48.0	30.0	14.0	45.5				
1899	15.2	7.6	20.3	47.8	58.9	68.3	70.7	72.8	59.4	45.4	40.0	18.8	44.3	99	Aug	-34	Feb.
1900	20.2	11.0	24.9	50.2	61.5	68.0	71.8	77.5	62.3	57.8	30.0	23.0	46.5	99	Aug	-17	Jan.
1901	10.4	11.8	30.6	48.4	59.8	71.2	80.4	71.6	60.6	51.2	31.4	8.0	46.2	107	July	-24	Dec.
1902	18.8	14.8	37.6	47.1	62.4	63.9	71.4	66.6	58.2	51.7	40.4	18.6	45.9	91	May	-30	Jan.
Means.	16.5	15.0	30.3	48.7	60.2	67.8	72.6	70.5	61.9	50.7	32.3	20.4	45.5				

DECORAH—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1893	...	...	...	...	...	...	6.05	.70	1.15	2.13	1.51	1.73	
1894	1.14	.35	2.93	...	...	2.64	.48	.53	4.06	2.83	.98	1.73	
1895	1.45	.55	.55	1.16	4.42	4.13	1.07	1.74	3.24	...	1.36	1.80	
1896	.65	...	.62	5.57	3.90	5.71	1.82	1.84	4.11	3.26	2.71	.67	
1897	2.23	.91	7.09	3.76	.74	7.38	1.89	1.68	3.22	.44	.69	1.19	24.78
1898	.82	1.2	2.58	2.81	3.67	2.88	3.04	1.98	1.73	...	2.05	.31	
1899	.38	1.43	3.51	3.46	3.33	5.51	1.57	4.51	1.8	1.04	1.59	2.06	30.19
1900	1.67	.6	2.26	.35	3.34	2.76	4.48	2.24	4.06	5.46	1.69	.73	31.29
1901	.90	.83	2.82	1.22	3.88	2.99	3.80	.02	7.28	...	1.46	.39	
1902	1.20	1.35	1.77	1.27	11.03	5.35	8.43	1.78	3.96	1.51	2.07	3.06	33.22
Averages	1.09	.98	1.96	2.69	4.37	4.26	3.21	1.68	3.44	2.34	1.59	1.30	28.97

RIDGEWAY—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1898	24.0	17	37.0	45.0	58.0	73.0	73.0	69.0	61.0	48.0	33.0	18.0	47.9	97	.....	-19	.....
1899	14.6	11.0	22.7	44.6	58.4	69.1	72.7	72.7	60.8	45.8	44.6	22.3	46.3	95	.....	-32	.....
1900	24.4	13.8	27.3	51.2	62.7	70.0	72.4	78.5	64.4	59.0	42.3	26.3	48.5	98	.....	-20	.....
1901	22.1	15.8	32.1	49.5	61.0	72.1	81.9	73.7	61.4	53.4	44.4	18.9	48.0	105	.....	-24	.....
1902	21.4	18.0	34.1	47.0	61.8	64.7	71.0	69.4	60.0	53.8	41.9	20.6	47.6	95	.....	-21	.....
Mean	22.3	17.1	31.4	48.6	60.6	69.2	73.6	72.8	62.2	53.9	37.2	21.2	47.6	...	.....	...	.....

WINNESHIEK COUNTY—CONTINUED.

RIDGEWAY—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Month	Snow.	Month
1898	1.00	1.60	3.12	3.00	3.30	3.15	3.64	1.90	1.50	5.75	2.20	0.40	32.97	.....	45.8	.....
1899	1.05	1.22	...	2.40	3.00	6.66	2.82	5.20	1.87	2.17	1.57	4.23		.....	.....	.....
1900	1.69	.52	3.20	5.74	3.55	4.14	3.71	2.11	6.88	6.72	1.88	1.23	42.35	.....	51.3	.....
1901	1.97	.67	4.78	1.19	3.22	2.71	5.97	1.50	7.06	3.78	1.50	1.15	35.61	.....	50.8	.....
1902	2.60	2.28	1.85	1.16	8.59	5.94	2.34	5.06	3.33	1.57	2.48	5.51	18.54	.....	44.1	.....
Averages	1.70	2.67	2.49	2.11	5.15	4.52	5.03	2.70	4.13	3.88	1.93	2.56	38.89			

WINNESHIEK COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL, MAY 1 TO SEPTEMBER 1.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1893	36	10	31	32	58	1.0	...	...	...	...	.....
1894	42	14	25	33	1.61	1.5	...	...	...	...	.....
1895	28	14	20	24	80	1.8	...	...	...	...	.....
1896	44	18	31	20	63	1.6	...	...	6.05	.50	.....
1897	30	19	48	34	1.02	1.8	4.42	2.64	.48	53	.....
1898	43	13	31	34	23	1.7	3.90	3.13	1.07	1.74	10.86
1897	33	17	29	25	68	1.5	.70	5.71	1.82	1.84	13.27
1898	38	18	35	28	75	1.6	3.07	7.38	1.89	1.68	18.74
1899	38	15	34	30	1.07	1.5	3.33	2.88	3.04	1.98	11.57
1900	40	18	38	28	65	1.4	3.34	5.51	1.57	4.51	14.92
1901	28	15	30	25	60	1.3	3.34	2.76	4.48	2.28	12.86
1902	32	10	30	28	1.20	1.8	8.98	2.99	3.30	.92	16.19
							11.03	5.35	8.43	1.78	27.19
Averages	34.2	14.6	32.2	27.5	88	1.5	...	...	...	...	14.89

HOWARD COUNTY.

Area of the county, 460 square miles; area in farms, 290,263 acres; number of farms, 1,708; value of farms (census of 1900), $9,800,150; value of farm buildings, $1,971,910; value of live stock, $1,987,940; value of the year's products not fed to stock, $1,401,880; acreage in cereal crops, 118,324 acres. Meteorological records have been compiled at Cresco continuously since January 1, 1872, Mr. Gregory Marshall serving as observer until about 1900. Following tables give the records of observation at that station. Altitude, 1,280 feet:

CRESCO—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l	High-est.	Month	Low-est.	Month
1872	12.5	18.4	21.0	41.4	58.2	67.3	72.2	72.0	60.6	44.4	22.4	30	41.2	94	Aug ..	-25	Dec.
1873	9.6	3.5	26.8	40.2	53.8	72.0	71.4	71.2	54.3	47.2	26.5	26.6	40.9	98	July .	-31	Jan.
1874	16.1	10.1	26.0	37.5	61.0	66.8	75.2	71.5	61.3	49.6	28.7	20.4	44.2	98	July ..	-21	Jan.
1875	0.5	1.0	22.4	38.4	56.7	63.0	70.3	67.4	58.0	42.7	24.1	25.5	38.3	89	Ju y ..	-30	Jan.
1876	16.4	19.0	23.0	43.2	58.2	64.7	74.6	70.7	58.0	44.0	28.2	4.5	41.8	98	Aug ..	-28	Dec.
1877	5.7	20.1	19.8	44.0	58.7	62.8	71.6	71.3	54.3	45.4	28.3	34.0	44.6	95	July ..	-31	Jan.
1878	20.7	31.2	42.3	47.7	51.1	64.1	73.7	71.1	59.4	44.7	31.7	18.5	46.5	94	July ..	-10	Jan.
1879	9.8	13.7	30.9	46.6	58.5	74.8	71.2	68.6	55.5	51.1	30.6	9.7	42.8	89	Aug ..	-25	Feb.
1880	21.1	19.1	27.4	42.6	61.6	67.1	70.8	68.8	58.1	44.0	19.2	0.7	42.9	92	Aug ..	-27	Dec.
1881	4.2	14.8	29.8	40.7	64.1	66.2	71.9	72.6	61.4	48.0	28.5	27.4	43.8	98	Aug .	-32	Jan.
1882	15.2	27.1	23.8	43.2	50.5	64.6	65.4	69.3	60.8	50.7	32.0	14.5	43.7	89	Aug ..	-20	Dec.
1883	-1.8	9.0	22.6	45.4	60.5	74.8	69.6	65.8	54.8	44.2	30.8	18.1	39.4	93	July ..	-34	Jan.
1884	5.5	11.3	25.3	43.2	56.6	67.1	69.5	65.2	63.3	49.0	28.6	10.2	40.9	89	Sept..	-3	Jan.
1885	0.3	4.1	21.4	42.6	58.2	64.2	72.2	69.1	57.8	42.5	32.4	30.2	38.5	90	July ..	-39	Jan.
1886	4.5	14.2	28.1	48.1	60.1	....	....	....	....	51.8	26.8	9.1	....	....	....	-32	Jan.
1887	3.0	13.1	28.0	49.8	59.0	70.8	77.1	69.6	58.0	41.9	29.4	18.6	42.6	98	Aug ..	-32	Jan.
1888	16.8	12.9	30.6	42.5	48.9	67.8	72.5	70.6	55.8	44.1	32.8	24.5	40.9	93	Aug .	-4	Jan.
1889	17.6	11.0	35.1	49.3	59.6	63.0	69.7	67.1	57.7	46.0	28.2	31.3	44.0	91	Aug ..	-27	Feb.
1890	14.4	21.0	22.6	47.2	58.2	68.6	70.8	73.9	55.8	44.9	33.1	22.3	43.2	90	July .	-21	Jan.
1891	22.4	12.6	23.3	49.7	56.1	65.4	75.1	75.8	64.6	46.2	26.2	28.3	44.6	95	Aug ..	-31	Feb.
1892	10.7	23.3	27.8	41.9	52.4	63.5	69.6	68.3	61.3	50.6	28.7	18.4	42.6	96	July ..	-29	Jan.
1893	2.5	9.3	....	49.2	52.9	68.2	71.7	69.4	....	49.0	29.7	15.4	40.9	94	Aug ..	-27	Feb.
1894	14.1	15.4	35.7	48.7	58.1	69.4	74.2	72.4	62.4	46.2	27.5	26.4	46.2	105	July ..	-24	Jan.
1895	7.0	10.9	28.0	51.6	58.6	67.0	69.0	70.6	65.0	42.0	30.0	20.4	43.1	95	Sept. .	-39	Feb.
1896	16.7	21.7	26.2	50.2	62.9	63.3	69.4	69	55.4	44.8	24.4	24.8	44.3	98	Aug ..	-29	Jan.
1897	11.0	20.0	6.0	45.4	56.0	65.0	72.0	65.6	67.0	51.0	29.0	12.0	43.5	94	July .	-29	Jan.
1898	20.0	29.0	34.0	45.0	58.0	68.0	71.0	69.0	64.0	45.0	29.0	12.0	44.5	98	Aug ..	-23	Dec.
1899	12.4	6.0	16.0	45.8	57.4	67.4	70.1	71.0	58.2	52.2	30.8	16.8	42.8	93	Aug .	-25	Feb.
1900	14.0	8.2	33.5	49.7	60.6	67.0	71.1	77.1	61.0	56.0	27.6	21.6	45.2	98	Aug ..	-23	Feb.
1901	16.4	11.2	29.0	48.0	58.6	69.1	74.6	71.2	56.2	51.0	31.2	15.4	44.9	108	July ..	-29	Dec.
1902	17.4	13.3	35.6	45.0	59.8	69.2	70.5	65.5	56.3	49.6	....	....	....	93	July ..	-29	Jan.
Means.	11.0	15.1	26.7	44.7	58.7	67.2	71.1	71.2	61.6	47.6	29.7	18.2	43.2	....	.....	....	.....

HOWARD COUNTY—CONTINUED.

CRESCO—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1871	....	....	....	....	....	....	....	....	....	3.87	2.36	.86	....
1872	.58	.48	1.60	3.20	5.14	4.25	....	4.06	1.90	3.12	.75	.10	.75 29.00
1873	2.25	.85	1.15	3.20	3.91	3.68	1.80	2.36	1.75	2.95	.70	.40	.70 24.44
1874	1.0	1.25	2.10	.30	.70	6.05	2.18	.75	4.30	1.20	1.70	.30	27.60
1875	.70	.25	.55	4.5	5.10	9.34	1.60	2.08	3.02	1.34	.17	2.00	28.02
1876	1.85	1.0	4.45	3.30	1.7	5.18	4.00	3.50	4.84	1.15	.30	.85	33.62
1877	1.55	.07	2.00	1.75	2.02	3.02	1.76	1.71	1.12	2.77	2.47	1.61	22.52
1878	.55	.31	.98	2.82	4.78	4.50	10.9	.94	6.30	3.55	.37	.98	37.83
1879	.78	.87	1.40	1.29	5.71	5.12	3.45	.47	6.5	3.65	5.2	2.82	36.25
1880	2.67	.17	2.09	4.35	7.89	8.75	4.6	2.35	2.71	1.29	1.57	.75	38.09
1881	.55	1.20	1.31	3.27	3.2	5.72	7.50	4.0	10.62	8.06	1.64	.58	43.86
1882	1.0	1.72	2.50	2.7	4.7	6.11	2.45	2.05	2.62	3.88	2.08	1.74	32.58
1883	1.37	1.48	.35	1.11	4.70	3.22	12.70	1.51	3.43	1.50	1.17	1.27	34.79
1884	.39	1.51	.6	3.7	2.44	3.47	4.25	8.34	3.18	2.83	.9	2.36	34.69
1885	1.2	.43	.75	1.0	1.10	3.39	5.04	1.45	4.22	1.14	.38	1.49	25.93
1886	1.72	.35	2.44	5.31	2.65	....	....	....	....	1.72	1.96	.80	....
1887	.73	1.85	.7	1.94	.88	2.40	3.11	2.2	7.10	1.53	1.05	2.58	26.60
1888	1.74	1.02	1.55	3.48	7.58	3.05	4.52	5.24	.82	.85	.28	2.20	35.26
1889	1.55	.5	.92	1.58	4.18	4.91	2.80	.82	2.87	1.8	2.22	1.33	25.33
1890	1.38	.84	1.06	1.61	4.73	11.71	1.12	2.7	3.2	3.98	1.58	.44	35.27
1891	1.84	1.69	1.69	2.38	1.5	5.09	4.15	2.63	.90	1.16	1.40	3.44	28.19
1892	.25	1.62	1.7	5.68	3.16	10.84	3.10	2.05	1.22	1.51	.62	1.32	36.33
1893	1.10	1.22	....	5.05	2.79	4.14	3.85	1.20	....	3.40	.84	1.17	....
1894	.99	.47	2.57	3.21	2.62	3.06	.89	1.02	3.16	3.64	.90	1.07	22.76
1895	.87	.5	.82	1.69	5.24	3.84	4.35	2.53	1.09	15.1	1.00	1.14	24.38
1896	.49	.14	1.07	5.66	4.74	1.27	3.20	2.62	4.85	2.30	2.53	.67	34.07
1897	1.90	.70	1.07	2.23	.10	6.95	2.12	4.30	3.26	.31	.51	.89	25.04
1898	.55	1.09	1.70	2.88	2.84	2.53	2.91	1.35	1.45	4.90	1.96	.38	3.91
1899	.43	.58	2.30	1.45	3.06	6.00	3.47	4.52	1.54	1.53	1.13	1.49	28.02
1900	.80	1.15	1.82	2.14	4.72	3.84	3.30	1.71	6.30	4.83	1.22	.80	32.84
1901	.48	.77	2.78	.10	2.02	1.52	4.08	1.36	6.40	2.25	.59	....	....
1902	.60	.58	T	1.06	6.4	4.12	8.41	2.86	2.60	1.65	....	....	....
Averages	1.17	.93	1.69	2.43	3.76	4.90	4.09	2.85	3.09	2.97	1.38	1.29	30.43

HOWARD COUNTY CROPS.

YEARS.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	37	14	30	22	44	1.5	4.73	11.71	1.32	2.79	20.55
1891	31	14	35	29	113	1.4	1.58	5.09	4.15	2.63	13.45
1892	30	13	29	22	73	1.5	6.15	10.84	3.10	2.65	22.74
1893	35	13	39	26	62	1.6	2.79	4.14	3.85	1.20	11.98
1894	14	13	33	22	60	0.9	2.63	3.00	.09	1.03	6.75
1895	43	17	50	34	131	1.4	5.24	3.84	4.37	2.52	15.92
1896	32	18	33	25	77	1.7	6.74	4.27	3.26	2.62	16.89
1897	30	14	32	25	80	1.5	.69	6.95	2.12	4.36	14.12
1898	31	14	32	27	88	1.6	2.84	2.53	2.91	1.35	9.63
1899	37	15	35	30	110	1.5	3.86	6.05	3.47	4.52	17.91
1900	38	15	35	28	82	1.2	4.72	3.84	3.36	1.71	13.63
1901	24	14	23	23	40	1.2	2.02	1.52	4.08	1.36	8.98
1902	31	15	30	28	55	1.5	9.47	4.12	8.41	2.80	24.80
Averages..	31	14 3	31.4	26.8	79	1.5	....	.....	.....	.....	15.18

CHICKASAW COUNTY.

Area of the county, 504 square miles; area in farms, 311,208 acres; number of farms, 2,197; value of farms in 1900, $11,594,740; value of farm buildings, $2,330,060; value of live stock; $2,251,826; value of products not fed to stock, $2,280,213; acreage in cereal crops, 121,630 acres. The altitude of New Hampton is 1,169, feet. Following tables contain records of the meteorological station established at New Hampton in April, 1897:

NEW HAMPTON—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Lowest.	Snow.
1897	...		....	46.0	59.0	66.0	75.0	68.0	67.0	58 0	...			98		...
1898	25.0	24.0	39.0	51 0	60.0	69.0	72.0	70.0	68.0	47.0	51.0	14 0	47 6	95	-20	....
1899	15.8	8 6	20.8	48.6	58 4	69.3	71.2	72.5	61.9	58 8	43 3	18.8	45.4	92	-33	....
1900	21.4	11.5	26.5	50.7	61.2	65.4	72.4	7 7	62.4	58.4	30 0	22.8	46.6	93	-18	....
1901	20.0	12 6	30.2	48.6	58 5	69.0	79.6	72 0	60.9	51.7	31 5	16.0	45 9	103	-25	....
1902	19 2	12.8	36 4	46 8	59.0	68.1	70.2	65.4	55.8	50.0	38.6	18.0	44.6	90	-22	...
Means	40.3	18 9	30.6	48 6	59 3	68.6	73. 4	70 7	62.6	53.5	34. 8	17.9	46.0			....

NEW HAMPTON—PRECIPITATION (INCHES).

1897	...	....	2.26	2.99	4 88	2.00	2 48	4.04	..				....	....	...
1898	0.58	1.60	1 61	2.04	3. 41	3.39	3.05	1. 33	1. 41	4. 06	2. 08	0.12	24. 63	...	..	34.0
1899	0. 43	1. 60	1. 61	2 89	4. 37	4. 10	3. 32	3. 44	1. 20	1 31	1. 39	0. 29	25. 95	....	..	27. 2
1900	1. 22	0. 60	1 45	2. 35	2. 29	4. 47	3 77	2. 37	4. 16	3 20	1. 50	0. 72	28. 10		....	37. 1
1901	1. 05	0. 80	1. 65	1. 13	1. 74	2 70	1. 82	1. 68	4 98	2. 82	0. 68	0. 05	21. 10	....	...	37. 0
1902	0.90	0. 74	1. 94	1. 04	12. 04	7 38	8. 19	3 72	6. 75	1. 40	2. 37	2. 20	48. 67	...	...	30. 0
Averages	0.83	1. 07	1. 65	1. 93	4. 47	4. 48	3. 69	2. 50	3. 75	2. 55	1. 79	0. 67	29. 67	....		...

CHICKASAW COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons	RAINFALL MAY 1ST TO SEPT. 1ST. May.	June.	July.	August.	Total.
1890	29	10	30	20	68	1.5					
1891	38	10	37	20	136	1.5					
1892	25	11	27	20	50	1.8					
1893	29	11	25	21	68	1.7					
1894	12	15	32	25	46	1.0					
1895	39	15	49	37	104	1.2					
1896	32	12	31	31	75	1.4					
1897	30	16	32	25	76	1.4	2 99	4. 88	2. 00	2. 48	12. 35
1898	35	16	38	28	75	1 3	3. 41	3. 39	3. 05	1. 33	11. 18
1899	36	13	31	34	80	1. 5	4. 37	4. 10	3. 32	3. 44	15. 23
1900	38	16	37	30	70	1. 2	2. 29	4. 47	3. 77	2. 37	12. 90
1901	19	12	28	22	42	1. 1	1. 74	2. 70	1. 82	1 68	7. 94
1902	30	14	32	25	60	1. 8	12. 04	7. 38	8. 19	3. 72	31. 33
Averages	31	13	33	26	73	1. 4	....	....	....	....	15. 15

BREMER COUNTY.

Area, 432 square miles; area in farms, 275,501 acres; number of farms, 2,004; value of farm lands, $10,389,470; value of buildings, $3,084,690; value of live stock, $2,255,518; value of products not fed to stock, $2,250,581; acreage in cereal crops, 117,740 acres. The altitude of Waverly is 948 feet. A meteorological station was established at Waverly January 1896, and the records are tabulated below.

WAVERLY—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest	Lowest.
1896	18. 0	25 4	29. 0	53 6	65. 5	68. 8	71. 4	70. 6	57. 0	47. 0	27. 6	28. 7	47. 3	95	....
1897	14. 0	23. 0	29. 0	47. 0	57. 0	67. 0	75. 0	68. 0	70. 0	57. 0	33. 0	16. 0	46 3	97	- 23
1898	22 0	22. 0	38. 0	47. 0	60. 0	71. 0	73. 0	70. 0	65. 6	48. 0	32 0	16. 0	47. 0	96	- 16
1899	18. 6	11. 6	23 6	49. 6	60. 2	70. 2	72 3	73. 8	60. 6	56 4	43. 2	20. 7	46. 7	93	- 27
1900	23. 3	14 1	28. 8	51. 6	63. 4	69. 4	72. 2	77. 4	63 8	59. 4	31 8	25. 2	48. 4	95	- 12
1901	21 8	15. 1	32. 8	37. 4	60. 6	71 0	81 6	73. 2	62. 8	53 8	33. 5	19. 6	48. 0	106	....
1902	20. 3	15. 2	37. 8	47. 4	63. 2	64. 2	72. 0	67. 5	58 6	52. 4	40. 8	19. 0	46. 5	91	- 25
Means	19. 7	18. 0	31. 2	47. 5	61. 4	68. 8	73. 9	71. 4	62. 5	53. 4	34. 5	20. 7	47. 1	....	....

WAVERLY—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Snow.
1896	. 43	0. 37	0. 33	7 25	6. 38	3. 94	5. 59	2. 16	3. 37	2. 43	2. 25	0. 27	34. 77	12. 0
1897	2. 28	0. 90	1 19	5. 04	2. 87	2. 75	3. 32	1 50	3. 08	1 25	0. 65	1. 64	26. 47	42. 5
1898	1. 00	1. 30	1. 91	2. 03	5. 18	5. 03	2 28	2. 69	1. 76	3. 96	2. 17	0. 38	29. 69	82. 8
1899	. 46	1. 72	1. 76	2. 14	4. 68	6. 51	1. 35	3. 66	0. 95	2. 61	1. 97	1. 97	29. 18	36. 1
1900	. 64	1. 24	2. 97	2. 40	1. 35	5. 48	5. 61	3. 33	4. 18	3. 40	1. 11	0. 67	31. 88	29. 2
1901	. 84	. 97	3. 51	1 47	2. 38	1. 87	1. 66	1. 80	4. 78	3. 41	0. 48	0. 58	23. 75	34. 2
1902	0. 92	1. 39	2. 05	1. 04	9. 50	5. 77	7. 07	4. 57	4 27	1 39	2. 38	2. 10	42. 43	29. 6
Averages	0. 93	1. 12	1. 96	3. 05	4. 62	4 48	3. 84	2. 53	3 20	2. 64	1. 48	1. 08	31. 09	30. 8

BREMER COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST TO SEPT. 1ST. May.	June.	July.	August.	Total.
1890	30	10	30	22	40	1.5					
1891	39	15	43	30	175	1.5					
1892	25	12	28	20	50	2.0					
1893	30	12	28	21	40	1.6					
1894	8	10	22	10	50	1.0					
1895	30	12	40	30	47	1.2					
1896	42	14	36	32	75	1.4	6. 38	3. 94	5. 59	2. 16	18. 07
1897	30	16	29	31	45	1 2	2. 87	2. 75	3. 32	1. 50	10 44
1898	37	16	38	25	68	1. 8	5. 18	5. 03	2. 28	2. 69	15 18
1899	35	12	35	30	80	1. 2	4. 68	6. 51	1. 35	3. 66	16. 20
1900	42	15	28	24	60	1 3	1. 35	5 48	5. 61	2. 33	14. 77
1901	20	15	32	28	30	0. 8	2. 30	1. 87	1. 66	1. 80	7. 71
1902	25	18	30	20	83	2. 0	9. 50	5. 77	7. 07	4. 57	26. 91
Averages..	30. 3	13. 2	31 8	25. 4	58. 7	1. 4	....	....	....	....	15. 61

FAYETTE COUNTY.

Area, 720 square miles; area in farms, 445,118 acres; number of farms, 3,261; value of farms in 1900, $15,210,420; value of farm buildings, $3,756,290; value of live stock, $3,592,448; value of the year's products not fed to stock, $3,256,824; acreage in cereals, 175,285 acres. The elevation of the railway station at Clermont is 886 feet; Fayette, 1,003 feet. The following table contains records of meteorological stations at Clermont and Fayette. At the former place the records were made by Miss Augusta Larrabee from 1887 to 1892, and by Wm. Larrabee Jr. from 1893 to 1902, inclusive. The Clermont records show the average annual precipitation for twenty-six years to have been 29.90 inches, while the average at Fayette for thirteen years has been 33.79 inches. The minimum yearly amount at Clermont was 19.04 inches in 1895; in 1896 the amount was 19.16, and in 1894, 19.29 inches. At Fayette the minimum was 22.01 inches in 1894. The maximum precipitation for the period at Fayette was 54.31 inches in 1902. At Clermont the maximum was 51.58 inches in 1902.

CLERMONT—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1877	1.44	.03	1.90	1.61	2.26	6.62	5.13	1.61	1 85	4 1[illegible]	1.98	1.66	29.68
1878	.31	.35	2.21	3.14	4.04	5.62	9.29	.59	4.99	2 95	.29	.77	34.55
1879	.34	.86	.98	2.07	5.41	3.75	4.02	1.91	4.8[illegible]	2.17	5.59	2.07	34.03
1880	1.79	.66	1.42	2.24	4.31	9.37	3.96	2.90	4 55	1.28	2.10	.77	35.40
1881	.70	1.67	1.11	.87	1.03	4.74	11.12	3.22	10.51	9 47	1.95	.42	47.81
1882	.94	1.28	2.74	2.67	3.45	4.20	2.83	3.13	2.10	4.36	2.43	1.58	31.69
1883	.80	2 27	.20	1.08	7 28	3 48	9 94	1.19	8.27	2 35	1.44	1 46	34 62
1884	32	1.47	1.41	1.84	2.66	2 98	3.43	3 41	5.68	3 57	1.20	2.50	30.87
1885	2.27	.59	.28	1.46	2.07	2.25	5.18	6.20	4.04	1.11	.72	2.15	28.07
1886	2.33	.43	1.02	1.97	3 00	1.62	.53	1.42	3.02	2 50	.83	.50	19.16
1887	.68	1.90	1.39	.35	1.49	2.86	4.11	4.10	6.90	.66	1.78	3.07	29.29
1888	2.05	1 04	3.44	2 27	5.40	2.56	4.21	3.29	.44	1.15	1.14	2.28	29.27
1889	2.9[illegible]	.48	.60	2 79	4.20	4.82	2.54	2 73	2.54	.05	2.22	1.75	25.44
1890	1.15	.40	.40	2.03	4.51	12.28	2.16	2 10	2.47	6.49	.76	.43	36.21
1891	1.72	.80	1.17	1.02	1.23	4.78	3.70	2.06	1.40	1.74	1 15	3.46	24.28
1892	1.10	.96	1.57	3 41	7.38	9.30	3.81	3.08	.92	2.34	.93	1.10	35 90
1893	1.10	1 07	2.14	2.80	2.81	2.87	3.00	1.75	1.32	2.28	.84	.94	22.92
1894	1 12	.34	2.84	2 69	2.46	1.51	.27	1.51	2.26	2.15	1 12	1.02	19 29
1895	.70	.31	.66	.91	2.42	3 32	1.07	4.13	3.43	.69	1.22	1.18	19.04
1896	.35	.26	1.15	5.86	9.88	4.12	4.71	2.03	3.70	3.24	2.39	.80	38.51
1897	2.60	.96	1.33	2.57	1.78	6 10	3.15	1.60	5 18	.97	.61	1.21	27.98
1898	.84	.99	1.62	2.32	2.41	1 80	2.82	.80	1.80	4 52	1.93	20	21.55
1899	.2[illegible]	1.31	1.87	3.86	3.68	4.30	2.94	5.38	1.18	2.07	1.29	1.88	29.96
1900	2.33	.64	2 86	2.55	2.67	3.21	7.54	1 79	2.28	4.12	1 12	.00	31.11
1901	.81	.38	2.03	.63	2 51	2.61	1.83	.64	5.29	2.74	.65	.13	0.10
1902	.40	99	2.33	.88	17.83	6.49	9.27	1.52	5.25	1.26	2.29	07	51.53
Averages.	1.14	.84	1.61	2.29	4.32	4.30	4 15	2.3[illegible]	3.43	2.05	1.47	1.28	29.90

FAYETTE COUNTY—CONTINUED.

FAYETTE—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	High-est.	Month	Low-est.	Month
1890	16.7	24 6	24.9	43.5	53 1	69.6	70.9	64.0	55 8	46.8	35 8	24.2	44 6	98	J'ly Au	-27	Jan.
1891	23.3	17 8	25.5	47.4	55.1	63.0	45.1	65 0	65 8	47.9	28.2	30.5	44.9	94	Aug.	-20	Nov.
1892	13.1	24.3	30.7	41.4	52.3	66.3	72 0	62.7	51.9	51 9	33.5	17.2	44.0	95	July	-26	Jan.
1893	5.2	13.0	29 4	42 7	54.0	39.6	73.6	69 2	67.7	50 5	32.5	17.3	43.7	100	Sept	-24	Jan.
1894	17.6	17.6	38.7	50.7	58.6	72.2	75.0	73 5	64.0	49.3	30.1	29 1	47.6	107	July	-27	Jan.
1895	10.0	12 0	32 0	52.0	60.0	39.0	72 0	71.0	66.0	44.0	32.0	24.0	45.4	96	J'ly Sep	-28	Feb.
1896	20.2	24.5	29.2	51.6	64.7	68.0	71 6	69.8	53.7	45.4	29.4	28.5	46.6	98	July	-15	Jan.
1897	15.0	23.0	31.0	43.0	56.0	67.0	74.0	63.0	69.0	55 0	32.0	15 0	45.8	99	June	-24	Jan.
1893	21.0	21.0	36.0	45.0	57.0	68.0	71.0	69.0	63.0	45.0	30.0	15.0	45.1	93	J'ly Au Sep	-18	Dec.
1899	17.5	9 2	21.8	47.2	58.7	68.8	71.2	72.7	69.0	54.7	40.5	19.3	45.1	96	Aug	-30	Feb.
1900	22.2	12.8	26.1	59 6	61.3	67.6	70.9	75 7	63.8	57.2	29 7	23 3	46.7	95	June	-18	Feb.
1901	20.5	12.3	31.3	47.6	53.0	70 6	72.4	72.0	60.3	51.2	32.2	17 1	46 4	110	July	-24	Dec.
1902	18.5	13 0	33.7	45 4	62.1	73.3	70.2	66.0	57.0	50.2	40.2	18.0	45 0	92	July	-30	Jan.
Means	16.9	17.4	30.2	47.2	57.7	68.2	72.3	69.5	62.5	49.9	32.5	21 4	45.5	...	...		.....

FAYETTE—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1890	1. 69	.95	1. 21	3. 53	5 75	16 53	2. 90	3. 45	3. 62	3. 52	1 49	1. 10	45. 74
1891	1. 68	1. 39	3. 38	2. 22	1. 99	4. 86	3 45	4. 22	1. 95	2. 27	2. 61	3. 18	32. 60
1892	.96	1. 02	2. 71	5. 57	6. 66	11. 63	2. 35	2. 30	2. 06	3. 25	.87	1. 18	40. 56
1893	1. 05	1. 48	2. 21	3. 73	3. 35	3. 45	4. 62	2. 04	1. 97	3. 19	1. 40	1. 24	29. 73
1894	1. 08	.35	3. 28	3. 78	1. 91	1. 80	.21	1. 44	2. 08	3. 37	1. 26	1. 45	22. 01
1895	1. 42	.62	.45	1. 64	4. 28	3. 87	2. 67	4. 71	3. 79	.78	1. 93	1. 96	28. 12
1896	.70	.81	1. 45	5. 27	5. 81	2. 46	4. 98	1. 91	4. 36	3. 45	2. 79	1. 01	34. 50
1897	2. 73	1. 22	1. 75	3. 00	2. 74	6. 80	2. 85	1. 84	4. 34	1. 03	1. 08	1. 50	30. 88
1898	1. 68	2. 66	2. 42	3. 85	3. 29	3. 58	4. 30	2. 81	1. 86	3. 88	2. 29	.25	32. 80
1899	.41	1. 83	2. 22	3. 87	6. 69	5. 54	2. 34	2. 33	.70	4. 42	1. 29	1. 84	33. 48
1900	.88	1. 21	2. 74	2. 63	2. 06	3. 14	7. 73	2. 76	3. 72	3. 68	1. 68	.50	32. 78
1901	1. 10	.66	3. 25	1. 46	2. 85	3. 69	.62	3. 04	4. 80	2. 32	.65	.70	25. 14
1902	.82	1. 48	3. 27	1. 13	15. 59	8. 81	9. 07	4. 92	3. 86	1. 47	3. 13	2. 76	54. 81
Averages.	1. 23	1. 16	2. 26	3. 20	4. 84	5. 85	3. 70	2. 90	2. 96	2. 81	1. 65	1. 43	33. 79

FAYETTE COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST TO SEPT. 1ST. May.	June.	July.	August.	Total.
1890	29	9	24	24	45	1.5	5.75	16.53	2.90	3.45	28.63
1891	38	15	33	29	141	1.5	1.99	4.86	3.45	4.22	14.52
1892	23	13	29	21	35	2.0	6.66	11.63	2.35	2.30	22.94
1893	31	8	28	24	67	1.7	3.35	3.45	4.62	2.04	13 46
1894	12	12	30	23	47	1.1	1.91	1.80	.21	1.44	5.36
1895	35	15	43	33	104	1.1	4.28	3.87	2.67	4.71	15.53
1896	33	14	32	34	79	1.6	5.81	2.46	4.98	1.91	15.16
1897	30	16	30	27	64	1.6	2.74	6.80	2.85	1.84	14.23
1898	34	17	34	31	102	1.7	3.29	3.53	4.36	2.81	13.99
1899	35	18	36	25	105	1.8	6.69	5.54	2.34	2.33	16.90
1900	39	16	35	25	80	1.2	2.06	3.14	7.73	2.76	15.69
1901	25	15	30	25	40	1.0	2.85	3.69	.62	3.04	10.20
1902	32	20	31	30	70	2.0	15.59	8.81	9.07	4 92	38.39
Averages..	30.4	14.4	32.3	27.0	.75	1.5	4.84	5.85	3.70	2.90	17.30

CLAYTON COUNTY.

Area, 745 square miles; area in farms, 454,892 acres; number of farms, 3,318; value of farms (in 1900), $13,826,980; value of farm buildings, $3,965,540; value of live stock, $3,217,318; value of the year's products not fed to stock, $3,398,416; area in cereal crops in 1902, 161,990 acres. The altitude of McGregor at river front is 628 feet; Elkader, 727 feet; Luana, 1,129 feet. Meteorological stations of the Iowa Climate and Crop Service have been established at Elkader and Grand Meadow (Luana postoffice), and records are tabulated below. The Hon. Frank Larrabee, of McGregor, has kindly furnished his continuous records of precipitation at that place since January, 1876. The average yearly precipitation at Elkader has been 32.72 inches; at Grand Meadow, 33.65 inches; at McGregor, 33.22 inches. The highest temperature recorded in the county was 111° in July, 1901, at Elkader; lowest, 34° below zero in January, 1897, at Elkader.

ELKADER—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1879	12.9	19.6	35.2	50.0	64.5	70.2	77.2	71.8	58.7	57.7	34.5	15.7	47.3				
1880	31.9	25.4	32.7	48.1	67.5	70.0	72.6	69.1	59.2	46.7	23.6	14.4	46.8				
1881	6.7	16.1	29.3	44.1	67.9	68.9	75.5	74.2	63.9	51.8	32.6	30.1	46.8				
1882	18.2	31.0	33.8	47.5	54.4	64.9	68.0	71.0	59.1	49.5	33.1	16.0	45.5				
1883	1.3	12.0	26.0	47.0	52.0	67.0	74.0	69.0	59.0	47.0	34.0	21.0	42.4				
1884	7.0	16.0	27.0	48.0	64.0	71.0	72.0	71.0	58.0	51.0	33.0	13.0	45.1				
1885	1.6	10.4	24.0	44.0	56.0	69.1	74.2	64.3	59.7	41.1	32.0	21.3	41.5				
1886	7.9	28.0	28.6	21.0	52.0	68.7	75.4	72.3	61.2	49.8	26.8	10.6	45.2				
1887	5.1	15.4	29.1	49.4	69.0	74.1	77.0	69.1	60.2	41.4	28.5	19.5	44.8				
1888	8.0	18.2	25.1	47.5	53.0	68.6	74.1	69.0	58.7	46.6	35.8	26.8	43.9				
1889	21.0	14.8	33.2	48.3	60.1	67.8	73.4	69.2	59.8	43.0	32.1	34.9	46.9				
1890	19.2	25.4	27.2	49.3	....	....	....	....	....	....	....	....	....				
1891	....	....	....	....	....	....	....	....	65.8	48.4	29.7	30.5	....				
1892	....	....	....	....	....	....	....	....	....	....	....	....	....				
1893	....	12.5	31.2	43.1	55.2	70.6	74.1	67.4	62.6	51.6	32.3	19.0	....				
1894	19.0	18.2	31.6	50.9	60.4	72.1	74.5	73.0	64.5	50.1	29.9	29.0	48.4	106	July ..	-27	Jan.
1895	9.0	11.0	32.0	52.0	61.0	70.0	72.0	73.0	63.0	44.0	33.0	25.0	45.8	99	July ..	-31	Feb.
1896	20.8	24.4	20.5	52.4	65.6	69.2	71.8	70.5	56.4	45.7	28.6	28.1	46.9	100	Aug ..	-14	Jan.
1897	14.0	23.0	30.0	46.0	57.0	67.0	74.0	68.0	59.0	56.0	33.0	16.0	46.1	101	June..	-34	Jan.
1898	22.6	22.8	37.3	46.1	60.5	71.2	72.7	70.8	65.0	47.0	32.0	17.0	....				
1899	17.2	10.7	33.8	49.1	60.0	70.6	73.2	73.9	59.8	55.4	43.6	22.0	46.5	99	Aug ..	-28	Feb.
1900	24.5	14.7	28.4	50.8	63.4	69.6	73.0	73.6	64.2	59.0	32.6	26.0	48.7	98	Aug ..	-17	Feb.
1901	20.2	18.8	33.4	50.6	61.6	73.0	81.8	74.4	62.8	54.0	34.8	19.8	48.3	111	July ..	-21	Jan.
1902	20.7	16.4	38.4	46.0	64.1	65.4	73.8	69.6	59.8	53.4	43.2	20.4	47.6	95	July ..	-30	Dec. Jen.
Means.	14.4	18.1	30.9	48.2	60.9	69.5	74.0	70.8	62.0	49.5	32.6	21.6	46.0	....	....	....	....

CLAYTON COUNTY—CONTINUED.

ELKADER—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1877	....	....	....	....	....	6.75	3.19	3.30	2.85	3.75	2.15	.80	....	....	....	....	....
1878	.40	.35	2.15	2.15	3.81	4.85	9.00	1.10	5.05	2.95	.20	.75	32.76	....	....	....	....
1879	.65	.30	1.15	2.45	3.65	1.50	1.60	2.05	4.70	1.45	4.90	1.90	24.85	....	....	....	....
1880	1.20	.95	1.40	3.15	4.75	6.45	5.75	4.40	3.10	1.15	1.90	1.15	35.55	....	....	....	....
1881	.70	2.15	1.45	.45	2.15	3.75	6.70	2.25	9.54	6.80	1.65	.70	38.29	....	....	....	....
1882	1.25	1.15	1.40	3.55	4.05	5.20	2.51	3.05	78	5.00	2.25	2.75	32.93	....	....	....	....
1883	2.46	2.41	.17	.58	7.42	3.97	8.82	1.80	2.55	2.43	2.00	1.63	35.24	....	....	....	....
1884	1.33	3.50	3.21	3.45	3.93	7.13	1.90	4.65	5.27	2.00	1.00	4.63	41.00	....	....	....	....
1885	2.5	.31	.52	2.15	1.34	3.82	8.42	5.49	4.65	2.50	1.13	2.19	35.05	....	....	....	....
1886	3.75	.57	2.71	4.10	5.08	2.26	1.38	3.04	5.15	4.66	1.43	1.43	35.48	....	....	....	....
1887	.70	3.65	2.10	1.38	1.25	2.91	4.56	4.4	7.95	2.51	1.38	5.85	38.61	....	....	....	....
1888	2.25	.16	5.51	4.33	5.25	2.21	5.60	4.20	2.35	1.85	2.20	2.90	38.81	....	....	....	....
1889	1.45	T	.40	3.05	4.65	3.90	2.90	.20	3.56	T	1.50	3.20	25.71	....	....	....	....
1890	2.05	.50	.86	3.33	....	....	....	....	....	....	....	....	....	....	....	....	....
1891	....	....	....	....	....	....	....	....	.94	2.84	1.23	3.26	....	....	....	....	....
1893	....	1.18	2.15	4.50	2.63	2.92	2.93	.83	1.48	3.23	1.25	1.85	....	....	....	....	....
1894	.91	.63	2.73	4.16	1.73	3.49	.16	1.84	3.04	2.87	1.55	.91	24.02	....	....	....	....
1895	1.37	.57	.79	.80	3.88	3.08	1.81	5.93	2.75	.81	1.77	1.91	25.53	....	....	....	....
1896	.75	.44	.84	5.06	5.58	2.77	4.96	1.90	5.08	2.78	2.12	.65	32.91	....	....	....	....
1897	2.31	.97	1.59	4.05	2.89	3.95	2.42	2.33	4.90	.92	.99	1.54	28.33	....	....	....	....
1898	.88	1.09	2.07	2.64	8.23	3.86	3.55	1.34	2.50	4.85	1.84	.87	28.33	....	....	....	....
1899	.44	1.25	1.69	2.46	5.13	5.92	2.02	3.10	.91	8.09	1.29	2.20	29.50	....	....	....	....
1900	.73	1.45	1.96	3.28	4.13	2.58	.60	3.88	3.99	4.08	2.07	.74	37.44	....	....	....	....
1901	.91	.85	2.62	.88	2.34	1.53	2.95	.82	4.04	2.58	.87	.61	20.98	....	....	....	....
1902	.77	1.19	2.17	.97	11.81	12.46	8.10	2.14	4.12	1.87	1.01	2.50	50.01	....	....	....	....
Averages	1.35	1.12	1.83	2.85	4.05	4.20	4.34	2.80	3.82	2.75	1.68	1.93	32.72	....	....	....	....

GRAND MEADOW—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1891	....	....	....	48	56	66	66	66	65	48	29	31	....	....	....	....	....
1892	14	26	29	43	52	64	70	68	62	51	31	17	44.0	....	....	....	....
1893	5	14	29	42	55	69	72	67	61	50	32	20	43.0	....	....	....	....
1894	19	19	38	50	60	70	74	72	62	49	30	29	48.6	....	....	....	....
1895	10	13	31	50	61	67	69	70	67	44	32	28	44.8	....	....	....	....
1896	20	23	28	56	62	67	69	68	55	44	28	28	45.6	....	....	....	....
1897	14	22	28	44	56	64	71	64	68	54	32	16	44.4	....	....	....	....
1898	21	21	35	45	58	68	70	68	64	46	30	16	45.1	....	....	....	....
1899	15.9	9.2	20.6	47.1	57.6	67.4	69.9	71.2	59	53.8	39.6	19.6	44.2	97	Sept ..	-30	Feb.
1900	21.8	13.0	26.2	49.9	60.8	....	68.9	74.7	61.5	58.0	30	23.3	....	90	Aug ..	-14	Jan.
1901	....	12.4	31.8	49.0	59.1	69.8	80.8	72.5	59.2	51.8	32.6	17.5	....	108	July ..	-25	Dec.
1902	18.6	14.6	36.2	46.1	61.6	63.0	70.9	67.2	57.6	50.7	40.4	18.2	45.4	90	July	-25	Jan.
Means	15.9	17.0	30.2	47.5	58.2	67.0	71.0	69.0	61.7	50.0	32.2	21.5	44.9	....	....	....	....

GRAND MEADOW—PRECIPITATION.

1891	....	....	....	....	1.63	1.50	5.33	3.67	2.52	1.42	2.02	1.41	4.01	....	....	....	....
1892	1.07	1.19	2.17	5.18	8.33	11.91	4.78	4.11	1.28	2.53	1.21	1.95	45.63	....	....	....	....
1893	1.65	1.76	2.29	4.11	3.18	8.80	5.72	1.70	2.01	3.02	1.84	1.80	32.44	....	....	....	....
1894	1.18	.58	3.45	4.83	2.31	2.42	.45	1.03	3.24	2.87	1.43	1.18	24.51	....	....	....	....
1895	1.60	.59	.83	.78	3.54	2.85	1.74	3.93	3.37	.76	1.60	1.27	22.80	....	....	....	....
1896	.60	.38	1.66	6.31	8.02	5.11	4.50	2.98	3.91	3.35	2.73	.78	40.33	....	....	....	....
1897	2.93	.93	1.56	3.48	2.07	7.51	4.30	1.04	5.88	1.10	.88	1.27	32.98	....	....	....	....
1898	.90	1.95	2.35	2.73	4.76	2.91	4.02	1.57	1.99	4.69	2.36	.39	30.62	....	....	....	....
1899	.62	1.13	1.80	4.18	4.72	6.43	2.24	5.85	1.21	2.02	1.69	2.13	34.93	....	....	....	....
1900	.64	1.35	1.79	2.74	2.53	....	8.24	2.23	3.19	4.26	1.67	.81	....	....	....	....	....
1901	.94	.35	2.53	1.17	2.85	3.01	1.56	.99	5.96	2.95	.70	.64	28.67	....	....	....	....
1902	.85	1.97	2.73	1.33	18.04	6.55	10.70	1.93	4.61	1.33	2.15	2.44	54.71	....	....	....	....
Avgs.	1.18	1.12	2.10	3.18	5.15	5.26	4.32	2.50	3.17	2.57	1.59	1.56	33.65	....	....	....	....

CLAYTON COUNTY—CONTINUED.

MCGREGOR - PRECIPITATION (INCHES).

YEARS.	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1876	2.46	1.39	2 46	3.84	2 95	7 43	4.07	7.78	5.69	18	1.86	.44	40 00
1877	2.23	....	2 64	1 64	2.52	5.61	3.91	1.75	2.43	4.04	2 37	1.99	31 13
1878	.55	.73	2.67	2 71	5 42	6.54	9.73	1.62	4 83	3 90	.38	.93	40.01
1879	.47	.97	1 48	2 20	5.14	2.84	4.34	2.61	3 05	2.79	5.23	2.14	33 26
1880	1.48	.83	2.30	2.85	4.84	7.11	6.95	4.08	3.65	1 99	2 20	1 02	39.30
1881	1.07	2 21	1.74	.54	3.03	5.42	10.76	1.61	9.76	9.63	2.25	.71	48.73
1882	1 19	.76	2.94	3.21	3.74	6.99	3.62	2.47	2.27	4.98	2.40	1.90	36.58
1883	1.30	3.17	.53	1 24	7.04	7 16	10.74	2.97	2.80	1.68	2.20	1.44	42.07
1884	61	1.81	2.17	2.10	3 83	8.34	4.20	4 79	4.69	3.09	.80	3.15	34 10
1885	1.62	.53	.35	2.76	1.71	3.23	8.68	5.18	4 70	1.19	.69	2.33	32.97
1886	4 19	.89	1.83	2.53	2.45	1.63	1.66	1 72	3.08	4.41	1.01	.90	26.30
1887	1 05	2.66	1.30	1.15	1.07	1 41	3.33	5 01	8.95	2.75	1 14	3.57	33.39
1888	1.83	.92	4.50	3.02	4 84	3.42	2.56	2.19	.59	1 25	1.60	2.83	29.55
1889	1.58	.52	.16	3 07	3.09	4.12	1.94	2 24	3.52	.17	1.57	1.94	23 92
1890	2 31	.92	1.00	3.33	5.82	9 26	.82	4 66	3 31	3 29	1.58	48	39 81
1891	1 46	1.18	2.51	2.37	1.97	3.86	3.83	3.37	1.37	2.53	1.12	2 87	28 39
1892	1.72	1 30	1.67	3 55	8 91	15.30	2.81	4.04	2.20	1 18	1.08	1.52	45.26
1893	1.24	1.67	2.63	4.10	4.24	2 79	6.45	1.95	1.79	2.82	1 48	1 62	32.78
1894	.67	78	2 57	3.54	1.75	3.11	.08	1 41	3.43	2 75	1.61	1.05	22.75
1895	1.26	61	.78	1.05	2.44	2.55	1.87	2.31	3.10	.70	1 96	2 14	20.77
1896	.66	34	.77	6 12	6.03	4.75	2.39	2.81	4.80	2.37	1.90	.40	33.34
1897	2 89	.99	1.68	2.54	1.62	5.43	3.09	.84	5.13	1 00	.95	1.36	27.58
1898	.86	1 28	2.56	3.02	2 37	1.70	4.32	2 16	2 62	4.39	1.60	.38	27.26
1899	.54	1 56	2.09	1.71	3.91	6.07	2.36	3.27	1 39	2 08	.91	3.06	29.55
1900	.65	1.02	1.93	3.50	3.60	1 77	6.83	2.05	3.37	5.10	2.56	.45	32.83
1901	.77	.93	3.13	1.04	2 13	2 60	2.29	1.01	4 77	2.94	.91	60	28.12
1902	.61	.95	2 57	1.59	11.86	6 92	8.75	1 49	4 34	1.68	1.75	2.66	45.17
Averages	1.38	1.14	1.95	2 5	4.06	4.94	4.54	2.86	3.76	2.65	1.67	1.63	33.32

CLAYTON COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL, MAY 1st to SEPT. 1st.				
	Corn, bushels.	Wheat, bushels	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons	May.	June.	July.	August.	Total.
1890	43	10	33	25	52	2 0	5 82	9.26	.82	4.66	20.96
1891	41	13	44	29	200	1 5	1.97	3.86	3.83	3.37	18.03
1892	28	15	28	24	58	2 0	8 91	15.30	2 81	4.04	31.06
1893	43	16	35	24	65	1.6	2.68	2.92	2.93	.83	9.31
1894	15	10	37	21	45	1.5	1.73	3.49	.16	1.84	7.22
1895	32	18	47	22	84	0 8	3.88	3.08	1.81	5.93	14 60
1896	47	11	37	28	92	1.8	5.58	2.77	4.96	1.90	15.21
1897	35	18	37	26	66	1.6	2.39	3.95	2.42	2.33	11.09
1898	37	17	38	25	110	1.9	3 23	3 36	3.55	1.34	11.48
1899	40	14	41	32	105	1.8	5 13	5.92	2.02	3 10	16.17
1900	43	16	40	33	90	1.2	4.13	2.53	8 60	3 88	19.14
1901	22	16	34	27	48	1.4	2 34	1 56	2.75	.82	7.47
1902	32	10	28	30	80	1 5	11.81	12.46	8.10	2.14	34.51
Averages	35.2	12.8	36.8	26.6	84	1.6					16.25

NORTH CENTRAL DISTRICT.

This district includes fourteen counties, as follows: Mitchell, Worth, Winnebago, Kossuth, Emmet, Palo Alto, Hancock, Cerro Gordo, Floyd, Butler, Franklin, Wright, Humboldt, Pocahontas. The mean annual temperature of the district is 45.7°; average yearly precipitation, 29.40 inches; average rainfall May 1 to September 1, 15.79 inches; average yield of corn per acre, 32 bushels.

MITCHELL COUNTY.

Area, 480 square miles; area in farms, 288,600 acres; number of farms: 1,718; value of farms (1900), $11,323,630; value of buildings, $2,181,900; value of live stock, $2,083,764; value of farm products not fed to stock, $2.326,906; area in cereal crops in 1902, 123,380 acres. Elevation of Osage, 1,163 feet. A voluntary meteorological station was established at Osage in 1891, and the records are tabulated below.

OSAGE—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1891	21 3	11.5	23 2	46.3	54.7	65 4	64.5	64 8	61. 4	44. 1	24.8	27.2	42. 4				
1892	9.5	22.5	26.6	41.6	51.5	63.7	69 0	65.6	58.0	45. 4	27 4	18. 6	41. 6				
1893	2.6	9.7	23 8	38.6	52.6	66. 1	71. 3	64. 4	58 0	44 2	27. 3	16. 1	39. 7				
1894	12.5	14 0	34.3	47. 0	58. 1	69. 5	73. 0	68. 9	58 6	46. 3	26. 7	25 3	44. 5				
1895	6.0	10. 0	26. 0	50. 0	58. 0	67 0	69 0	68. 0	63 0	39 0	29 0	20. 0	42. 1				
1896	17.8	22 0	25. 8	48 4	61 8	66. 6	69. 4	67. 0	52 5	40. 8	22. 6	24. 9	43. 0				
1897	10. 0	19. 0	26 0	43. 0	55. 0	65. 0	72 0	64. 0	63. 0	....	27 0	14. 0	....				
1898	19. 3	19 0	32. 4	43. 8	57. 0	68. 5	71. 0	66. 5	59. 8	44. 1	26. 5	11. 8	43. 8				
1899	11. 8	8 4	19 2	46. 8	57 5	67. 8	70. 8	71. 2	60. 2	53 2	40. 5	19. 2	43. 9	94	Aug.	-32	Feb.
1900	20. 4	10. 1	25. 8	49. 5	60. 8	66. 2	70. 6	74. 2	60 6	56. 1	28. 8	22. 8	45. 5	94	July.	-28	Feb.
1901	18. 6	12. 6	29. 1	46. 8	58. 0	68 9	77. 8	70 4	59 4	51. 4	31. 9	17 0	45. 1	101	July.	-24	Dec.
1902	18. 8	14. 8	36. 8	45 4	61. 0	62. 6	71. 1	66 0	57 0	49. 6	38. 1	17. 4	44. 9	90	July.	-22	Jan.
Means.	14. 0	14 4	27. 4	45 5	57. 1	66 4	71. 0	67. 5	59. 4	46. 9	29. 2	19. 1	43. 2	....	....	....	....

OSAGE PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1880		.20	.66	1. 63	3. 49	5 76	5. 97	2. 15	2. 11	1. 10	1. 60	1. 08	30. 65
1881	.69	2. 00	1. 13	1. 01	4. 04	2 85	4. 37	4. 38	10. 01	6. 61	1 84	.55	39. 90
1882	72	1. 01	1. 70	1 87	2. 84	6. 43	3 56	1. 00	1. 36	2. 15	2. 24	1. 44	26. 32
1883	1. 35	1. 28	.11	....	....	....	....	....	....	....	....	....	....
1891	1. 90	1 37	1. 47	2 06	1 75	3. 16	2 58	2. 05	1. 68	3. 09	1. 53	3. 15	24. 70
1892	.43	.88	1 94	4. 16	4. 87	7. 23	6. 06	8 69	1 72	1. 49	1. 11	1. 33	33. 91
1893	.85	2. 33	2. 49	5. 14	3. 85	2. 28	4. 08	2. 57	1. 81	1. 69	.78	1 65	29. 44
1894	.75	.50	1. 85	3. 20	2. 92	2. 53	.49	2. 18	4. 11	3. 38	.70	1. 33	23. 76
1895	.88	.78	.87	1. 11	4 19	3. 11	2. 14	4. 17	4. 88	.33	1. 95	1. 28	25. 22
1896	.84	.18	1. 13	5. 08	6. 67	4 70	1. 78	4. 22	3. 48	3. 76	3. 31	.83	30 03
1897	1. 89	1. 81	2 54	3 21	1. 71	5. 5	3. 51	2. 19	3. 73	.44	.33	1. 45	28. 32
1898	.87	1. 75	2. 01	3 02	3. 67	3 15	2. 85	2. 61	1. 20	4. 20	2. 47	.32	27. 63
1899	.41	1. 66	2. 18	1. 93	3. 71	8. 01	2. 00	5. 75	1. 93	.87	1. 19	1. 91	31. 56
1900	.93	1. 3	2 06	1. 71	2. 98	4. 13	4. 64	3. 23	6. 53	3. 20	1 44	.26	31. 38
1901	1. 22	.95	2. 50	1. 87	2. 18	1. 58	2. 53	1. 80	5. 70	2. 79	.94	.40	24. 46
1902	.57	.70	1. 19	1. 11	9 58	7. 60	6. 81	4. 18	2. 10	1. 46	2. 10	2. 41	39. 31
Averages	0. 88	1. 18	1 57	2. 27	4. 28	4. 52	3. 54	3. 00	3. 50	2. 48	1. 45	1 28	30. 18

MITCHELL COUNTY—CONTINUED.

MITCHELL—COUNTY CROPS.

YEAR.	AVERAGES PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	29	11	30	26	61	1.5					
1891	34	15	41	32	124	2 0	1.75	3.16	2.58	2.05	9.54
1892	33	13	19	27	82	2.0	4 87	7.23	6.06	2.69	20.85
1893	27	11	27	24	79	1 8	3.85	2.28	4.08	2.57	12.78
1894	19	14	36	25	67	0.9	2 92	2 35	.49	2.18	7.94
1895	40	16	46	35	134	1.2	4.19	3.11	2.14	4.17	13.61
1896	35	15	27	27	76	1.2	6.67	4.70	1.78	4.22	17.37
1897	28	14	28	26	119	1.3	1.71	5.51	3.51	2.19	12.92
1898	33	16	33	30	86	1.5	3 67	3.15	2.85	2.61	12.28
1899	35	15	35	24	110	1.5	3.71	8.01	2.06	5.75	19.53
1900	40	14	28	30	80	1.5	2.98	4.13	4.64	2.23	14.98
1901	29	11	27	22	46	1 0	2.18	1.58	2 53	1.80	8 09
1902	32	12	32	25	60	1.3	9.58	7.60	6 31	4.18	27.67
Averages	31.4	13.6	32.2	27.0	86.7	1.4					15.28

WORTH COUNTY.

Area, 408 square miles; area in farms, 249,081 acres; number of farms, 1,485; value of farms (in 1900), $8,809,130; value of farm buildings, $1,662,570; value of live stock, $1,472,731; value of products of the year not fed to stock, $1,666,756; area in cereal crops, 99,770 acres. The average yield of corn in past thirteen years has been thirty-one bushels to the acre; oats, thirty-four bushels. The tables below contain records of temperature and precipitation at the voluntary weather station in Northwood during the past seven years.

NORTHWOOD—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug	Sept.	Oct.	Nov.	Dec.	Ann'l	Highest.	Month	Lowest.	Month
1896	....	....	....	15. 1	62 7	67 2	69 2	67. 8	55 7	46. 2	28. 2	25.7	....	96	Aug.	....	.....
1897	10.0	21.0	26.0	44.0	55 0	65.0	73.0	65.0	57.0	53.0	30.0	14.0	43. 6	96	July.	-29	Jan.
1898	20.0	20.0	35.0	44.0	57 0	68.0	71.0	69.0	62.0	45.0	29.0	16.0	44.6	94	Aug. July.	-20	Dec.
1899	14.3	8.2	18.9	46.6	56 8	67.6	71.0	72.6	59.4	53.0	41 6	20.2	44.2	96	Aug.	-34	Feb.
1900	21.2	10.4	27.2	52.9	62 2	68.2	70.3	75.3	60.6	56.6	29.6	22.6	46.4	91	Aug. Sept.	-28	Feb.
1901	17.5	15.4	32 5	50.2	59.6	68.6	79.8	71.9	60.4	52.0	32.6	17.6	46. 5	105	July.	-35	Dec.
1902	21.0	17.3	37.0	46.4	61.0	63.0	70.2	66.2	57 3	50.2	37.6	17.8	45.3	89	July.	-18	Jan.
Mean	17 1	15.4	29 4	47.7	58.9	66.8	72.0	69.7	60 3	48 0	31.9	19.1	45.1				

NORTHWOOD—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mch.	April.	May.	June	July.	Aug.	Sept.	Oct	Nov.	Dec.	Ann'l.
1896	....	....	....	5.95	6.01	5 44	1 93	3.39	2.36	2.56	4.02	.90	32.61
1897	1.50	.80	1.51	2 22	1 53	5.05	4.31	1.83	2.70	.91	.80	1 20	23.86
1898	.20	1 95	1.03	2.49	3.95	3.00	1.80	2 81	.88	4.70	1.30	T	24.11
1899	0.00	1.27	2.83	.56	3.59	5.89	3.18	6.31	1 03	1 44	1 26	76	28.12
1900	.65	1.55	1.43	2.15	2 31	4.88	7.02	3.34	5.60	4.37	1.14	.10	34.49
1901	.75	.70	2.25	1.57	4.09	2.46	1.18	1.83	9.37	1.35	.51	.77	26.83
1902	.80	.77	.55	1.26	9 46	6.96	8.48	5.88	2 55	3.11	2 42	2.68	44.92
Averages	.65	1 16	1 60	2 31	4.42	4.81	3.99	3.62	3.49	2.63	1.56	.91	30 70

WORTH COUNTY—CONTINUED.

WORTH COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total inches.
1890	27	10	25	24	50	1.5					
1891	27	13	38	35	103	1.8					
1892	29	10	28	25	68	2 0					
1893	36	8	22	21	47	1.9					
1894	20	16	42	32	60	1.5					
1895	47	20	51	30	117	1.2					
1896	30	8	35	28	60	2.0					16 82
1897	25	12	27	20	45	1 5					12.72
1898	36	15	36	28	103	1.8					11 56
1899	41	12	34	29	114	1.7					18.97
1900	41	16	40	30	80	1.3					17.55
1901	20	15	30	22	25	1.2					9.51
1902	23	9	35	26	58	2.0					30.78
Averages	31	12.6	34	27	71 5	1.6					16.84

WINNEBAGO COUNTY.

Area, 408 square miles; area in farms, 239.085 acres; number of farms, 1,512; value of farms (census of 1900), $7,643,020; value of farm buildings, $1,294,890; value of live stock, $1,397.096; value of the year's farm products not fed to stock, $1,459,966; area in cereal crops, 107,690 acres. The average yield of corn in the past 13 years has been 32.2 bushels per acre; oats, 34.3. A meteorological station was established in Forest City in 1894, and the records are printed herewith. The altitude of Forest City is 1,226 feet.

FOREST CITY (TEMPERATURE).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July	Aug.	Sept.	Oct.	Nov	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1894	....	....	30 1	48. 2	58. 4	71.0	74 3	72. 6	63 1	49. 0	26. 0	26 1	....	....	.....	....	.....
1895	22	9. 0	20. 0	58 0	..	....	73. 0	71. 0	66 0	43 0	28. 0	20. 0	....	....	.....	-26	Feb ..
1896	17 2	22 6	26. 5	50 1	68. 0	68. 1	69. 9	70. 7	56. 2	44. 8	21. 8	24 9	44. 0	96	Aug ..	-15	Jan ..
1897	10. 0	20. 0	25. 0	45 0	56. 0	65 0	72. 0	66. 0	69 0	54. 0	32 0	14 0	44. 0	95	July ..	-25	Jan ..
1898	20. 0	19. 0	34. 0	45. 0	58 0	73. 0	71 0	69 0	64. 0	46. 0	29. 0	13 0	45. 2	95	Aug ..	-20	Dec ..
1899	15 3	8. 2	18. 6	46. 4	57 9	68 4	71. 3	73. 6	61. 4	55 4	43. 4	19. 1	44. 9	97	Sept ..	-33	Feb ..
1900	21. 4	10. 8	26. 8	50 8	62 0	67. 3	70. 6	75 8	61 6	58 7	29 8	23. 0	46. 4	94	June ..	-24	Feb ..
1901	19 4	14. 4	30. 4	48 4	59 7	69. 3	82. 6	71. 4	60. 8	52. 6	33 4	17. 4	46. 6	106	July ..	-28	Dec ..
1902	20. 0	16. 4	35. 5	45. 2	61 4	63. 4	71. 0	67. 5	58 2	50. 9	37 0	17. 4	45. 4	92	July ..	-20	Jan ..
Mean	18 2	15. 0	28. 4	48. 0	59. 6	68, 1	72 9	70. 8	62. 3	50 5	31 2	19. 4	45. 4	....	.....	....	.....

FOREST CITY (PRECIPITATION).

YEAR.	Jan.	Feb.	Mar	April.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1894	....	....	....	4.52	3 67	2.65	50	.87	2.91	3.59		78	.....
1895	.74	.30	1.05	2 28	....	....	2 63	5. 24	4.46	.32	1.75	.85	.....
1896	....	.30	1.00	4 63	6.64	5.97	1.99	2.04	2.88	3.46	2.58	1.07	.....
1897	1.58	.60	1.47	4.16	1 68	3.82	4.59	1.49	1.58	1.19	.20	1.56	23.88
1898	.30	1.65	1 33	2 50	4.06	7.20	2.14	5.50	.68	4.54	1.28	.20	31.38
1899	.2	1 58	3. 88	1 18	3 79	7. 15	2.20	1.52	1.67	1.61	1.56	.72	26.53
1900	.65	.65	1. 43	1 55	2 47	4. 39	6 28	4. 46	6. 79	4. 11	.38	.14	35. 28
1901	.90	.70	1 95	1 67	2. 08	3. 43	4. 00	2. 15	9. 48	1. 20	.57	.60	28. 74
1902	.72	.40	20	97	7 10	5. 85	6 58	5. 61	3 95	1. 32	2. 94	2. 80	37. 79
Mean	.64	.77	1. 48	2. 60	3 80	5. 06	3. 48	2. 21	3. 82	2. 37	1. 36	.91	29. 42

WINNEBAGO COUNTY—CONTINUED.

WINNEBAGO COUNTY CROPS.

YRAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	29	14	35	26	70	1.0	.....	.....	.....	.....	.....
1891	32	18	47	32	85	2.7	.....	.....	.....	.....	.....
1892	32	13	22	26	87	2.0	.....	.....	.....	.....	.....
1893	36	9	22	22	63	1.6	.....	.....	.....	.....	.....
1894	16	14	36	26	45	1.0	2.57	2.65	.50	.87	6.59
1895	46	22	59	50	150	1.6	.....	.....	2.63	5.24	.....
1896	38	16	36	30	110	1.8	6.64	5.97	1.99	2.04	16.64
1897	26	10	24	20	80	1.5	1.66	3.82	4.59	1.49	11.58
1898	37	16	35	40	107	1.5	4.06	7.20	2.14	5.50	18.90
1899	30	13	30	25	75	1.2	3.79	7.15	2.20	1.52	14.66
1900	40	15	33	25	85	1.2	2.47	4.39	6.26	4.46	17.58
1901	27	12	28	25	45	1.2	2.08	3.43	4.00	2.15	11.66
1902	30	12	40	20	90	1.5	7.10	5.85	6.58	5.61	25.14
Average	32.2	14	34.9	28	84	1.5	.....	.....	.....	.....	15.34

KOSSUTH COUNTY.

Area, 984 square miles, the largest county in the state. Area in farms, 587,147 acres; number of farms, 2,807; value of farms (in 1900), $17,923,910; value of buildings, $2,830,460; value of live stock, $3,289,751; value of farm products of the census year not fed to stock, $3,174,904; area in cereal crops, 259,240 acres. Since 1890 the average yield of corn has been 34 bushels per acre; oats, 36; barley, 27; spring wheat, 14. A voluntary weather station has been established at Algona, and the records are given in the following tables. The elevation of the station is 1,194 feet.

ALGONA—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April	May	June.	July.	Aug	Sept.	Oct.	Nov	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1892	....	22.0	29.0	42 0	51.0	66.0	73.0	70.0	64.0	52.0	30.0	18.0	....	94	June .	....	.....
1893	8 0	12.0	28 0	43.0	57.0	73.0	73.0	68.0	63.0	49.0	32.0	18.0	43.0	90	July ..	-24	Feb.
1894	13.0	16.0	38.0	50.0	60.0	72.0	76.0	73.0	63.0	48.0	30.0	28.0	47.4	104	July..	-24	Jan.
1895	10.0	16.0	31.0	55.0	60.0	69.0	71.0	71.0	65.0	44 0	32.0	22.0	45.7	98	May ...	-21	Feb.
1896	21.0	26.0	28.0	52.0	64.0	70.0	72.0	71.0	57.0	45.0	23.0	28 0	46.5	98	Aug ..	-13	Jan.
1897	12.0	22.0	27.0	47.0	58.0	68.0	76.0	67 0	69.0	54.0	30.0	14.0	45 4	97	June	-27	Jan.
1898	21.0	20.0	34 0	47.0	59 0	72.0	74 0	71 0	64.0	45.0	29.0	14.0	46.1	93	July...	-23	Dec.
1899	16.4	7.2	18.0	47.8	59.0	69.0	78.6	74.6	60.8	54 7	42.9	20.4	45.0	94	July..	-36	Feb.
1900	22.7	11.0	27.9	51 8	64.0	70.2	73 2	76.9	62.7	58.2	30.9	24.1	47.8	94	June ..	-20	Feb.
1901	20.3	16.7	32.0	49.5	60.0	71.4	82.2	72.6	60 6	53.6	33.3	18.4	47 6	106	July.	-24	Dec.
1902	21.1	18.6	37.1	46.7	62 8	65.0	72.6	68.0	59.0	52.9	38.8	18 0	46.7	94	July.	-18	Jan.
Averages	16.5	17.0	30.0	48 8	59.5	69.7	73.7	71.1	62.5	50.6	31.9	20.3	45.7	....	.....	....	

KOSSUTH COUNTY—CONTINUED.

ALGONA—RAINFALL.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1881	.....	.....	.....			2.87	1.75	6 44	5.75	1.69	.15	.....	.....
1882	.....	.....	...	4.00	4.75	4 25	2.00	5.06	1.03	1.12	.....	.94	.....
1883	.....	.92	.....	.....	4.84	2.25	1 53	10.06	1.19	1.29	1.94	2.54	....
1884	.46	.....	.....	2.38	1.75	3 69	4.12	1 53	2.31	2 31	1.20	.13	.....
1885	.60	6.25	1.00	2.02	1.62	6.06	2 62	.....	.....	.....	.....	.....	.....
1872	.....	.....	.....	.....	.....	2 35	5.80	4 80	1.35	.....	.....	1.05	.....
1873	2.54	2.50	1.05	4.20	9.10	7.60	2 10	3.70	2.10	3.72	.80	.60	40.01
1874	1.40	2.70	2.35	2.05	1.90	7.50	1.60	4 00	5.60	2.70	2.35	.55	34.70
1875	1.50	6.75	.45	4.00	4 00	10.80	2 20	7.10	....	1.60	.....	1.00	.....
1876	.75	1.10	3.85	1.20	3.90	.25	4 20	4.60	5.55	90	1.19	.25	27.74
1877	.50	.00	2.05	2.80	5.38	6.60	1.25	1.40	1.35	4.20	2.09	1 85	29.47
1878	.85	.03	4.65	3.57	2 98	7.10	8.20	2 80	2 90	4.80	0.50	.40	38.78
1879	.40	.58	1.19	.02	3.30	3 16	0 04	4.35	1.67	1.65	1.42	1.42	19.20
1880	1.01	.30	.88	1.20	2.93	4.22	4.12	2.82	.90	1.38	.98	.50	20.74
1881	.41	2.43	1.29	1.65	5.22	3.35	5.37	5.57	8.28	3.97	1.20	.77	39.51
1882	.76	.72	1.20	3.43	2.83	5 86	3 52	.35	.15	2.90	1.55	.80	24.07
1883	1.25	.90	.14	1.03	3.18	3.18	7.87	3.32	1 12	.67	.23	.65	23.54
1884	.16	.76	1.18	1.55	2 51	3.15	1.75	2.27	8.40	3 17	.62	2.26	28 48
1885	.70	.35	.18	.73	2.36	4.70	.75	3.29	1.00	2.40	.58	.83	17.91
1886	2.38	.20	1.48	1.40	1.92	1.54	.31	.78	3 62	.75	1.59	65	16.56
1887	.04	.77	.28	2.34	1.37	6.61	2.65	2.74	7.08	.68	.70	.57	26.88
1892	.....	.84	1.08	3.82	5 29	4.64	3.44	2.71	.35	1.41	.20	3 00	....
1893	.31	2.04	2 20	4.25	2.31	1.69	1.87	.40	1.90	.02	.03	1.60	19.10
1894	1.05	.15	1.57	4.81	1.20	1.80	.25	1.77	1.23	2.92	.17	.97	17 94
1895	.49	.23	.33	2.31	3.39	4.83	3.18	6.92	3.82	.45	1.53	24	27.72
1896	.16	.31	1.15	6.48	6.07	3.75	1.94	2.64	2 31	2.92	3 25	1.29	32.25
1897	1.38	.87	2 60	3.50	.56	3.75	3 52	1.68	1.89	.97	.32	1.60	22.64
1898	.25	1.65	1.45	2.42	6.09	4.63	1.40	5.79	1.19	3.61	1.23	.37	30.08
1899	.03	.92	2.47	1.95	3 31	5.56	2 12	1.12	.92	2.45	1.40	.20	22.45
1900	.63	1.15	2 59	2.12	1.04	4.87	5.84	4.41	5 42	4.15	.95	.35	34.43
1901	.55	.80	2.21	2.02	2.93	3.82	4.80	3.61	9 40	1.07	1.17	78	33.16
1902	1.04	.50	.13	1.10	5 49	4.10	6 03	7.49	4 95	1.10	2.50	2.45	36.88
Averages	.80	1.80	1.58	2.58	3.45	4.39	3.67	3.71	3.16	2.10	1.26	1.05	29.51

KOSSUTH COUNTY CROPS.

YEAR.	AVERAGE PER ACRE						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	32	13	36	24	80	2.0					
1891	42	15	45	26	180	1.8					
1892	27	13	25	20	83	1.5	5.29	4.64	3.44	2.71	16.08
1893	30	9	26	32	35	1.5	2 31	1.69	1.87	.40	6.27
1894	20	20	40	30	42	1.0	1.20	1.80	.25	1.77	5 02
1895	42	20	55	40	125	1.0	3.39	4.83	3.18	6.02	18.32
1896	37	13	32	29	82	1 5	6.07	3.75	1.94	2.64	14.40
1897	30	14	38	30	102	1.5	.56	3.75	3.52	1.68	9.51
1898	41	18	33	25	96	1.7	6.09	4.63	1.40	5.79	17 91
1899	33	15	35	28	70	1.5	3.31	5.56	2 12	1.12	12.11
1900	41	15	40	30	65	1.0	1 04	4.87	5 84	4.41	16 16
1901	35	12	30	27	30	1.0	2.93	3 82	4.80	3.61	15.16
1902	28	9	24	23	70	1 5	5.49	4.10	6.03	7.49	23.11
Averages.	34	14	36	27	75	1.4	.....	.....	....	...	14.00

EMMET COUNTY.

Area, 408 square miles; area in farms, 236,580 acres; number of farms, 1,056; value of farms (1900), $6,854,570; value of farm buildings, $979,200; value of live stock, $1,341,214; value of farm products not fed to stock (in 1900), $1,203,151; area in cereal crops, 113,690 acres. The average yield of corn for 13 years has been 31 bushels per acre; oats, 32; barley, 26 bushels. A voluntary meteorological station was established at Estherville in 1895, and the somewhat fragmentary records are given in the following tables:

ESTHERVILLE—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annl.	Highest.	Month	Lowest.	Month
1893	12.0	....	....	46.2	54.4	72.2	72.0	65.8	....	....	....	....	....	....	....	....	....
1894	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1895	....	....	....	....	53.0	62.0	67.0	73.0	73.0	57.0	45.0	23.0	22.0	....	101	Sept.	....
1896	20.6	25.3	26.8	50.2	62.8	69.8	....	....	71.8	56.8	45.0	21.6	25.8	....	....	....	....
1897	11.0	23.0	24.0	....	55.0	66.0	73.0	....	69.0	53.0	33.0	15.0	....	....	....	-28	Jan.
1898	22.0	20.0	34.0	45.0	57.0	69.0	71.0	69.0	60.0	44.0	29.0	10.0	44.0	98	July-Aug.	-25	Dec.
1899	10.8	2.6	13.0	....	57.1	....	....	71.4	58.9	51.5	35.0	....	....	....	....	-38	Feb.
1900	....	10.8	24.4	50.2	58.8	66.6	69.9	75.4	61.4	50.0	27.8	22.6	....	....	....	....	....
1901	17.8	15.6	30.3	45.0	57.4	69.4	80.4	70.4	58.3	49.2	31.2	14.9	45.0	107	July	-30	Dec.
1902	19.4	17.4	35.2	44.2	62.6	....	69.9	....	55.4	....	....	14.6	....	....	....	-25	Jan.
Means	16.3	16.0	27.1	48.3	58.7	68.6	72.7	71.0	60.9	49.1	29.1	16.4	44.5	....	....	....	....

ESTHERVILLE—PRECIPITATION (INCHES).

1895	....	....	....	2.54	1.67	2.19	4.51	3.10	4.72	43	.88	T	....	....	....	....	....
1896	.40	.67	1.85	3.13	4.53	1.98	....	3.81	2.40	2.78	1.45	.30	....	....	....	....	....
1897	1.20	.35	1.05	....	1.24	5.04	2.65	....	.80	1.45	.10	1.05	....	....	....	....	....
1898	.15	.65	.48	1.38	2.22	3.48	5.39	4.30	.41	1.28	.90	.25	29.80	....	....	....	....
1899	.02	1.20	2.20	....	4.94	....	....	2.39	T	1.45	.15	....	....	....	....	....	....
1900	....	.40	1.40	2.06	2.06	3.66	6.71	3.34	7.25	1.00	.60	.15	....	....	....	....	....
1901	.30	1.05	1.15	1.49	2.38	3.22	1.41	4.28	6.14	.94	1.16	.57	24.03	....	....	....	....
1902	.30	.25	.73	2.03	5.61	....	5.61	....	....	....	....	1.80	....	....	....	....	....
Means	.35	.62	1.41	2.46	3.13	3.06	3.88	3.30	3.10	1.62	1.17	.59	24.72	....	....	....	....

EMMET COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.					
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.
1890	35	14	29	32	55	1.0
1891	37	21	40	37	87	2.5
1892	31	11	28	24	43	2.0
1893	34	11	25	28	45	1.8
1894	20	12	20	15	20	1.0
1895	32	21	45	33	140	1.1
1896	32	16	33	36	130	1.5
1897	28	11	30	35	115	1.6
1898	41	17	39	30	104	2.0
1899	30	13	31	30	110	2.0
1900	38	13	35	33	85	1.6
1901	35	12	35	33	45	1.7
1902	30	11	33	33	120	2.0
Averages	31	14	32	26	84	1.7

PALO ALTO COUNTY.

Area of county, 576 square miles; area in farms, 342,539 acres; number of farms, 1,661; value of farms, $9,372,930; value of farm buildings, $1,421,810; value of live stock (in 1900), $1,930,955; value of farm products of the year not fed to stock, $1,954,090; area in cereal crops, 146,301 acres. The following tables contain records of temperature and precipitation at the meteorological station established in West Bend in 1893; altitude, 1,197 feet.

WEST BEND—MEAN TEMPERATURE.

YEAR	Jan.	Feb.	Mar	April	May	June	July.	Aug	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1893	....	....	38.2	50.1	....	69.6	72.0	69.1	48.5	29.0	16	....	....	....	....	....	....
1894	10	14	35.2	48.3	59.4	70.7	75.7	....	....	....	....	....	....	....	....	....	....
1895	T	....	29	52	60.0	67	71	70	62	42	30	21	....	98	July	....	....
1896	19	24	26	49	62.4	68.4	71.4	69.7	55.2	43.4	21.9	27.0	44.9	97	Aug.	-11	Jan.
1897	12	21	26	44	58	66	74.0	65	68	52	29	13	43.8	97	Sept.	-25	Jan.
1898	20	21	33	45.7	58	69	71	69	62	44	28	24	45.3	98	July	-22	Dec.
1899	15.9	7.4	8.2	46.1	59.4	65.6	71.5	71.4	58.9	42.0	40.8	19.7	43.6	98	Sept.	-35	Feb.
1900	21.9	11.0	27	50.2	62.9	69.0	71.6	75.4	61.2	55.8	28.8	23.0	46.5	96	June	-21	Feb.
1901	19.8	16.2	30.4	47.7	59.1	74.0	81.4	75	58.9	51.7	33.4	17.6	46.7	109	July	-25	Dec.
1902	20.7	18.0	37.2	46.7	62.5	64.8	72.7	67.8	57.8	51.3	37.8	17.5	46.2	98	July	-30	Dec.
Av'g's.	17.6	16.5	29.2	46.8	59.3	67.8	72.9	69.7	60.8	49.0	31.0	19.9	45.0	109	July	-25	Jan.

WEST BEND—PRECIPITATION (INCHES).

1893	....	....	....	2.64	1.92	3.60	2.40	1.28	1.60	.16	.87	1.26	....	....	....	....	....
1894	.10	.60	....	3.17	1.52	2.48	.65	1.30	....	....	....	....	....	....	....	....	....
1895	....	....	.69	2.46	2.84	5.28	3.63	5.57	4.14	.37	1.70	.40	....	....	....	....	....
1896	.25	.40	1.27	5.57	5.01	2.46	4.58	2.76	2.82	2.55	2.15	.85	31.49	....	....	....	....
1897	1.00	.26	.85	4.21	.71	2.86	4.15	1.71	1.04	1.10	.73	1.50	24.79	....	....	....	....
1898	.25	1.40	.97	2.49	4.85	6.21	2.93	6.63	1.13	2.74	1.55	.40	31.55	....	....	....	....
1899	T	.60	1.53	1.59	4.04	4.22	3.02	2.04	.52	2.27	1.35	1.12	22.91	....	....	....	....
1900	.70	1.10	1.94	1.67	2.34	2.59	5.62	3.34	4.55	4.35	.70	.48	29.38	....	....	....	....
1901	.5	.43	2.49	1.6	2.17	3.07	3.66	2.26	9.77	1.14	.75	.60	28.39	....	....	....	....
1902	.70	.37	.41	1.3	2.97	4.39	8.36	7.12	2.98	1.19	1.87	2.34	34.31	....	....	....	....
Av'g's.	.62	.81	1.64	2.8	2.84	3.81	3.84	3.63	3.18	1.76	1.39	.99	27.39	....	....	....	....

PALO ALTO COUNTY CROPS.

YEARS.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.					
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	Rainfall.	May.	June.	July.	August.	Totals.
1890	34	10	35	24	5	1.0	....	....	....	....	....	....
1891	34	15	44	29	152	1.5	....	....	....	....	....	....
1892	25	11	23	17	64	1.8	....	....	....	....	....	....
1893	29	12	27	20	43	1.5	....	1.92	3.60	2.40	1.28	9.20
1894	13	15	26	20	43	1.0	....	1.52	2.48	.65	1.30	5.95
1895	28	23	45	32	50	1.0	....	2.84	5.28	3.03	5.57	16.72
1896	40	14	37	35	84	1.4	14.81	5.01	2.46	4.58	2.76	14.81
1897	30	11	37	28	75	1.5	9.43	.71	2.86	4.15	1.71	9.43
1898	32	14	34	27	78	1.7	20.62	4.85	6.21	2.93	6.63	20.62
1899	35	8	33	35	80	1.5	14.02	4.04	4.22	3.02	2.04	14.02
1900	37	13	35	25	60	1.2	13.80	2.34	2.59	5.62	3.34	13.89
1901	25	11	30	25	20	1.2	10.80	2.17	3.7	3.66	2.20	10.80
1902	34	10	33	35	60	1.5	22.74	2.97	4.39	8.36	7.12	34.31
Averages.	31	13	34	27	65	1.4	....	....	....	....	....	14.97

HANCOCK COUNTY.

Area, 576 square miles; area in farms, 349,343 acres; number of farms, 1,703; value of farms (in 1900), $11,567,000; value of farm buildings, $1,735,980; value of live stock, $2,068,541; value of the year's products not fed to stock, $2,153,116; area in cereal crops, 170,010 acres. The tables below give records of the meteorological station established in Britt in 1897:

BRITT—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1897	12.0	22.0	29.0	45.0	55.0	66.0	73.0	65.0	63.0	54.0	30.0	13.0	44.2	97	July	-24	Jan.
1898	19.0	20.0	34.0	45.0	58.0	67.0	71.0	69.0	62.0	45.0	29.0	14.0	44.7	97	July	-18	Feb.
1899	14.7	7.3	18.2	46.5	60.0	68.9	70.8	72.7	59.8	53.2	41.4	19.3	44.4	98	Sept.	-33	Feb.
1900	22.1	19.5	27.2	50.0	61.1	67.6	71.0	75.2	61.6	57.4	29.2	23.2	46.6	95	July	-24	Feb.
1901	19.2	15.4	31.6	48.1	58.3	70.2	70.4	70.2	60.0	50.2	32.0	18.2	45.8	100	July	-27	Dec.
1902	19.0	16.1	30.6	45.3	62.0	64.0	72.4	67.6	57.4	50.4	36.8	17.0	45.4	92	July	-22	Jan.
Average	17.7	17.0	28.8	46.8	59.1	67.8	72.9	70.0	61.6	51.7	33.1	17.1	45.2	1901 101	July	1899 -33	Feb.

BRITT—PRECIPITATION.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1897	1.07	.05	1.52	3.03	.18	3.03	3.80	2.76	1.18	.96	.25	1.10	22.19
1898	.25	1.67	.93	2.79	4.43	3.96	1.27	4.85	1.88	1.04	.76	.41	29.64
1899	.03	1.15	2.03	1.63	4.77	7.31	2.58	1.49	1.14	1.41	1.31	.84	26.55
1900	.63	.50	1.09	1.86	2.99	5.25	5.44	4.33	0.76	3.97	.45	.18	33.75
1901	.44	.51	1.95	1.84	2.6	3.45	4.98	1.94	8.37	1.49	.81	.27	28.98
1902	.55	.47	.46	.36	6.16	3.87	6.83	7.24	3.41	1.18	2.29	1.93	35.54
Average	.59	.97	1.34	2.07	3.69	4.48	4.32	3.67	4.45	2.18	.98	.79	29.13

HANCOCK COUNTY CROPS.

YEARS.	YIELD PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	Rainfall, May 1st, Sept. 1.
1890	30	13	31	25	54	1.5	
1891	37	15	41	31	150	1.3	
1892	30	13	37	24	74	1.5	
1893	32	12	32	21	39	2.0	
1894	19	15	33	23	47	0.8	
1895	46	20	49	30	90	1.3	
1896	34	13	30	22	54	1.8	
1897	37	14	37	23	73	1.3	10.48
1898	41	17	35	29	97	1.7	14.01
1899	35	13	39	30	95	1.3	16.15
1900	40	14	36	27	65	1.2	18.01
1901	38	16	40	24	45	1.4	13.00
1902	31	10	32	25	65	1.8	24.30
Average	34	14	35	27	73	1.5	15.99

CERRO GORDO COUNTY.

Area, 576 square miles; number of farms, 1,957; area in farms, 353,188 acres; value of farms, $13,272,230; value of farm buildings, $2,384,700; value of live stock, $2,610,465; value of the year's products not fed to stock, $2,811,297; area in cereal crops, 173,410 acres. A meteorological station was established in Mason City in 1894, the fragmentary records of which are tabulated below. At Clear Lake a station was established in 1898; the records have been continuous since 1900. The altitude of Mason City is 1,148 feet; Clear Lake, 1,241 feet.

CLEAR LAKE—PRECIPITATION.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1900	.55	1.10	1.65	2.25	3.80	6.60	1.20	3.75	4.80	3.50	.50	T	32.20
1901	.50	.70	2.10	.40	2.10	2.15	3.70	1.45	6.00	2.40	.05	.32	23.47
1902	.90	.60	0.65	.78	6.85	5.30	0.15	4.60	1.65	1.05	2.40	1.95	35.84

MASON CITY—TEMPERATURE.

1894				53	58	69	75	72	64	49	28	26	
1895	9	13	31	51	59	67	70	68	60				
1896			28	51	62		70	71	55	43	26	26	
1897	16						71	63	56	52	28	14	
1898	19	20	34	46	58	68	72	69	62	45	31	14	44.8
1899	13.6	8.0	18.7	45.5	56.9	68.0	70.8	71.0	60 2	52.6		22.2	
1900	20.8	10.4		49.6	60 3	65.8							
Averages	15.2	14.9	27.9	49.4	59.0	67.6	71.4	69.0	68.0	49.4	29.4	20.4	44.8

MASON CITY—RAINFALL.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1894				5.15	1.98	4.77	.24	.98	1.78	3.86	.33	1.06	
1895	.51	.37	.90	1.61	2.91	3.37	2.01	5.71	3.24	.53	1.92	.73	23.81
1896	.35	.29	1.92	6.26	7.31	7.64	2.08	3.59	8.28	4.22	2.60	.85	40.17
1897	4.68						4.01	1.08	.69	.37	.10		
1898	T	.95	.75	1.85	5.30	3.03	3.02	2.65	1.80	3.20		T	
1899	T	.71	1.80	1.81	3.29	11.05	2.25	2.80	1.40	.30			
1900	.70	.20			2.90	12.35							
Averages	1.19	.56	1.34	3.34	3.95	7.04	2.79	2.66	1.85	2.01	1.00	.66	28.39

CERRO GORDO COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.
1890	21	11	29	31	49	1.5
1891	34	12	39	25	71	1.8
1892	30	12	25	23	84	2.0
1893	35	12	25	24	53	1.5
1894	15	11	28	24	44	1.1
1895	38	16	46	27	115	1.2
1896	35	13	25	23	75	1.4
1897	28	14	29	22	67	1.3
1898	38	16	38	25	80	2.0
1899	37	12	33	22	109	1.7
1900	40	16	38	28	98	1.2
1901	27	12	28	23	49	1.5
1902	33	10	30	21	70	2.0
Averages	32	13	32	24	72	1.5

FLOYD COUNTY.

Area, 504 square miles; area in farms, 303,843 acres; number of farms, 2,054; value of farms (census of 1900), $11,533,320; value of farm buildings, $2,384,020; value of live stock, $2,201,363; value of the year's products not fed to stock, $2,559,415; area in cereals, 163,709 acres. The following tables give weather records compiled at Charles City. Elevation of the station, 1,024 feet.

CHARLES CITY TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l	Highest.	Month	Lowest.	Month
1891	....	14	27	44	53	68	....	....	66	52	27	28	....	....	.....	....	.....
1892	12	23	29	42	51	65	77	69	63	51	29	16	42.8	....	.....	....	.....
1893	7	10	26	42	54	72	73	68	63	52	31	16	43 1	....	.....	....	.....
1894	16	16	37	50	60	69	78	75	62	48	29	29	47.0	....	.....	....	.....
1895	8	11	32	53	60	68	72	71	66	42	31	21	44.6	....	.....	....	.....
1896	20	24	29	53	65	69	72	74	57	46	26	28	46.8	....	.....	....	.....
1897	12	22	28	46	.....	.....	75	66	68	55	31	13	.....	....	.....	....	.....
1898	2	21	36	45	68.0	69.0	72	69	64	47	30	14	45.6	....	.....	....	.....
1899	15.8	9.1	20.5	47.4	59.0	69.4	71.6	73 2	60.8	51.5	42.0	19 8	45.3	95	Aug.	-31	Feby
1900	22.4	11.1	26.0	50.2	62.4	67.8	71.6	76 8	62.4	57.4	29 8	24 0	46.8	96	Aug.	-22	Feby
1901	19.4	13.2	31.4	48.6	60 4	70.2	81.0	72.4	61.6	51.0	32.4	15.8	46 4	108	July.	-28	Dec.
1902	25.2	13 6	37.0	46.5	62.6	66.8	72.6	67.6	54.8	51.0	40.7	17.2	46.6	98	July.	-27	Jan.
Averages	16.3	15.7	29 9	30.6	59.6	8.3	73.7	71 1	62.7	50.6	31.6	20.2	45.6	108	1901 July.	-31	1899 Feby

CHARLES CITY—PRECIPITATION.

1891	....	1.38	1.80	1 75	1.87	4 13	3.18	4.36	1.10	2.00	1 40	3.59	....	....	.....	....	.....
1892	1.50	75	1.47	3.10	5.36	8.12	2.77	1.59	1.48	1 27	1.42	1.25	30 08	....	.....	....	.....
1893	1.49	2.28	2 51	4.89	2 72	2 71	4.72	1.20	1 77	1 28	1.09	1 76	28.42	....	.....	....	.....
1894	1.42	1.10	1.95	4.28	1.22	4.75	1.19	1.10	4 15	3.46	1.02	1.39	27.03	....	.....	....	.....
1895	1.25	1 01	.48	.91	3.50	5.64	1.77	4.95	2 05	.46	1.96	1.03	25 01	....	.....	....	.....
1896	.60	.89	1.53	6.55	7.74	6.23	2 14	2.67	3 80	3.23	1.62	65	36.75	....	.....	....	.....
1897	1.58	1.00	1.16	3.82	2.01	3.50	3.42	76	2 75	.32	.74	1.65	22.70	....	.....	....	.....
1898	1.20	2.79	1.73	1.72	4 38	2 63	2.88	.88	1.13	4.30	1.51	.08	25.78	....	....	....	.....
1899	.85	1.72	1.5	1.61	4 71	5.46	1.92	5.68	1.45	1.73	1.61	.94	29.14	....	.....	....	.....
1900	.58	1.16	1.94	2.78	2.87	5.53	4 23	2.65	6.75	2.97	1.85	.49	33.80	....	.....	....	.....
1901	1.10	.79	2.65	2.36	2.30	2.69	2.65	2.08	5 21	2.37	.50	.32	25.02	....	.....	....	.....
1902	.65	38	2.19	1.05	9.19	8.36	7.92	6.71	2 80	1.18	3.18	2.30	45 81	....	.....	....	.....
Averages	1 11	1.22	1 75	2.90	4.13	5.11	3 23	2.93	2.87	2.04	1.49	1.29	30.07	..	.....	....	.....

FLOYD COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST TO SEPT. 1ST. May.	June.	July.	August.	Total.
1890	26	11	27	25	60	1 5					
1891	35	20	40	29	149	1.4	1 87	4 13	3.18	4.36	13.54
1892	30	10	26	27	89	1.5	5 36	8.12	2.77	1 59	17.84
1893	32	10	22	25	78	1.7	2.72	2.71	4.72	1.20	11.35
1894	14	11	28	21	47	0.8	1.22	4.75	1.19	1.10	8 26
1895	36	19	44	32	118	1.0	3.50	5.64	1.77	4.95	15 86
1896	35	14	28	27	68	1.3	7.34	6.23	2 14	2.67	18.38
1897	32	16	32	29	76	1.6	2.01	3.50	3 42	.76	9.69
1898	33	14	35	30	95	1.5	4.38	2.63	2.88	1.38	11.17
1899	40	15	38	33	120	1.4	4.71	5.46	1.92	5 68	17.77
1900	40	18	41	30	75	1 2	2.87	5.53	4 23	2 65	15.28
1901	20	12	28	23	48	0.6	2 30	2.69	2.65	2.08	9 72
1902	36	12	35	25	90	1.8	9.19	8.36	7.92	6.71	32.18
Averages	31 5	14	32	27	91	1.4					15 28

BUTLER COUNTY.

Area, 576 square miles; area in farms, 360,578 acres; number of farms, 2,304; value of farms, $14,145,3[illegible]0; value of farm buildings (in 1900), $2,571,020; value of live stock, $2,841,148; value of products not fed to stock, $2,773,647; acreage in cereal crops in 1902, 193,600 acres. The following tables contain meteorological records of the station established at Greene in 1897. Altitude of the station, 924 feet.

GREENE—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept	Oct.	Nov.	Dec.	Ann'l	Highest	Month	Lowest.	Month
1897	....	22.	29.	46.	57.	68.	75.	68.	70	56	32	15	.....	102	July.	-23	Jan....
1898	21.	21.	37.	47.	60.	71	74.	72.	66	47	31	15	46 8	100	Aug.	-19	Dec. ..
1899	15.8	11.	22.	48.5	59.7	70.7	73.4	75 2	61.6	53.2	43.6	20.4	46.5	98	Aug.	-29	Feby ..
1900	23.6	13.2	28.4	52.0	63 4	69.5	72 6	77 6	63 3	58 6	31 0	24.8	48.2	99	June	-19	Feby ..
1901	20.9	15 6	32.2	49.5	60.6	72 0	82.6	73.6	62.4	52.6	33.6	18.3	47.8	111	July	-23	Dec. .
1902	20.2	15 0	37.2	46.8	63 1	65.3	73.2	68.2	58 2	51 4	40 2	19.3	46.5	93	July.	-24	Jan....
Means..	20.3	16.3	30.9	48.3	60.6	69.4	75.1	72.4	64.1	53.6	35.2	18.9	47.1				

GREENE—PRECIPITATION.

1897	1 40	.39	1.02	3.62	2.07	3.05	4.04	1.19	3.28	.40	.52	.95	22 71	....	.....	....	.....
1898	0.47	1.19	1.69	1.52	5.70	3.25	3.67	1.47	1.56	4 34	1.99	.33	27.18	....	.....	....	.....
1899	0.82	1.89	1.39	1.47	6.85	5.78	.72	2.68	1 28	1.22	1.12	1.78	26 45	....	.....	....	.....
1900	0.55	.91	1.57	2.19	1.26	5 49	5.06	2.37	5 16	2.31	1.46	.34	28 67	....	.....	....	.....
1901	0.96	.51	2 24	1.66	1.58	2.22	2 84	2.17	4.79	3.18	82	21	22.68	....	.....	....	.....
1902	0.58	.89	1.94	.88	7.38	4.67	8.79	8.24	4.00	1.39	2.82	2.30	43.33	....	.....	....	.....
Means	71	.96	1.64	1.88	4.14	4.07	4.19	3.15	3.34	21.4	1 29	.98	28.49				

BUTLER COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels	Oats, bushels.	Barley, bushels.	Potatoes, bushels	Hay, tons.	RAINFALL MAY 1st TO SEPT. 1. May.	June.	July.	August.	Total.
1890	30	10	32	25	40	1.5					
1891	36	16	40	28	103	1.4					
1892	28	12	24	23	61	2.0					
1893	33	13	24	22	75	1.8					
1894	12	11	20	20	42	0.6					
1895	31	16	42	43	85	1.4					
1896	43	14	31	35	115	1.5					
1897	34	15	36	26	4[illegible]	1.8	2.07	3.03	4.04	1.99	11.13
1898	38	15	39	30	78	1.8	5 70	3 25	3.67	1.47	14.09
1899	34	16	38	31	130	1.4	6.85	5.78	.72	2 68	16 03
1900	42	14	30	28	92	1.6	1 26	5 49	5.06	2.37	14.18
1901	24	11	30	22	45	1 1	1.58	2.22	2.84	2.17	8.81
1902	28	9	30	25	90	2.0	7.38	4.07	8.79	8.24	29.08
Averages	32	13	32	27	81	1.5					15.55

FRANKLIN COUNTY.

Area, 576 square miles; area in farms, 362,601 acres; number of farms, 1,874; value of farms (in 1900), $13,873,480; value of farm buildings, $2,025,880; value of live stock, $2,723,713; value of the year's products not fed to stock, $2,769,883; acerage in cereal crops (1902), 185,820 acres. A voluntary meteorological station was established at Hampton in 1890, and the records are tabulated below. Altitude of the station, 1,155 feet.

HAMPTON—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1890	14.0	20 0	23.0	47.0	54 0	68.0	72 0	65.0	55.0	45.0	35.0	24.0	43 5	....	.....	....	.....
1891	22.0	18.0	23.0	47.0	56.0	66.0	66.0	66 0	65.0	48.0	27 0	29.0	43.9	....	.....	....	.....
1892	12.0	23.0	29.0	42.0	51.0	66.0	70.0	68 0	63.0	51.0	29.0	15 0	43.3	....	.....	....	.....
1893	4.0	11.0	27.0	41.0	54.0	69 0	73 0	68 0	62 0	50.0	31.0	17.0	42 2	....	.....	....	.....
1894	14.0	17.0	38.0	49.0	59.0	72 0	76.0	73.0	62.0	49.0	29.0	26 0	47.0	....	.....	....	.....
1895	8.0	12 0	30.0	52.0	59.0	67.0	70 0	70.0	65.0	43.0	31.0	21.0	44 0	....	.....	....	.....
1896	19.0	24.0	28 0	51.0	64.0	68.0	71.0	71.0	57.0	46 0	25.0	28.0	45.9	....	.....	....	.....
1897	12.0	22.0	28.0	45.0	57.0	66.0	74.0	67.0	69.0	55.0	30.0	14 0	44.9	....	.....	....	.....
1898	20.0	20.0	35 0	47.0	59.0	69.0	73 0	70.0	64.0	46.0	30 0	15.0	45.7	....	.....	....	.....
1899	15.8	9.4	20.9	48.0	58 9	69.4	72.7	74 2	62.1	56 6	44.0	20.6	46.0	100	Aug.	-30	Feb.
1900	23.3	12.2	18 9	52.3	63 2	69.3	73.0	78.0	63.5	60.2	31 4	24.4	48 2	96	Sept	-17	Feb.
1901	....	17.0	33.4	50.2	61.7	72.2	82.4	74 6	63.6	54.2	35 0	19 0	....	109	June	-22	Dec.
1902	21.6	17.2	37.6	47.4	62.4	64.4	72.6	68.4	59.2	43.3	40.4	18 8	46.9	94	July	-19	Jan.
Average..	15.5	17.5	28 6	47.6	59.4	68.2	72.7	70 2	62.3	50 6	32.1	20.9	45.1	109	1901 July	-30	1891 Feb.

HAMPTON—PRECIPITATION.

1890	1.74	.71	1.55	2.28	4.02	11 92	1.57	4.00	3 19	3 52	3.65	.80	38.88	....	.....	....	.....
1891	2.70	1.62	3.76	1.67	2.06	4.41	6.55	3.08	3.34	2 89	1.19	2 88	36.15	....	.....	....	.....
1892	.43	1.12	1.83	3.63	7.62	4.32	5.68	1.07	.88	2.01	1.08	1.43	31.05	....	.....	....	.....
1893	.82	2.91	2.56	6.18	3 94	3.75	4.36	1.15	1.54	1.63	1.93	1.38	31.15	....	.....	....	.....
1894	1.05	.86	2.23	6.98	1.08	2.78	.70	2.68	2 40	3 91	.41	1.10	26.18	....	.....	....	.....
1895	.95	.57	.77	2.56	3 70	4.40	3.54	4 73	2.15	.92	2.17	1.31	27.77	....	.....	....	.....
1896	.32	.41	1.06	6.65	5.72	3.60	4.80	3.17	4.42	4.39	2.61	1 60	38.75	....	.....	....	.....
1897	1.99	.80	1.94	4 90	2.45	4.5'	1.30	2 01	4.79	.70	.71	1.19	27.34	....	.....	....	.....
1898	1.08	1.56	2.37	2.29	4.25	4 95	1.46	5.38	3.11	4.02	2.52	.46	33.40	....	.....	....	.....
1899	.27	1.09	2.05	2.14	8.40	6.76	2 79	3.33	1.74	1 39	1.08	1.73	32.72	....	.....	....	.....
1900	.47	.93	2.97	2 21	2.47	5 72	7.26	4.68	6.86	4.59	.93	.38	37.47	....	.....	....	.....
1901	1.04	.98	3.38	2.10	2.06	2.46	2.89	1.84	6.38	2.88	.65	.43	27.06	....	.....	....	.....
1902	1.46	.87	2.88	1.07	7.45	8.30	10.95	5.77	4.67	1.33	2.16	2.42	49.33	....	.....	....	.....
Average..	1.10	1.11	2 26	3.44	4.17	5 23	4.14	3.15	3.50	2.63	1.61	1.32	33.66	....	.....	....	.....

FRANKLIN COUNTY CROPS.

YEARS.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, Tons.	RAINFALL MAY 1ST. TO SEPT. 1ST. May.	June.	July.	August.	Total, Inches.
1890	28	11	29	25	42	1.5	4.02	11.95	1.57	4.00	21.54
1891	39	17	42	31	133	1.8	2.66	4.41	6 55	3.04	16 10
1892	29	16	28	27	83	1.5	7 62	4.32	5.68	1 07	18.69
1893	34	11	25	27	63	1.9	2.94	3.75	4.36	1.15	12.20
1894	20	16	28	18	34	0.7	1.08	2.78	.70	2.68	7.24
1895	48	23	53	37	28	1.2	3.70	4.40	3.54	4.73	16 34
1896	36	17	30	30	66	1.7	5.72	3.60	4.80	3.17	17.29
1897	25	14	29	22	47	1.3	2.45	4.56	1.30	2.01	10.32
1898	31	15	31	27	71	1.5	4.25	4 95	1.46	5.38	16 04
1899	36	15	38	32	110	1.3	8.40	6.76	2 79	3 33	21.28
1900	43	16	40	25	70	1.4	2.47	5.72	7.26	2.68	18.13
1901	30	14	33	28	58	1 2	2.06	2.46	2.89	1.84	9.25
1902	33	16	30	22	42	2.0	7.45	8.30	10 95	5.77	32.47
Average	33	15	34	27	73	1.3	....	....	....	....	16.69

WRIGHT COUNTY.

Area, 576 square miles; area in farms, 366,371 acres; number of farms, 1,878; value of farms (in 1900), $13,221,370; value of farm buildings, $2,048,-83); value of live stock, $2,521,948; value of the year's products not fed to stock, $2,584,921; acreage in cereal crops, 157,630 acres. The following tables contain records of the meteorological station at Dows, established in 1896. Elevation of station, 1,142 feet.

DOWS—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept	Oct.	Nov.	Dec.	Ann'l.	Highest.	Lowest.
1896	20.7	25.5	28.4	53.5	63.7	68.2	71.3	68.9	56.8	47.6	30.5	27.1	46.8	96	- 6
1897	15	8.5	28.0	46.0	55.0	66	74	67	70	58	31	15	45.5	95	-25
1898	19	20	35	47	58	69	71	70	63	47	29	14	45.2	96	-21
1899	16.6	9.8	20.4	47.5	58.4	69.1	71.2	72.8	69.6	55.8	42.7	20.6	45.4	98	-30
1900	22.8	11.1	28.5	51.4	62.2	66.8	71.0	75.7	62 9	58.6	30.5	24.0	47.1	93	-21
1901	21 0	18.5	32.5	48.0	59.1	70.4	80.5	70.8	61.1	52.4	33.0	18.2	47.0	103	-23
1902	20.1	14.6	36.8	45.6	61.4	64.4	72.4	65.2	57.8	50.9	39.5	17.2	45.5	94	-24
Means.	19.3	15.4	29.9	48.4	59.7	67.7	73.0	70.0	61.6	52.6	33.7	19.8	46.0	....	....

DOWS—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Snow.
1896	.34	.35	1.00	7.21	7.61	5.48	4.98	2.53	4.56	3.28	2.19	.89	40.42	16.
1897	1.65	1.00	1.38	4.69	3.24	4.70	1.18	3.16	2.57	.52	.56	1.57	26.22	40.2
1898	.85	1.65	1.57	1 88	7.22	4.91	1.75	3.10	2.69	3.95	1.59	47	31.69	30.8
1899	.22	.58	1.41	2.51	5.84	7.77	1 44	2.34	2.14	.69	1.23	.91	27.08	....
1900	.35	1.17	3.15	1.56	4.75	4.57	6.72	2.70	5.25	4.05	1.00	.15	34.82	21.5
1901	.60	1.05	3.31	2.09	2 42	2.28	2.17	2.22	6.52	3.00	0.58	.55	26.79	
1902	.75	.54	2 12	1 38	4.38	5 82	12.19	11.10	2.67	0.95	2 22	1.70	45.81	26.5
Averages	.54	.90	1.99	3.05	5.07	5.08	4.35	3.88	3.77	2.35	2.34	.89	33.21	....

WRIGHT COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST TO SEPT. 1ST. May.	June.	July.	August.	Total.
1890	29	10	29	25	39	1.0					
1891	39	21	40	35	101	2.0					
1892	29	12	25	24	51	1.8					
1893	37	15	27	24	40	1.8					
1894	13	13	22	18	23	0 8					
1895	46	25	58	38	107	1.4					
1896	34	12	29	26	64	1.5	7 61	5.48	4.98	2 53	20.60
1897	27	15	30	24	46	1.4	3.24	4.70	1.18	3.16	12.28
1898	35	18	35	31	69	1.8	7.22	4.91	1.75	3.10	16.98
1899	35	16	38	34	99	1.5	5.84	6.77	1 44	2.34	17.39
1900	43	18	41	34	85	1.7	4 75	4.57	6.72	2.70	18.74
1901	26	16	33	25	40	1.4	2.42	2.28	2 17	2.22	9 09
1902	25	8	30	25	57	2.0	4.38	5.82	12.19	11.10	33.49
Averages..	31	15	34	28	63	1.5	....	....	....	....	18.36

HUMBOLDT COUNTY.

Area, 432 square miles; area in farms, 274,613 acres; number of farms, 1,478; value of farms (in 1900), $3,004,680; value of farm buildings, $1,746,780; value of live stock, $1,974,374; value of the year's products not fed to stock, $1,950,523; acreage in cereal crops, 115,810 acres. Records of a meteorological station at Humboldt are tabulated below. Altitude of the station, 1,095 feet.

HUMBOLDT—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month.	Lowest.	Month.
1886	3.3	4.2	....	45.5	....	....	....	63.5	60.0	48.7	....	23.6	....	....	....	....	.....
1887	5.2	....	....	....	....	73.2	77.9	69.9	....	44.0	....	16.6	....	....	....	....	.....
1888	6.4	....	....	....	....	....	....	67.9	....	....	30.5	25.7	....	....	....	....	.....
1889	18.5	....	....	44.4	56.2	....	....	71.0	....	45.6	29.5	23.6	....	....	....	....	.....
1890	4.5	21.8	25.2	45.4	58.4	71.6	73.8	65.0	58.0	47.3	30.6	26.1	45.8	....	....	....	.....
1891	23.4	13.4	24.8	49.5	56.7	68.2	66.9	....	....	....	....	....	....	....	....	....	.....
1895	....	....	....	51.0	62.0	69.0	72.0	72.0	67.0	45.0	32.0	24.0	....	....	.....	....	.....
1896	22.1	28.0	29.0	54.0	66.0	71.0	73.0	71.0	58.0	48.0	26.4	30.0	47.9	..	.....	....	.....
1897	14.0	23.0	29.0	47.0	58.0	69.0	76.0	69.0	70.0	56.1	32.0	16.0	46.6	..	.....	....	.....
1898	21.0	21.0	35.0	48.0	60.0	71.0	73.0	71.0	63.0	47.0	31.0	17.0	46.4	....	....	....	.....
1899	18.7	11.0	21.0	48.0	59.8	70.6	72.4	74.2	62.0	56.3	43.0	21.2	46.6	97	Sept..	31	Feb.
1900	24.5	14.0	30.2	52.6	63.4	68.8	72.8	77.8	63.7	50.0	31.5	24.8	48.5	95	June.	30	Feb.
1901	22.3	17.3	33.8	49.1	60.1	72.0	83.0	72.0	61.8	52.6	33.9	20.2	48.2	108	July..	-24	Dec.
1902	24.4	20.6	39.0	47.0	63.1	65.3	72.6	68.4	58.8	52.2	40.0	17.5	47.4	94	July..	-22	Jan.
Averages	17.5	17.4	29.7	49.1	60.3	70.0	73.9	66.9	62.3	49.7	33.5	22.8	47.2	108	1901 July	-31	1899 Feb.

HUMBOLDT—RAINFALL (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1887	....	....	....	....	3.78	4.23	1.24	6.75	1.03	1.05	1.78	....	....
1888	....	....	....	....	5.54	2.83	4.04	3.75	....	5.00	.25	....	....
1889	.80	.57	....	1.51	4.11	....	3.48	2.41	....	.15	1.74	.80	....
1890	.94	.27	1.18	2.70	3.72	7.24	3.32	4.54	4.54	2.90	.74	1.08	32.90
1897	....	1.58	2.64	1.20	4.06	5.93	5.26	3.89	....	....	....	....	.....
18 3	....	....	....	....	2.29	3.78	4.90	2.15	.92	.10	.31	1.62	.....
1894	1.21	.40	1.69	6.24	1.75	2.09	2.01	1.57	1.87	3.26	.22	1.06	23.37
18 5	.10	.18	.80	2.72	2.48	4.86	1.16	3.93	2.68	.80	1.42	.24	21.47
1896	.27	.29	.88	5.55	8.02	2.39	6.14	1.67	4.06	3.08	2.15	.45	36.27
1897	1.55	1.03	2.52	4.05	1.49	2.86	2.64	1.74	.70	.72	.40	.84	20.54
1898	.23	1.29	1.74	1.58	5.28	5.67	1.22	5.99	1.80	2.61	.93	.02	28.36
1899	T.	.44	.95	1.26	6.27	7.56	2.02	1.46	1.22	1.19	.67	.73	24.67
1900	.27	.55	2.23	2.75	2.38	4.71	6.52	2.3	5.05	3.67	1.02	.10	32.57
1901	.00	.50	1.80	1.75	3.64	3.69	2.47	1.74	8.24	1.91	.57	.46	26.80
1902	.45	1.29	.80	1.58	3.51	8.00	8.81	7.30	3.15	1.14	2.28	1.57	40.00
Averages	.65	.70	1.45	2.74	3.88	4.67	3.94	3.11	3.44	1.73	1.46	.76	28.53

HUMBOLDT COUNTY—CONTINUED.

HUMBOLDT COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST TO SEPT. 1ST. May.	June.	July.	August.	Total.
1893	35	14	36	26	91	1.6	3.72	7.21	3.20	1.54	18.89
1897	41	18	42	32	135	1.5	3.05	5.93	5.26	3.89	18.13
1898	26	11	25	22	82	1.3	....	....	....	....	.....
1899	37	15	36	25	82	1.5	2.50	3.78	4.70	2.15	13.12
1900	16	10	16	12	35	0.8	1.13	2.09	2.01	1.56	7.42
1901	40	15	38	29	78	1.2	2.84	4.86	1.96	3.93	13.23
1902	41	15	40	33	90	1.6	2.46	4.30	6.14	1.61	18.94
1896	28	10	26	20	44	1.5	1.10	2.83	2.64	1.74	8.73
1897	42	18	42	30	90	1.8	2.67	7.27	1.32	5.90	18.16
1898	42	14	40	32	120	1.5	2.56	7.56	2.62	1.46	17.20
1899	35	18	42	34	75	1.4	4.71	6.52	3.32	.92	16.49
1900	35	15	38	30	80	1.6	3.64	3.69	2.47	1.74	11.54
1901	32	12	32	24	54	1.8	3.51	8.00	8.81	7.30	27.08
Averages	34	15	35	24	83	1.5	....	....	....	....	15.84

POCAHONTAS COUNTY.

Area, 576 square miles; area in farms, 365,455 acres; number of farms, 2,005; value of farms (in 1900), $11,338,110; value of farm buildings, $2,206,070; value of live stock, $2,833,035; value of the year's products not fed to stock, $2,376,889; area in cereal crops, 173,850 acres. The tables below contain records of a meteorological station at Plover, the elevation of which is 1,426 feet:

PLOVER—TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month.	Lowest.	Month.
1887	....	22.0	28.0	48.0	58.0	68.0	75.0	69.0	72.0	55.0	31.0	18.0	....	99	Sept.	....	.....
1888	20.0	21.0	36.0	48.0	59.0	71.0	74.0	70.0	64.0	49.0	30.0	17.0	46.4	97	July.	-21	Dec.
1889	16.8	10.2	29.6	47.4	59.6	70.2	72.6	73.4	63.8	55.6	42.0	21.8	46.2	99	Sept.	-33	Feb.
1890	25.1	3.0	29.6	57.8	64.0	69.4	73.2	75.8	63.3	56.5	39.2	26.6	48.2	96	June	-18	Feb.
1900	21.2	17.4	31.3	49.0	60.0	70.2	81.8	71.1	61.4	51.6	34.1	18.8	47.3	100	July.	-25	Dec.
1901	20.8	16.4	36.8	45.2	61.5	62.6	70.6	66.6	55.6	48.9	35.5	17.4	44.8	95	July.	-25	Jan.
Averages	21.0	16.7	30.4	48.2	60.4	68.6	74.5	71.6	63.4	52.3	33.8	19.9	44.5	....	.....	....	.....

PLOVER—PRECIPITATION (INCHES).

1896	....	....	....	....	....	2.02	5.75	3.08	3.88	2.72	4.19	.75	23.06	....	.....	....	.....
1897	.90	.90	1.45	3.89	.47	1.98	4.22	1.54	.59	1.02	.05	1.45	18.49	....	.....	....	.....
1898	....	.69	.92	1.75	4.85	4.22	3.30	6.30	1.06	2.88	.94	.22	27.13	....	.....	....	.....
1899	.20	.35	1.35	.82	5.55	4.43	1.82	1.61	.44	2.38	1.64	1.20	21.78	....	.....	....	.....
1900	.35	1.10	1.30	1.60	2.69	4.67	8.58	2.49	4.46	3.68	.60	.25	31.69	....	.....	....	.....
1901	.50	.35	2.75	1.22	1.36	3.67	2.27	2.90	13.55	2.00	1.22	.27	32.08	....	.....	....	.....
1902	.60	.60	.52	1.43	4.79	7.24	9.44	9.48	4.19	1.48	2.45	1.10	43.82	....	.....	....	.....
Averages	.51	.65	1.38	1.78	3.28	4.03	5.13	4.00	4.04	2.31	1.59	.75	28.29	....	.....	....	.....

POCAHONTAS COUNTY—CONTINUED.

POCAHONTAS COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	Aug.	Total.
1890	31	11	33	27	53	1.0					
1891	38	9	40	27	129	2 0					
1892	25	11	25	25	21	1.8					
1893	32	11	25	26	42	1.6					
1894	16	16	24	22	50	0.6					
1895	35	21	57	39	104	1.2					
1896	35	14	27	28	52	2 0					
1897	27	15	29	25	60	1.7	.47	1.98	4 22	1.54	8.21
1898	35	16	37	31	52	1.7	4.85	4.22	3.30	6.39	18.76
1899	32	11	33	26	92	1.5	5.55	4.43	1.82	1.61	13.41
1900	42	18	40	28	70	1.6	2.69	4.67	8.58	2.40	18.34
1901	29	14	40	25	82	1 2	1.36	3.67	2.27	2.90	10.60
1902	30	8	33	31	45	2.0	4 79	7.24	9.94	9.48	31.45
Averages.	31	13	34	27	67	1.5	.....	.....	.....	.....	16.79

NORTHWEST DISTRICT.

This district includes nine counties, as follows: Dickinson, Osceola, Lyon, Sioux, O'Brien, Clay, Buena Vista, Cherokee, and Plymouth. The mean annual temperature of the district is 45.8°; average yearly precipitation, 28.16 inches; average rainfall May 1st to September 1st, 15.83 inches; average yield of corn, 31 bushels per acre. Covering a period of twenty years, however, the average yearly precipitation for the northwest district is not above 26.00 inches, of which amount about 55 per cent falls in the crop growing months, May 1st to September 1st.

DICKINSON COUNTY.

Area, 408 square miles; area in farms, 221,980 acres; number of farms, 995; value of farms (in 1900), $6,243,020; value of farm buildings, $970,260; value of live stock, $1,143,256; value of farm products not fed to stock, $1,101,161; acreage of cereal crops, 105,800 acres. The records of a meteorological station at Spirit Lake are tabulated below. Elevation of the station, 1,458 feet.

SPIRIT LAKE—TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1893	.....	.....	.....	.....	.....	.....	.....	.....	.....	49.0	32.2	16.2	.....	.....	.....	.....	.....
1894	10.0	15.0	38.0	50.0	57.0	73.0	78.0	75.0	65.0	49.0	29.0	28.0	47.2	.....	.....	.....	.....
1895	7.0	.....	36.0	55.0	62 0	68.0	73 0	74 0	68.0	45 0	29.0	21.0	.....	.....	.....	.....	.....
1896	19.0	25.0	26.0	49.0	62.0	68 0	72.0	71.0	57.0	44.0	19.0	28 0	44.8	.....	.....	.....	.....
1897	11 0	17.0	24.0	45.0	58.0	67.0	74.0	68.0	72.0	45.0	31.0	15.0	44.8	.....	.....	.....	.....
1898	22.0	20.0	34.0	46 0	57.0	68.0	74.0	70.0	65 0	44.0	21.0	15.0	45 8	.....	.....	.....	.....
1899	15.0	5.2	.....	47.3	58.4	68.4	70.9	73.4	62.2	54.6	41.8	21 4	.....	98	Sept.	-39	Feb.
1900	22.3	10.6	26 0	51.6	.....	.....	.....	77.3	62.6	50.7	29.1	20.1	.....	.....	.....	.....	.....
1901	18.1	17.2	32.4	.....	59 3	69.2	88.2	74.4	59.8	.....	.....	18.7	.....	108	July.	-27	Dec.
1902	20.4	17.4	.....	.....	60 5	64 8	72.8	68.4	.....	51.3	34.4	16.2	.....	93	July.	-28	Jan.
Averages	16.1	15.9	30.9	49.1	59.3	68.3	74 6	72 3	64.0	50.1	30 5	19.8	45.5	1901 108	July.	1890 -39	Feb.

SPIRIT LAKE—PRECIPITATION.

1899	.71	1.16	.....	.65	3.94	10 39	6.91	3 22	.30	2.07	.32	1.06	.....	.....	.....	.....	.....
1900	.32	.65	1.10	2.79	.....	.....	.....	4 31	8.82	1.51	.68	...	.....	.....	.....	.....	.....
1901	.60	.25	50	.....	2.66	4.28	.89	2 46	8.08	.....	1.00	65	.....	.....	.....	.....	.....
1902	.60	.20	.....	.....	4.95	2 9·	5.41	6.08	.....	.43	.....	1.46	.....	.....	.....	.....	.....
Averages	.51	.55	.80	1.72	3 85	5.88	4.40	4.01	5.71	1.35	.57	1.15	30.50	.....	.....	.....	.....

DICKINSON COUNTY—CONTINUED.

DICKINSON COUNTY CROPS.

YEARS.	AVERAGE PER ACRE.					
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.
1890	26	11	32	28	80	2 0
1891	34	20	36	31	109	2.0
1892	28	12	23	22	46	2.0
1893	31	10	27	24	42	2.2
1894	15	14	22	16	33	0.8
1895	10	19	30	23	62	0 5
1896	35	16	39	41	82	1.0
1897	25	10	26	28	75	1.5
1898	38	18	40	25	75	1.5
1899	34	10	27	32	70	2 0
1900	36	15	33	23	70	1 3
1901	28	11	32	26	45	1.0
1902	28	9	26	28	60	1.8
Averages	29	13	30	27	65	1.5

OSCEOLA COUNTY.

Area, 408 square miles; area in farms, 246,875 acres; number of farms, 1,088; value of farms (in 1900), $8,011,360; value of farm buildings, $1,123,060; value of live stock, $1,096,678; value of farm products not fed to stock, $1,299,984; acreage in cereal crops, 112,250 acres. A meteorological station was established at Sibley in 1893, and the records are contained in the following tables. Altitude of the station, 1512 feet:

SIBLEY—TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1893	....	....	....	....	55	69	69	66	61	....	30	16	....	....	.....	..	.....
1894	9	18	37	48	59	70	73	71	68	50	30	27	45.2	..	.....	..	.....
1895	8	12	31	54	59	65	69	....	....	44	21	25	44.2	....	.....	....	.....
1896	....	26	26	49	62	67	69	69	56	53	30	15	44.0	....	.....	....	.....
1897	....	18	25	45	56	65	72	64	69	46	28	14	44.6	....	.....	....	.....
1898	21	21	33	46	56	68	70	68	63	46	40	19.2	43 5	99	Sept ..	-40	Feb.
1899	16.6	5 9	17 1	45.9	56.	66.9	69 8	71. 8	69	5 52.8	40 8	19.2	43 5	99	Sept ..	-40	Feb.
1900	22.6	10.8	29 0	50.6	62 2	67.8	71 0	75.0	61.7	58.0	29.6	24.6	46.9	98	Aug. ..	-20	Feb.
1901	19.5	16 8	32.8	48.5	59.6	68.4	79 5	72.6	60.3	5 .8	33 6	16.1	46.6	106	J ly ..	-29	Dec.
1902	19.2	15.2	35.4	45.4	60.8	63.6	71 0	67.8	57.6	51.6	35.4	15.8	44 9	94	June .	-21	Jan.
															1901.	1899	1890.
Averages	16.6	15.4	29.6	48 0	58.6	67.1	71.3	69.1	61 2	50 9	30.9	19.1	45.0	106	July ..	-40	Feb.

SIBLEY—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Wettest.	Month	Driest.	Month
1893	....	....	....	....	1.61	2.41	3 87	2.26	.88	....	.17	1.43	....	....	.....	....	.....
1894	.97	T	1.01	4.13	3.59	3.84	1.01	.97	2.57	2 94	.29	1.15	22.47	....	.....	....	.....
1895	.63	.32	.54	2.81	3.39	4.85	1.18	.67	2.11	45	.80	.15	17.85	....	.....	....	.....
1896	.35	33	.92	5.33	5.42	3.92	3 67	4 28	6.67	3.5	4.15	.27	38.66	....	.....	....	.....
1897	1.84	.68	2.90	3 68	.73	4.20	6 21	.95	1.15	1.39	.20	1.05	24.98	....	.....	....	.....
1898	.20	.57	.50	1.44	5 42	4.99	2 69	3.06	.67	1.38	.56	.15	21.63	..	.....	..	.....
1899	.20	.84	1.42	1.80	5.80	7 39	4 20	2.26	.22	2.68	.67	1.29	28.21	..	.....	....	.....
1900	22	.45	1.41	2 19	1.29	2 9	4 81	6 29	5.91	1.20	.64	.57	31.57	....	.....	....	.....
1901	.15	.64	1.35	1.78	3 72	4.79	2 85	2.53	6.37	1.04	.70	.65	26.62	..	.....	....	.....
1902	.80	.40	.50	1.54	2.56	1.89	5. 38	9.25	3.98	.68	.53	1.85	29.06	....	.....	....	.....
Averages	.54	47	1.17	2.69	3.35	4.13	3.91	3.25	3.16	1 67	.87	.86	26.07	....	..	..	.....

OSCEOLA COUNTY—CONTINUED.

OSCEOLA COUNTY—CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Totals.
1890	13	8	21	22	48	1.6	.....	.....	..	.....	....
1891	26	17	39	31	155	1.5	.....	.....	.. ..	.....	.....
1892	20	12	27	21	39	1.5	.....	.....	.....	.....	.....
1893	34	13	28	27	71	1.5	1.61	2.41	3.87	2.26	9.65
1894	17	18	18	17	46	0.7	3.59	3.84	1.01	.97	9.41
1895	22	24	55	38	77	1.0	3.39	4.85	1.18	.67	10 04
1896	30	14	36	39	92	1.8	5.42	3.92	3.67	4.28	17.29
1897	26	8	28	25	100	1.5	.73	4.20	6.21	.95	12.09
1898	38	15	32	26	88	1.5	5.42	4.99	2.69	3 06	16.16
1899	30	8	27	25	90	1 5	5.80	7 39	4.20	2.26	19.65
1900	35	12	25	22	66	1.0	1.29	2.90	4.81	6.29	15.38
1901	35	13	36	30	65	1.7	3 72	4.79	2 85	2.58	13 94
1902	30	9	29	22	50	1.5	2.56	1.89	5 58	9.25	19.28
Averages	29	13	30	26	76	1.4	.... ..	....	....	...	14 28

LYON COUNTY.

Area, 600 square miles; area in farms, 358,801 acres; number of farms, 1,619; value of farms (census of 1900), $11,590,090; value of farm buildings, $1,727,030; value of live stock, $1,918,442; value of farm products not fed to stock, $2,238,843; acreage in cereal crops, 213,590 acres. Meteorological records of a station at Rock Rapids are tabulated below:

ROCK RAPIDS—TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct	Nov.	Dec.	Ann'l.
1893	....	....	....	....	56	71	75	68	62	48	32	18	.....
1894	10	14	37	50	60	73	77	73	65	53	32	28	47.5
1895	6	12	28	55	58	66	71	70	65	47	30	18	43.8
1896	23	23	25	46	58	66	71	71	54	41	18	27	43.7
1897	13	19	25	46	56	66	73	66	69	53	28	14	44.0
1898	22	....	34	46	55	....	70	....	....	48	....	13	.....
Means	14.8	17.0	29.8	48.6	57.2	68.4	72.8	69.8	63.0	47.5	28.0	19.7	44.7

ROCK RAPIDS—PRECIPITATION.

1893	....	....	....	....	4.69	1 36	4 91	1.24	.74	1.05	.80	1.18	.....
1894	.65	T	.94	5.88	.33	1 18	1.88	1.28	.59	2 06	T	1.06	15.74
1895	1 00	02	1.63	3.29	4.81	5.40	2.10	.41	3.80	.62	1.06	.10	24.24
1896	T	.05	1.55	4.68	4.11	5 79	1.61	3.06	4.68	3 61	.35	T	32.49
1897	1.05	.50	2.80	3.46	.38	4.98	2.67	2.82	1 67	1 06	.25	.80	22.50
1898	.4	....	.99	1 45	6.05	....	1.95	....	....	2.08	....	....	.....
Mean	.63	14	1.59	3 75	3.89	3 74	2.52	1.76	2.80	.75	.90	61	3.17

LYON COUNTY—CONTINUED.

LYON COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.					
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.
1890	33	14	33	31	51	1.5
1891	33	20	43	35	110	1.5
1892	28	16	31	33	40	1.5
1893	32	14	30	24	71	1.6
1894	26	10	14	11	42	0.7
1895	36	32	51	42	100	1.3
1896	39	14	32	30	230	1.4
1897	43	10	28	32	120	1.5
1898	42	14	58	38	75	1.8
1899	36	11	30	25	100	1.5
1900	35	13	33	25	70	1.3
1901	33	13	35	32	60	1.5
1902	31	15	35	32	90	1.7
Average	31	14	33	27	90	1.4

SIOUX COUNTY.

Area, 768 square miles; area in farms, 476,621 acres; number of farms, 2,451; value of farms (census of 1900), $18,558,110; value of farm buildings, $2,675,470; value of live stock, $3,094,638; value of farm products not fed to stock, $3,454,171; acreage in cereal crops, 283,840 acres. Meteorological records of a station at Sioux Center are tabulated below. The precipitation for the four years of observation shows a higher average than would be obtained from a period of fifteen to twenty years. The average for that county is not much in excess of 25 inches.

SIOUX CENTER—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l	Highest.	Month	Lowest.	Month
1899	...	...	...	...	58	70	76	73	62	53	42	20	...	95	July ..	-15	Feb.
1900	23	12	31	51	64	71	75	76	63	57	30	25	48	100	July ..	-27	Dec.
1901	21	18	34	49	60	70	76	72	61	53	35	18	...	104	July ..	-27	Dec.
1902	21	17	35	45	62	65	71	68	57	51	35	16	45.5	91	June..	-20	Jan.
Averages	21.6	15.7	33.0	48.3	61.0	69.0	74.5	72.2	60.7	53.2	35.5	19.7	47.0	...	...	...	...

SIOUX CENTER—PRECIPITATION (INCHES).

1899	...	...	...	...	5.02	5.78	2.20	3.75	0.15	2.46	0.66	1.44	...	...	...	...	...
1900	0.15	0.95	1.17	3.93	2.20	4.42	12.31	3.20	7.22	2.29	0.55	0.60	39.98	...	...	...	...
1901	0.27	0.75	1.41	2.07	4.31	5.40	...	4.44	6.03	1.36	0.73	0.70	...	...	...	...	...
1902	0.40	0.65	1.19	3.37	3.77	1.63	5.64	5.05	4.15	0.28	0.35	2.60	29.08	...	...	...	...
Averages	0.27	0.78	1.25	3.13	3.82	4.30	5.38	4.10	4.38	1.58	0.57	0.83	30.37	...	...	...	...

SIOUX COUNTY—CONTINUED.

SIOUX COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.					
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.
1890	30	11	29	35	46	1.0
1891	38	22	47	34	165	2.0
1892	27	16	31	29	45	1.7
1893	30	14	32	22	56	1.6
1894	12	11	23	17	45	0.5
1895	37	25	50	46	111	1.7
1896	38	15	29	35	82	1.8
1897	39	10	28	29	68	1.4
1898	39	15	32	29	87	1.8
1899	36	12	28	25	90	1.4
1900	28	14	30	23	70	1.6
1901	30	13	25	23	40	1.2
1902	35	10	33	24	90	1.5
Averages	32	15	33	28	76	1.5

O'BRIEN COUNTY.

Area, 576 square miles; area in farms, 360,025 acres; number of farms, 1,845; value of farms (census of 1900), $13,754,540; value of farm buildings, $2,171,510; value of live stock, $2,618,240; value of farm products not fed to stock, $2,614,846; acreage in cereal crops, 204,320 acres.

Weather records of stations at Primghar and Sheldon are tabulated below. Elevation of Primghar, 1,502 feet; Sheldon, 1,406 feet.

PRIMGHAR—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l	Highest.	Month	Lowest.	Month
1896	...	...	...	56	60	67	71	72	65	45	31	23	...	100	Sept ..	...	...
1896	22	27.4	27.2	51.0	63.2	69.2	72.2	72.6	58.5	46.1	21.4	27.0	46.5	97	Aug ..	-14	Jan.
1897	13	20	26	46	58	68	74	67	70	55	32	17	45.5	97	July ..	-24	Jan.
1898	21	22	36	48	59	73	73	73	...	47	28	17.0	...	...	...	-20	Dec.
1899	17.5	10.7	16.0	47	57.8	69.5	75.4	73.6	60.5	52.6	45.2	22.4	45.7	98	Sept ..	-38	Feb.
1900	27.0	8.8	...	53.3	65.8	69.5	73.8	77.4	60.4	59.0	32.7	24.8	48.6	98	June .	-20	Feb.
1901	20.4	15.4	32.8	...	62.4	...	83.6	76.2	62.6	...	...	...	...	110	July ..	...	...
1902	20.3	17.4	37.4	47.3	61.2	...	...	...	...	52.6	..	....	....	....	.....	....	.....
Averages	20.2	17.4	29.2	49.8	60.9	69.4	74.7	73.1	62.8	50.9	31.7	21.9	46.6	110	1901 July ..	-38	1899 Feb.

PRIMGHAR—PRECIPITATION (INCHES).

1895	...	...	...	2.99	2.24	5.28	1.76	1.08	3.97	.24	1.01	.10	...	.	.....	....	.....
1896	.25	.27	.61	5.62	5.09	2.50	4.22	1.46	2.11	3.62	3.75	.18	28.68	...	.....	....	.....
1897	1.55	.35	2.97	4.78	1.17	1.90	2.98	4.84	1.12	2.30	.85	1.26	25.95	...	.....	....	.....
1898	.19	.32	1.20	2.19	4.49	5.10	4.52	2.10	.55	2.40	1.00	.10	24.16	...	.....	....	.....
1899	0.00	.70	2.75	1.50	3.95	7.76	2.85	2.20	0.00	1.25	.45	.70	24.11	...	.....	....	.....
1900	.10	.60	4.13	2.35	2.75	2.40	18.4	51.85	5.55	1.71	T	.20	40.09	...	.....	....	.....
1901	...	...	...	2.00	2.75	7.46	.85	2.06	...	1.65	.75	....	..	...	.....	....	.....
1902	.45	.30	....	1.10	2.20	2.10	5.46	4.45	....	.30	....	....	...	...	.....	....	.....
Averages	.42	.42	2.33	2.82	3.07	4.31	5.13	2.44	2.22	1.68	.97	.42	26.88	....	.....	....	.....

O'BRIEN COUNTY—CONTINUED.

SHELDON—MEAN TEMPERATURE (DEGREES)

YEAR.	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l	Highest.	Month	Lowest.	Month
1899	..	..	18.0	47.4	56.6	66.2	70.3	71.6	59.2	..	32.2	1.90	.....	98	Sept..	-13	Dec.
1900	25.0	10 3	28.8	50 4	61.4	67.7	71.0	74.4	61.8	50 8	29.7	24.4	46.8	94	{Jn {July	21	Feb.
1901	20.0	15 3	31 8	49.2	59.6	68 7	73.6	72.4	60.8	51.8	33.5	17 5	40 7	104	July ..	-25	Dec.
1902	20. 4	17 2	28.8	46.0	60 8	63 8	71.2	67 4	57.8	51.8	37.0	15.3	45 4	92	June.	-20	Jan.
Mean	21. 8	14. 2	28 8	48 2	59 0	66.5	73. 0	71. 4	62 4	53. 4	35. 6	19. 0	46.1				

SHELDON—PRECIPITATION (INCHES).

1899	..	..	.65	1.55	4 19	6.47	3 20	3.97	.09	4.30	.77	1.15	..	....	.....	....	.....
1900	.27	.75	1.24	2.05	1.09	3 88	16.56	1.82	6.95	1.70	.27	.50	37.30	..	.....	....	.....
1901	.20	.93	1.59	1.56	4.00	4.93	1.82	1.77	6.04	1.22	.82	.83	25 23	....	.....	....	.....
1902	.71	.65	.56	.70	4 81	1.46	5 90	1.14	3 31	.70	.47	1.12	20.58		.....	....	.....
Averages	0.39	0.68	0 98	1. 48	3. 62	4. 17	6. 85	1. 42	4. 09	2 00	.71	.90	27 27	..	.....	...	

O'BRIEN COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL, MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons	May.	June.	July.	August.	Total.
1890	18	8	45	17	23	1.0					
1891	30	19	46	31	113	1.8					
1892	23	11	42	23	75	1.4					
1893	36	13	10	23	81	1.6					
1894	15	12	22	18	38	0.7					
1895	28	20	60	35	153	1.2	2 24	5.28	1.76	1 03	10.31
1896	45	14	45	35	75	2.1	5.69	2.50	4.22	1.46	13.27
1897	27	10	42	25	150	1.5	1.17	1.90	2.56	4.84	10.37
1898	42	15	57	29	135	1.5	4.49	5.10	4.52	2 20	16.21
1899	37	10	30	21	95	1.5	3.95	7.76	2.85	2.10	16.76
1900	38	15	33	39	80	1.2	2 75	2 40	18.45	1.85	25.45
1901	32	14	42	26	58	1.2	2.70	2 46	.85	2.05	13.06
1902	33	12	38	28	80	1.5	2.20	2.10	5 46	4.46	14.21
Averages..	31	13	35	26	80	1 4					15.02

CLAY COUNTY.

Area, 576 square miles; area in farms, 344,960 acres; number of farms, 1,684; value of farm lands (census of 1900), $11,440,140; value of farm buildings, $1,750,250; value of live stock, $2,413,082; value of products, not fed to stock, $2,186,381; acreage in cereal crops, 174,580 acres. Weather records compiled at Spencer are tabulated below. Altitude of Spencer, 1,319 feet.

SPENCER—MEAN TEMPERATURE (DEGREES).

YEARS.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1895	..	15 0	32.0	57.0	58.0	66.0	..	70.0	65.0								
1896	23.8	27.9	26.0	..	63.1	68.3	71.4	70.7	56.4	44.5	20.8	26.8	.....	97	Aug.	...	.....
1897	11	20.0	26.0	45.0	57.0	66.0	74.0	66.0	60.0	53.0	30 0	16.0	44.4	98	July	-25	Jan.
1898	20	20.0	33.0	45.0	57.0	70.0	72.0	70.0	62.0	46.0	28.0	13.0	44.8	95	July	-23	Dec.
1899	15 2	6.8	17.;	45.1	58.1	68.7	70.6	73.2									
Means.	17.5	17.7	26.9	48.0	58.6	68.0	72.0	69 9	63.1	47 8	26.2	18.6	44.7	..	.....	...	.....

SPENCER—PRECIPITATION (INCHES).

1895	..	.12	.28	2.39	2.23	2.79	.91	3.10	4.85								
1896	.22	.04	1.35	..	5.63	3.48	3.85	2.19	2.70	3.40	4.51	.39	.....	...	.....	...	.....
1897	1.28	.34	1.72	4.20	.62	3.98	4 81	1.99	.71	1.95	.12	.73	22.64	...	.....	...	.....
1898	04	.67	.74	3.12	5 00	9.17	4.09	3.75	.94	2.41	1.24	.32	31.49	...	.....	...	.....
1899	.06	.77	1.29	1.09	5.28	5.77	2.22	4.21									
Averages.	.40	.48	1.07	2. 70	3. 75	5. 03	3. 18	3. 05	2. 55	2. 58	1. 95	.47	27 20				

CLAY COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.					
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons
1890	31	9	33	27	50	1.0
1891	29	16	36	32	127	1.5
1892	28	12	26	23	68	1.5
1893	38	17	24	21	40	1.6
1894	12	14	22	18	29	0.8
1895	10	15	35	35	20	0.7
1896	45	14	40	40	100	1.6
1897	27	11	30	26	65	1.6
1898	42	15	34	30	75	1.5
1899	36	11	33	34	100	1.6
1900	35	12	31	33	72	1.2
1901	24	10	32	25	60	1.2
1902	26	10	32	30	60	1.5
Averages	31	13	31	29	66	1.4

BUENA VISTA COUNTY.

Area, 576 square miles; area in farms, 360,231 acres; value of farms, (census of 1900), $13,001,470; value of farm buildings, $2,306,120; value of live stock, $2,736,760; value of farm products not fed to stock, $2,512,688; acreage in cereal crops, 189,840 acres. Records of voluntary meteorological stations at Alta and Storm Lake are tabulated below. The altitude of Alta is 1,513 feet; Storm Lake, 1,440 feet.

ALTA—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1891	24	18	24	49	57	69	68	65	66	48	27	29	45.1	94	Aug.	-18	Feb.
1892	13	23	29	42	49	66	72	70	64	54	31	17	44.1	95	June. July.	-28	Jan.
1893	7	11	27	41	55	71	73	68	65	50	31	17	43.0	95	Aug. Sept.	-22	Feb.
1894	12	16	37	49	61	73	77	74	65	50	30	27	47.6	106	July.	-28	Jan.
1895	10	16	31	54	60	68	71	72	66	45	31	23	45.6	98	Aug. Sept.	-25	Feb.
1896	21	27	27	51	63	69	71	70	58	46	22	28	46.0	95	July.	-14	Jan.
1897	11	19	28	46	58	67	74	67	70	55	31	16	45.2	96	July.	-24	Jan.
1898	22	21	34	47	58	70	73	71	64	45	29	16	45.9	96	Aug.	-18	Dec.
1899	16.9	8.8	19	46.6	57.8	69	71.4	74.6	61.8	55	43.8	20.1	44.2	98	Sept.	-33	Feb.
1900	23.3	10.8	28.4	51.4	62.8	68	70.8	74.8	62.0	57.7	30.1	24.4	47.0	94	June.	-16	Feb.
1901	21.1	17.4	31.8	48.5	59.7	69.4	81.2	72.9	60.4	52.0	34.0	17.2	47.1	105	July.	-26	Dec.
1902	20.0	17.2	36.9	46.0	61.4	62.9	70.2	66.9	56.7	51.5	36.0	14.6	45.0	90	July Aug	-20	Jan.
														1901		1899	
Averages	16.8	19.2	29.4	47.6	58.6	68.5	72.7	70.8	63.2	50.8	31.6	20.8	48.5	105	July.	-33	Feb.

ALTA—PRECIPITATION (INCHES).

1891	1.78	1.37	1.77	2.12	2.92	16.62	6.21	5.64	2.04	5.78	.91	2.49	49.05	....	.....	....	.....
1892	.34	1.14	2.74	4.54	10.39	2.95	2.76	4.63	.70	1.16	.21	.64	32.20		.....	....	.....
1893	.26	1.82	2.60	3.14	3.65	5.48	4.61	1.73	1.02	.23	.96	1.40	26.40	....	.....	..	.....
1894	.71	.80	.75	3.59	1.54	2.78	.39	2.87	1.14	3.18	.26	.98	18.49	....	....	....	.....
1895	.44	.22	1.14	3.56	1.40	4.99	1.55	4.44	7.43	.32	.88	.04	26.41	....	.....	....	.....
1896	.42	.26	.58	8.15	7.99	5.40	5.74	1.71	2.55	2.78	2.97	.46	39.01	....	.....	..	.....
1897	1.62	.55	4.08	4.23	.98	1.86	5.19	3.57	.20	1.76	.47	1.52	26.03	..	.....	...	.....
1898	.25	.93	1.44	3.02	4.86	3.41	2.32	5.49	1.03	3.24	1.37	.35	27.71	..	.....	..	.....
1899	.15	.68	1.58	1.17	7.75	8.66	2.89	2.37	.17	1.98	1.37	1.06	28.93	..	...	..	.....
1900	.45	1.88	1.96	2.19	3.00	6.23	11.11	3.64	5.34	2.61	.68	.55	39.14		.....	....	.....
1901	.42	.49	2.34	1.61	1.86	3.20	1.55	5.60	6.53	1.87	1.22	.89	25.68	....	.....	.	.....
1902	.94	.40	.87	1.51	4.31	6.59	12.24	6.34	3.94	1.11	2.77	1.97	42.99	....	.....	....	.....
Averages	.65	.75	1.82	3.24	4.22	5.66	4.71	3.84	2.67	2.17	1.17	1.08	31.93		.....	....	.....

STORM LAKE—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1891	24.0	13.0	24.0	....	58.0	67.0	68.0	69.0	68.0	52.0	28.0	28.0	....	....	.....	....	.....
1892	14.0	24.0	30.0	44.0	52.0	68.0	74.0	71.0	65.0	56.0	33.0	18.0	45.9	....	.....	....	.....
1893	11.0	14.0	27.0	43.0	56.0	72.0	75.0	71.0	67.0	52.0	34.0	19.0	45.0	....	.....	....	.....
1899	19.0	9.6	18.8	45.6	57.4	68.6	71.1	73.4	62.4	55.0	42.6	21.6	45.4	94	Sept ..	-30	Feb.
1900	24.2	11.1	29.0	51.5	62.7	67.1	71.1	75.4	62.8	58.1	31.3	25.2	47.4	92	June..	-15	Feb.
1901	21.8	17.4	32.2	48.3	59.0	70.0	81.5	73.4	61.4	52.8	34.4	17.0	47.4	104	July ..	-27	Dec.
1902	20.1	16.2	36.0	45.8	60.9	63.2	70.9	67.4	58.1	52.1	37.1	16.7	45.4	90	July. Aug	-20	Jan.
														1901		1899	
Averages.	19.2	15.0	28.1	46.4	58.0	68.0	73.1	71.5	63.5	55.5	36.4	20.2	46.2	104	July ..	-30	Feb.

BUENA VISTA COUNTY—CONTINUED.

STORM LAKE—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1884	.05	.64	1.87	2.31	1.12	1.70	5.17	3.56	3.47	2.61	.10	1.15	23.23	....	.....	....	.....
1885	.85	.42	.20	.87	4.90	4.58	3.40	1.63	2.42	1.89	1.08	.44	22.68	....	.....	....	.....
1886	1.28	.36	1.16	1.98	1.92	2.97	1.01	1.47	2.18	.78	1.33	.86	17.30	....	.....	....	.....
1887	.29	.62	.39	.91	1.68	2.21	4.36	1.83	9.89	.76	.70	1.38	25.02	....	.....	....	.....
1888	1.33	.54	2.84	4.15	5.92	2.75	3.02	4.79	1.22	.46	.03	.50	27.55	....	.....	....	.....
1889	1.00	.40	.35	1.79	3.07	4.86	6.17	1.52	1.34	.36	1.46	.76	23.08	....	.....	....	.....
1890	1.16	.44	1.90	2.69	2.50	5.86	3.38	3.99	2.82	2.57	1.05	.44	28.80	....	.....	....	.....
1891	1.61	1.02	1.33	1.85	2.88	14.70	5.22	3.16	1.70	4.36	.72	2.28	40.82	....	.....	....	.....
1892	.37	.90	1.54	5.64	7.26	2.28	2.21	2.77	.67	.65	.25	.53	25.07	....	.....	....	.....
1893	.17	1.48	2.60	2.72	3.41	3.34	3.99	1.90	.90	.10	1.03	1.46	23.10	....	.....	....	.....
1898	....	....	....	....	....	....	....	....	....	1.45	.99	.28	....	....	.....	....	.....
1899	.13	.59	1.02	1.70	7.37	7.98	.62	2.01	.33	2.12	1.10	1.06	26.08	....	.....	....	.....
1900	.35	.85	1.96	2.33	1.47	6.79	9.16	4.58	5.33	3.32	.46	.34	36.94	....	.....	....	.....
1901	.89	.53	1.82	1.41	1.55	2.87	1.67	2.15	6.92	1.88	1.18	.62	22.99	....	.....	....	.....
1902	.89	.32	.86	1.86	4.22	5.37	10.49	5.52	3.11	1.13	2.94	1.92	38.63	....	.....	....	.....
Averages.	.70	.65	1.38	2.90	3.52	4.88	4.28	2.92	3.02	1.76	.96	.93	27.23	....	.....	....	.....

BURNA VISTA COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST TO SEPT. 1ST. May.	June.	July.	Aug.	Total, inches.
1890	30	9	25	22	42	1.5	2.50	5.86	3.38	3.99	15.73
1891	30	13	36	25	184	1.5	2.92	16.02	6.21	5.64	30.79
1892	28	12	24	23	59	1.3	10.39	2.95	2.76	4.63	20.73
1893	37	11	25	19	85	1.4	3.65	5.48	4.61	1.73	15.47
1894	10	12	19	12	39	0.5	1.54	2.78	.39	2.87	7.58
1895	32	24	55	41	74	1.0	1.40	4.99	1.55	4.44	12.38
1896	41	11	32	33	87	2.0	7.99	5.40	5.74	1.71	20.84
1897	30	14	32	26	110	1.4	.98	1.86	5.19	3.57	11.60
1898	41	15	35	30	90	1.7	4.86	3.41	2.32	5.49	16.08
1899	33	13	28	22	85	1.6	7.75	8.66	2.89	2.37	21.67
1900	41	14	43	25	90	1.5	3.00	6.23	11.11	3.64	23.98
1901	21	15	37	28	55	1.2	1.86	3.20	1.55	3.70	10.31
1902	28	9	30	25	70	1.5	4.31	6.59	12.24	6.34	29.48
Averages.	31	13	32	26	78	1.4	.....	.....	.....	.....	18.20

CHEROKEE COUNTY.

Area, 576 square miles; area in farms, 354,643 acres; number of farms, 1,908; value of farms (in 1900), $13,341,580; value of farm buildings, $2,268,410; value of live stock, $3,051,784; value of farm products, not fed to stock, $2,584,577; acreage in cereal crops, 203,620 acres. A voluntary meteorological station was established at Larrabee in 1890, and the unbroken records are tabulated below. Altitude of the station, 1,366 feet.

At Washta records of precipitation have been compiled since January, 1898, and these records are appended. Altitude of Washta, 1,157 feet.

LARRABEE—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1890	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
1891	29	27	28	52	59	72	69	68	66	50	32	33	48.7	....	....	....	....
1892	12	22	30	44	51	68	73	70	64	55	31	18	44.5	....	....	....	....
1893	9	13	27	43	56	71	74	68	64	49	32	17	43.6	....	....	....	....
1894	13	16	37	51	60	73	76	74	65	50	30	28	47.8	....	....	....	....
1895	11	15	33	54	60	68	72	72	67	45	32	24	46.1	....	....	....	....
1896	21	28	27	52	63	68	71	72	56	46	22	28	46 8	....	....	....	....
1897	15	21	29	45	56	67	73	69	71	54	31	17	45 5	....	....	....	....
1898	21	22	34	46.5	56	70	71	71	63	45	30	16	45.4	98	....	-22	....
1899	17.5	7.8	18.8	46 2	37.2	68.6	71.8	72 4	61.4	52 8	41.8	20.0	44.7	97	Sept.	-37	Feb.
1900	23.2	11.4	29.6	49.6	63.4	68 0	70.4	76.0	61.6	37.2	31.2	25.4	47.2	98	June.	-21	Feb.
1901	21.4	17.4	21.6	48.9	57.8	68.8	82.0	72.9	60.6	51.3	33.4	19.0	47.2	108	July.	-26	Dec.
1902	20.4	17.8	35, 8	45.2	62.4	64.4	72.5	68.5	57.7	50.9	36.2	16.6	45.7	93	July. Aug.	-22	Jan.
Aver'g's	17.9	18.2	29.2	48.1	58.5	68.9	73.0	71.2	63.1	50.5	31.9	21 9	46.1	108	1901 July.	-37	1899 Feb

LARRABEE—PRECIPITATION (INCHES).

1890	.99	.63	1.56	3.29	3.52	6.65	2.66	3.92	2.93	2.16	.71	.57	29.59	....	....	....	....
1891	1.31	1.07	1.51	1.23	2.73	19.88	8.20	3.85	1.82	3.38	.67	2.93	48.61	....	....	....	....
1892	.25	1.42	1.85	5.22	9.83	3.79	2.98	4 69	.99	1.21	.15	.50	32.88	....	....	....	....
1893	.13	.79	2.47	3.93	4.11	2.19	1.95	2.18	1.24	.89	.95	2.27	23.10	....	....	....	....
1894	.78	.26	1.14	4.30	1.18	2.65	.69	2.50	1.08	2.85	.87	1.29	19.04	....	....	....	....
1895	.25	.80	1.44	3.73	2.44	6.75	2.41	2.87	5.17	.24	1.66	.08	26.74	....	....	....	....
1896	.28	.40	.47	6 91	5 49	3.96	6 89	1.47	2.16	3.40	3.20	47	35.50	....	....	....	....
1897	1.68	55	4 82	2.84	.98	4.26	4.61	3.18	42	2.31	.35	1 88	27.38	....	....	....	....
1898	.17	.94	1 09	1.82	3.54	5.90	5.06	4.07	.96	2.92	1.05	.24	27 76	....	....	....	....
1899	.12	1.13	1.40	1.39	4.33	5.72	2.71	3.57	.80	1.42	.97	.43	23.49	....	....	....	....
1900	.35	1.25	1.55	2.67	6.30	6 93	14.08	2 23	6.24	1.54	.48	.33	43 95	....	....	....	....
1901	.22	.46	1.98	.85	2 57	3.78	1.13	1.90	10 77	1.75	1.25	.76	27.42	....	....	....	....
1902	.95	.60	.63	.55	3.26	4.79	7.19	6.95	3.45	.80	1.48	2.17	33.8	....	....	....	....
Aver'g's	.57	.75	1.65	2 99	3.95	5.90	4.66	3.34	2.88	1 84	.98	1 07	30.64	....	....	....	....

WASHTA—PRECIPITATION (INCHES).

1898	.10	.85	53	1.61	4.29	4.67	3.04	.74	1.40	2.88	1.05	.46	21.62	....	....	....	....
1899	.10	.60	1.55	1.28	5.22	7.87	1.69	3.56	.27	1.11	1.23	1.10	25.58	....	....	....	....
1900	.34	1.30	1.36	2.52	2.81	3.20	8.21	4.31	7.47	3.42	.27	.40	35 61	....	....	....	....
1901	.45	.90	2.18	1 28	2.86	2.82	2 55	2.04	6.58	1.77	.90	.80	25.13	....	....	....	....
1902	1.10	.45	.65	2.00	.87	3 54	10.02	3.91	3.86	.71	1.82	3.10	32.03	....	....	....	....
Aver'g's	.41	.62	1.25	1.73	3.21	4.41	5.10	2.91	3.91	1.97	1.05	1.17	27.97	....	....	....	....

CHEROKEE COUNTY—CONTINUED.

CHEROKEE COUNTY CROPS.

YEAR.	AVERAGE PER ACRE						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	31	13	36	30	44	1.5	3.52	6.55	2.66	3.92	16.75
1891	32	16	40	25	89	1.8	2.78	19.88	8 20	3.85	34.66
1892	32	15	29	23	39	2 0	9.83	3.79	2.08	4 69	21.29
1893	37	15	33	27	61	1.5	4.11	2.19	1.95	2.18	10.43
1894	15	15	25	15	52	0.7	1.18	2.65	.69	2.50	7.02
1895	39	26	58	48	89	1.6	2.44	6.75	2 41	2.87	14.47
1896	25	10	15	40	75	2.0	6.49	3.96	6.89	1.47	18.21
1897	25	13	35	30	54	1.5	.98	4.26	4.61	3.18	13.03
1898	42	17	33	30	75	1.8	3.54	5.90	5 06	4.07	18.57
1899	36	13	31	34	80	1.5	4.33	5.72	2.71	3.57	16 33
1900	41	18	40	25	76	1.5	6 30	6.93	14 08	2.23	29.54
1901	22	18	38	30	45	1 3	2.57	3.78	1 13	1 00	9.38
1902	35	9	30	30	110	1.8	3.26	4 79	6.95	3 45	22.19
Averages	32	14	34	31	68	1.6					17.83

PLYMOUTH COUNTY.

Area, 820 square miles; area in farms, 541,967 acres; number of farms, 2,643; value of farms (census of 1900) $19,388,570; value of farm buildings, $2,425,480; value of live stock, $3,425,044; value of farm products not fed to stock, $3,615,604; acreage in cereal crops, 286,760 acres. Records of the meteorological station established at LeMars in 1896 are tabulated below. Altitude of station, 1,224 feet.

LEMARS—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l	Highest.	Month	Lowest.	Month
1896	....	....	32.8	53.8	65.0	69.8	72.0	73.6	62.4	50.4	23.9	29.1	....	....	....	....	....
1897	13.8	22.0	29.1	49.6	57.2	68.4	75.8	68.0	69.0	54.6	33.2	17.2	46.2	99	July.	-19	Dec.
1898	22.2	22.8	36.3	48.6	58.0	70.0	72.5	71.8	64.2	46.4	30.4	17.8	46.8	98	Aug	-15	Dec.
1899	20.2	9.6	20.8	48.4	59.0	69.7	71.6	73.4	62.5	54.7	42.4	22 2	46.2	96	Sept.	-35	Feb.
1900	25.4	13.1	32.0	51.3	63.2	69.4	72.1	76.0	63.1	57.3	32.2	26.0	48.4	96	July.	-16	Feb.
1901	22.8	18.2	34.4	49.8	55.9	70.4	81.4	72.9	60.6	52.4	35.1	20.4	48.2	105	July.	-31	Dec.
19.2	21.6	18.0	37.2	46.2	62.6	64.8	71.6	68.2	58.2	51.6	36.8	18.1	46.2	93	Aug	-24	Jan.
Averages	21.0	17.3	31.8	49.7	60.6	68.9	73.9	72.0	62.9	52.5	33.4	21.5	47.0	105	1901 July.	-35	1899 Feb.

LEMARS—PRECIPITATION (INCHES).

1896	....	....	.46	6.69	8.64	2.67	4.50	.96	2.15	3.69	3.20	.06	....	....	....	....	....
1897	2.60	.60	3.53	7.21	1.10	3.11	2.09	2.60	0.00	1.95	.35	2.40	27.59	....	....	....	....
1898	.25	.45	1.26	1.96	3.71	4.72	3.34	2.31	.70	1.89	.80	.20	21.59	....	....	....	....
1899	T	.70	1.24	.98	4.72	6.23	3.22	5.51	.85	1.55	1.81	1.06	27.90	....	....	....	....
1900	.24	1.10	1.35	4.16	.96	3.42	12.00	2.85	7.01	1.69	.34	.20	35.32	....	....	....	....
1901	.08	.63	1.06	1.70	4.54	3.26	2.10	1.09	6.97	1.74	.60	.55	24.32	....	....	....	....
1902	.98	.20	.65	2.68	1.46	4.63	7.08	3.65	4.07	.44	.85	3.15	29.99	....	....	....	....
Averages	.69	.61	2.37	3.62	3.59	4.02	4.90	2.71	3.19	1.85	1.06	1.09	28.70	....	....	....	....

PLYMOUTH COUNTY--CONTINUED.

PLYMOUTH COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total
1890	28	9	30	27	46	1.0					
1891	38	18	43	30	130	1.8					
1892	28	14	28	23	45	2.0					
1893	34	14	33	26	50	1.8					
1894	11	11	16	18	45	0.9					
1895	32	28	50	40	100	1.0					
1896	35	14	22	28	90	1.8	8.64	2.67	4.50	.96	16.77
1897	29	12	27	25	50	1.5	1.10	3.11	2.09	2.60	8.90
1898	35	15	35	27	72	2.0	3.71	4.72	3.34	2.31	14.08
1899	38	10	35	30	80	1.6	4.72	6.26	3.22	5.51	19.71
1900	40	14	35	30	70	1.6	.96	3.42	12.00	2.85	28.23
1901	33	15	35	30	25	1.2	4.54	3.26	2.10	1.09	10.99
1902	39	12	35	36	72	2.0	1.46	4.68	7.08	3.65	16.87
Averages.	32	14	33	28	67	1.5					16.50

WEST CENTRAL DISTRICT.

This district includes the following (9) counties: Sac, Ida, Woodbury, Monona, Crawford, Carroll, Audubon, Shelby and Harrison. The mean annual temperature of the district is 47.1°; average annual precipitation, 29.36 inches; average rainfall from May 1st to September 1st, 15.75 inches; average yield of corn, 31.4 bushels per acre.

SAC COUNTY.

Area, 576 square miles; area in farms, 364,232 acres; number of farms, 1,999; value of farms (census of 1900), $13,892,300; value of farm buildings, $2,590,690; value of live stock, $3,189,585; value of farm products for the year not fed to stock, $2,936,298; acreage in cereal crops, 189,260 acres. In this county meteorological records have been compiled at Sac City, Grant City and Odebolt. Altitude of station at Sac City, 1,278 feet; Odebolt, 1,356 feet.

SAC CITY—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1888	1.8	18.4	23.7	47.1	50.3	66.1	74.3	67.2	56.9	45.7	32.3	26.4	42.5	....	.....	....	.....
1889	18.7	15.8	30.6	48.0	57.3	65.4	69.6	69.0	55 9	44.9	29.7	33.0	45.4	....	.....	....	.....
1890	12.6	20.9	23.4	48.8	52.3	69.5	74.3	03.3	56.7	46.0	33 8	25.0	44.0	....	.....	....	.....
1891	23.0	11.2	24.8	49.2	54.8	66.9	65.1	65.4	62.9	48.8	29.4	31.6	44.4	....	.....	....	.....
1892	13.2	20.2	28.7	44.5	52.2	67.8	75.6	62.7	62.6	51.3	31.3	18.2	44.9	....	.....	....	.....
1893	7.8	11.3	27.6	42.0	51.4	71.2	74.5	64.2	....	....	....	18.7	....	....	.....	....	.....
1894	14.0	17.0	37 :	47.9	60.2	72.8	77.0	75.9	68.6	49.6	30.7	27.5	41.9	....	.....	....	.....
1895	11.0	16.0	31.0	53.0	62.0	68.0	72.0	69.0	66.0	45.0	32 0	24.0	45.8	....	.....	....	.....
1896	22 5	27.4	28.2	52.8	64.6	70.8	72.6	71.4	58.4	47.1	25.2	29.7	47.6	....	.....	....	.....
1897	12.0	22.0	28 0	46.0	57.0	67.0	74.0	68.0	70.0	53.0	32.0	16.0	45.4	....	.....	....	.....
1898	22.2	21.9	35.0	47.0	59.0	70 0	71.0	72.0	62.0	46.0	30.0	16.0	46.1	....	.....	....	.....
1899	18.4	11.8	20.8	....	.....	.....	72.1	78.4	62.6	55.8	43.6	21.9	....	98	Sept..	-29	Feb.
1900	25.8	18.2	30.0	52.4	63.0	68.2	72.3	76.4	63.2	58.8	32.0	27.0	48.5	94	June. July	-17	Feb.
1901	23.0	18.8	33.4	49.2	59.8	71.1	82.8	73 9	62.0	53.2	35.2	18.4	48.4	108	July..	-17	Dec.
1902	20.4	17.4	38.5	47.7	63.6	65.9	72.0	68.8	59.1	53.5	38.4	17.2	46.9	94	July. Aug.	-21	Jan.
Averages	16 5	17 6	29.8	48.2	57.7	68.6	73 3	70.0	61.6	49.9	32.5	23 4	45.8	108	1901 July.	-29	1890 Feb.

SAC COUNTY—CONTINUED.

SAC CITY—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1876	0.71	0.54	1.81			2.29	5.00	0.80	7.80	0.70	0.90	0.10	
1877	0.95	0.20	1.07	3.35	3.40	5.75	4.40	0.80	5.20	1.90	1.65	1.40	30.07
1878	0.78	0.10	3.75	5.65	4.62	4.48	4.58	2.60	1.89	0.77	0.35	0.50	30.00
1879	0.69	0.53	1.72	0.52	3.69	6.96	1.00	1.69	0.57	1.89	2.38	1.25	21.69
1880	0.95	0.20	0.38	2.18	2.55	5.11	2.14	3.45	2.35	1.77	0.77	0.91	22.83
1881	0.89	2.37	1.50	2.78	6.96	0.52	5.17	5.19	7.29	5.88	1.30	0.64	46.55
1882	0.78	0.94	0.91	3.30	3.70	5.39	4.45	0.23	0.05	1.34	1.55	1.18	25.82
1883	0.84	2.25	4.37	4.44	4.16	4.08	6.55	4.10	6.02	2.80	0.50	2.41	42.54
1884	0.76	1.20	0.65	3.40	5.55	8.80	6.45	3.90	0.65	3.25	1.00	1.50	36.51
1885	3.90	0.40	1.90	2.00	1.30	2.40	0.60	1.85	3.33	0.60	2.35	1.35	21.68
1886	0.75	1.30	0.15	1.20	1.55	3.30	3.15	2.15	10.20	1.75	0.70	2.40	28.55
1887	1.45	0.92	3.35	5.40	6.05	2.81	2.58	4.81	1.36	1.20	0.00	0.38	30.50
1888	2.15	0.20	0.30	0.25	2.37	7.73	8.18	1.20	1.65	0.45	2.40	1.30	28.17
1889	1.60	0.65	1.13	0.23	3.65	7.00	1.75	1.70	1.10	3.75	0.50	0.45	23.55
1890	1.25	1.00	1.10	1.00	3.2	4.70	2.70	3.50	2.25	5.85	1.00	1.10	28.90
1891	.55	.55	1.4	6.60	6.00	1.80	2.05	1.25	2.62	.75	.25	1.20	24.78
1892	.14	1.30	1.75	2.00	2.25	5.30	3.12	2.05				1.45	
1893	1.35	.35	1.15	4.80	2.10	6.20	2.76	3.60	2.25	3.10	.20	1.75	29.81
1894	.50	1.00	1.62	5.05	2.60	6.75	1.95	7.89	2.95	.25	1.00	.03	31.59
1895	.78	.54	1.50	4.45	6.75	4.95	6.75	1.85	3.00	4.50	2.60	1.25	38.92
1896	1.32	.95	2.82	5.00	1.90	2.25	3.40	1.45	T	1.60	.20	1.78	22.67
1897	.41	1.12	1.82	2.40	4.63	3.83	1.55	4.20	2.00	4.15	1.03	.40	27.54
1898	.04	.57	1.61				1.27	2.79	.55	2.78	1.45	1.10	
1899	.38	1.08	1.61	1.85	1.52	6.49	5.63	6.46	3.84	4.52	.49	.34	34.21
1900	.16	.51	2.31	2.01	2.17	2.05	.35	1.21	10.15	1.70	1.11	.68	24.35
1901	1.45	.18	1.18	1.28	3.68	5.63	12.61	8.03	3.09	1.56	1.97	2.16	42.77
1902													
Averages	0.95	0.82	1.65	2.99	3.63	4.89	3.81	3.36	3.29	2.56	1.11	1.15	30.21

GRANT CITY - PRECIPITATION (INCHES).

1869				0.45	1.58	6.12	4.43	6.00	8.52	6.80	0.80	1.75	3.12
1870	1.10			4.30		5.20	0.77	2.12	2.66	7.11	0.65		0.25
1871	1.05	2.60	0.45	3.00	1.28	1.00	3.20	5.80			1.10	6.40	1.65
1872	0.01	1.00	4.25		4.30		4.15	4.30	1.55	3.25			
1873	0.50	1.63	2.66	3.06	2.33	2.67	7.98	9.83	8.11	0.85	1.14	0.09	40.22
1876	0.50	0.12	1.19	4.17	5.38	3.21	2.75	2.22	2.28	4.78	1.38	2.14	29.16
1877	0.62	0.00	2.46	3.85	4.89	8.28	4.82	1.96	1.59	2.10	0.16	0.63	31.06
1878	0.22	0.38	1.86	0.26	2.54	7.41	0.65	1.33	0.60	1.80	2.11	1.19	20.41
1879	0.55	0.26	0.44	1.35	2.61	3.58	4.05	3.33	4.65	1.66	0.73	3.06	23.27
1880	1.2			1.90	4.92	6.00	5.88	2.31	5.90	....	0.90	0.45	
1881	0.35	0.50		1.95	4.67	6.10	3.35	0.09	0.07	3.34	....	0.52	
1882	0.42	0.27	0.38	2.00	5.30	5.99	3.55	3.06	2.40	2.75	0.06	0.88	27.14
1883	0.05	1.09	1.85	2.94	1.22	6.54							
1884	0.27	0.25	0.20	3.00	4.21	6.38	6.50	6.11	1.38	3.10	1.00	1.60	34.99
1885				2.22	2.20	2.30	0.40	2.04	3.98	1.84	2.38	0.41	
1886	0.36	3.83	0.39	1.30	1.01	4.00	5.50	2.00	10.88	1.04	0.70	1.04	29.05
1887	0.47	0.64	2.92	3.25	3.94	2.60	1.41	....					
1888													
Averages	.52	.66	1.72	2.39	3.66	4.45	3.88	3.70	4.10	1.95	1.44	1.04	29.28

ODEBOLT—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month.	Lowest.	Month.
1893	22.6	23.1	33.0	48.6	59.7	71.8	74.3	74.1	65.0	....	31.2	17.4	....	101	Aug.	-17	Dec.
1899	13.2	12.2	23.6	44.8	53.8	71.2	73.7	75.4	63.9	56.7	43.5	23.0	47.6	99	{Aug. {Sept.	-29	Feb.
1900	21.0	14.8	31.8	53.4	55.2	71.6	74.6	77.4	64.8	59.2	33.3	26.8	49.9	102	June.	-19	Feb.
1901	24.4	19.4	34.7	49.9	60.8	72.8	84.2	75.7	62.3	53.2	31.2	20.5	49.3	100	July.	-21	Dec.
1902	21.6	18.6	33.0	48.0	54.2	63.6	73.7	70.2	59.4	52.6	36.7	18.8	47.4	97	Aug	-21	Jan.
															1901		1899
Averages	22.6	17.6	31.0	49.7	11.9	70.8	76.1	74.6	63.1	55.4	38.0	21.3	48.6	109	July	29	Feb.

SAC COUNTY—CONTINUED.

ODEBOLT—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July	Aug.	Sept.	Oct.	Nov	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1897		.72	3.35	6.30	.96	2.40	4.03	2.95	.81	1.25	.20	1.70	24.71	....	....	....	....
1898	.44	.95	2.80	2.15	4.79	4.93	5.05	5.72	2.00	....	2.16	.36	31.14	....	....	....	....
1899	.05	.83	.72	2.35	5.48	5.40	1.11	2.10	.44	1.95	1.07	1.00	22.50	....	....	....	....
1900	T	1.19	1.50	2.35	1.57	3.20	6.67	6.37	4.21	6.23	.64	.50	34.43	....	....	....	....
1901	.18	.53	2.93	1.91	1.54	3.72	.30	1.29	7.93	.57	.88	.54	22.31	....	....	....	....
1902	.91	.30	.99	1.13	2.30	6.24	13.57	3.72	3.41	1.00	1.78	2.50	37.99	....	....	....	....
Averages	32	.75	1.99	2.71	2.77	4.31	5.12	3.69	3.15	2.21	1 12	1.10	28.78	....	....	....	....

SAC COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL, MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1889	31	13	31	24	46	1.0	3.65	7.00	1.75	1.70	14.10
1891	39	15	41	29	133	1.8	3.25	4.70	2.70	3.50	14.15
1892	25	13	28	23	42	1.7	6.00	1.50	2.05	1.25	10.80
1893	42	11	28	24	72	1.4	2.25	5.20	2.12	2.05	11.62
1894	9	13	15	12	31	0.5	2.10	6.20	2.76	3.60	14.66
1895	38	19	52	39	110	1.0	2.60	6.75	1.95	7.89	19.19
1896	40	12	27	32	78	2.0	6.75	4.95	6.75	1.85	30.30
1897	28	14	31	25	82	1.6	1.90	2.25	3.40	1.45	9.00
1898	38	16	40	30	90	1.6	3.83	1.55	4.20	2.00	14.21
1899	36	14	30	25	91	1.4	5.84	5.40	1.27	2.79	15.30
1900	43	20	40	33	80	1.5	1.52	6.49	5.03	6.46	20.10
1901	21	14	35	28	32	1.4	2.17	2.05	.35	1.21	5.78
1902	32	12	32	25	92	2.0	3.63	5.63	12.61	8.03	29.87
Averages	33	14	33	27	71	1.5	....	....	....	....	15.31

IDA COUNTY.

Area, 432 square miles; area in farms, 270,415 acres; number of farms, 1,493; value of farms (census of 1900), $10,104,640; value of farm buildings, $1,933,970; value of live stock, $2,597,118; value of farm products not fed to stock, $2,230,478; acreage in cereal crops, 146,490 acres. The following tables contain records compiled at the meteorological station at Galva. Altitude of the station, 1,281 feet.

GALVA—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l	High-est.	Month.	Low-est.	Month
1893	13.	14.	....	44.	....	....	....	68.	65.	50.	34.	18.	.....	....	.....	....	.....
1894	14.	13.	40.	50.	61.	70.	74.	71.	66.	....	32.	30	.....	....	.....	....	.....
1895	14.	17.	34.	53.	62.	67.	72.	72.	66.	44.	32.	....	.....	....	.....	....	.....
1896	....	27.	29.	52.	64.	68.	72.	71.	58.	46.	28.	30.	.....	....	.....	....	.....
1897	14.	28.	30.	48.	55.	69.	76.	68.	72.	57	31.	17	46.7	....	.....	....	.....
1898	22.	28.	36.	49	59.	72	....	....	66.	47.	31.	17.	.....	....	.....	....	.....
1899	20.4	11.2	21.6	47 2	59.2	69.2	71.6	73.6	66.7	55 8	40.8	20.	46.5	98	Sept..	-30	Feb..
1900	24.5	14.6	30.3	52.7	63.8	68.2	72.6	76.6	....	57.8	31.	26.6	.....	97	June...	-17	Feb..
1901	23.4	18.6	32 5	49 7	59.3	72 2	82.3	73.8	62 8	52.6	34.6	19.8	48.5	106	July...	-25	Dec..
1902	21.1	16.8	37.8	47 5	63.4	65.3	71.8	68.8	58.0	....	....	15.8	.....	94	Aug ...	-21	Feb..
Means	18.5	17.8	32.5	49.3	60.7	69.0	74.0	71.4	64.5	51.3	32.2	21.6	47.2				

GALVA PRECIPITATION.

1893	.20	.70	....	2.20	....	....	....	2 96	1.48	.60	....	1.54	.....	....	.....	....	.....
1894	.32	.08	.57	3.90	2.16	2.43	1.12	2 48	1.18	....	.21	.95	.....	....	.....	....	.....
1895	.14	.28	.91	3.48	2.16	7.03	2 47	5.99	3 92	.27	.82	....	.....	....	.....	....	.....
1896	.33	.10	.55	6.86	7 44	3.42	7 38	1.30	3.46	2.04	2.98	.12	35.53	....	.....	....	.....
1897	1.45	.40	3.49	3.79	.52	2.17	2.72	1.78	.21	1.63	.13	....	.....	....	.....	....	.....
1898	.18	.44	.82	1.90	5.49	3.84	....	....	1.48	....	1.73	.26	.....	....	.....	....	.....
1899	.15	.80	1 43	1.09	4.78	7.45	1.39	3 03	.10	1.57	.60	.96	23.35	....	.....	....	.....
1900	T	.80	1.13	2.20	3.54	2.88	7.42	6.16	7.14	4.30	.70	30	36.47	....	.....	....	.....
1901	.22	.90	3.40	1.40	1.12	2.35	.69	1.45	7.12	1.91	2 00	.65	23.21	....	.....	....	.....
1902	.50	.20	.22	1.29	2.53	7.01	1039	4.91	3.08	1.06	2.78	1.90	36.47	....	.....	....	.....
Means	.85	.47	1.39	2 76	3 30	4.23	4 20	3.34	4.60	1.67	1.33	.84	31.01	....	.....	....	.....

IDA COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1st TO SEPT. 1st. May.	June.	July.	August.	Total.
1890	29	13	36	25	75	1.0					
1891	39	20	33	25	125	1.8					
1892	30	12	29	23	45	2.0					
1893	39	15	29	24	67	1 6					
1894	16	13	23	18	56	1.5	2.16	2.43	1.42	2.48	8.19
1895	32	20	41	23	150	1.3	2.16	7.03	2.47	5.99	17.65
1896	31	15	28	28	80	1.9	7.44	3.42	7.38	1.30	19.54
1897	28	18	35	30	42	1.8	.52	2.17	2.72	1.78	7.19
1898	39	14	31	26	72	1.9	5.49	3.34	3.60	2.32	14.75
1899	32	12	35	25	90	1.5	4.78	7.45	1 39	3.03	16.65
1900	40	13	31	22	81	1.5	3.54	2.88	7.42	6.16	20.00
1901	26	14	33	32	28	1.4	1.12	2.35	.69	1.45	5.61
1902	35	12	33	35	90	1.5	2.53	7.01	10.39	4.91	24.88
Averages..	32	14	32	26	77	1.5					14.92

WOODBURY COUNTY.

Area, 864 square miles; area in farms, 522,737 acres; number of farms, 3,231; value of farms (census 1900), $16,297,170; value of farm buildings, $2,878,120; value of live stock, $3,703,887; value of farm products not fed to stock; $3,902,855; acreage in cereal crops, 230,600 acres. The following tables contain records compiled at the United States weather bureau station in Sioux City. Altitude of the station, 1,165 feet.

SIOUX CITY—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	High-est.	Month	Low-est.	Month
1889	....	....	....	....	....	....	75.1	73.2	61.0	50.4	33.0	35.2	.....	....	.....	....	.....
1890	14.0	22.9	28.4	52.1	57.8	72.4	76.0	69.0	61.8	50 2	40.4	31.5	48.0	....	.....	....	.....
1891	27.5	18 4	25.0	52.6	59 0	67.8	69.2	70.2	68 0	50.4	30.2	30.9	47.0	....	.....	....	.....
1892	14.7	24.7	31 8	46.7	52.4	66.0	75.4	71 8	66 0	55 4	34.8	20.8	46.9	....	.....	....	.....
1893	12.6	15.2	29 1	44.6	57.0	72 2	75 2	70 0	65.7	51.2	33.9	20 0	45.6	....	.....	....	.....
1894	14.6	18.6	39.8	51.6	62.4	72.4	76.0	75.2	65.7	52.6	33.4	30.2	49 4	....	.....	....	.....
1895	14.2	19.0	33 9	56 6	62.0	68.2	72.4	72.8	67 8	47.4	33.2	26.2	47.8	....	.....	....	.....
1896	22.9	28.4	27.2	51.8	64.4	69.6	72.4	71.8	58.5	47.1	22.4	30.6	47.2	....	.....	....	.....
1897	14.2	21.7	28.8	47.6	59.1	68.4	76 2	68.2	71.8	54 8	32 7	18.3	46.8	....	.....	....	.....
1898	24.0	23 8	35.9	49.6	59.5	71.0	73.4	72 5	65.2	46.3	32.1	20.4	47.8	....	.....	....	.....
1899	21.1	11.0	22.6	49.4	59.4	70.4	73.5	74 2	62.4	54.2	43 4	23.0	47.0	....	.....	....	.....
1900	26.6	13 8	32 9	52 9	64 0	69.8	73 6	77.2	62.8	58.8	38.6	28.2	49.5	....	.....	....	.....
1901	27.2	20.0	35.6	50.4	60.8	71.5	82.6	74 4	62.5	54.6	36 8	20.3	49.4	....	.....	....	.....
1902	22.8	18.8	38.4	48 0	64.0	65.6	73.4	69.8	59.9	54.5	37.5	17.7	47 5	....	.....	....	.....
Means.	19.7	19.3	31.4	50.3	60.1	69.9	74 7	72.2	64.2	52 0	34 1	25.2	47.7	....	.....	....	.....

SIOUX CITY—PRECIPITATION (INCHES).

1889	....	....	....	....	....	....	3.35	1.19	1 71	.21	1.99	1.14	.....	....	.....	....	.....
1890	1.14	.40	2.12	1.32	2 29	3.61	2.59	3.64	2.36	1.84	.84	.10	22 25	....	.....	....	.....
1891	1.66	1.28	2.01	2.22	2.41	7.62	5.77	3.54	.91	3.04	.37	2 48	33.29	....	.....	....	.....
1892	.41	97	1.16	4 76	8.56	1.50	2.63	4.14	.57	1.32	.16	.20	26.38	....	.....	....	.....
1893	.34	.77	1.43	3.56	3.17	1.63	2.29	5.85	1.11	.58	.75	1.57	23.05	....	.....	....	.....
1894	.60	19	.64	2.79	1.91	2.74	1.81	1.68	.73	3.28	.17	30	17.84	....	.....	....	.....
1895	.16	.33	.50	3.20	2.15	4.95	2.63	1.54	3.91	.10	.80	.02	20.29	....	.....	....	.....
1896	.21	.35	.50	6.16	6.39	2.94	5 54	.86	2.09	2.59	2.89	.25	30.77	....	.....	....	.....
1897	1 41	.43	1.71	4 03	1 24	2.13	2.26	2.51	.51	2.02	.49	1 64	20.38	....	.....	....	.....
1898	.27	.37	90	1.37	4.69	6.61	2 78	3.10	.95	1.36	.45	.06	22.91	....	.....	....	.....
1899	.08	.53	.55	.96	6.18	4.76	1.00	4.91	.26	1.33	.85	1.27	22.67	....	.....	....	.....
1900	.24	.62	1.53	3 80	1.87	4.32	8.72	3.59	5.64	2 21	.36	.85	33.22	....	.....	....	.....
1901	.22	.54	1.58	1.50	3.65	4.70	1.24	1.75	7.99	2.29	.56	.68	26.59	....	.....	....	.....
1902	.83	.30	.50	1.29	1.27	2.22	5.08	2.19	4.49	.63	.16	1.48	20.84	....	.....	....	.....
Averages ..	.54	.54	1.16	2 84	3.52	3.88	3 40	2.89	2 37	1.62	.77	.89	24.61	....	.....	....	.....

WOODBURY COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST. TO SEPT. 1ST. May.	June.	July.	August.	Total.
1890	30	10	30	22	54	2.0	2 29	3.61	2.59	3.64	12 18
1891	36	17	37	28	159	1 5	2.41	7.62	5.77	3.54	19.34
1892	29	13	27	26	33	1.4	8.56	1 50	2.63	4.14	16.83
1893	35	15	30	29	81	1.3	3 17	1.63	2.29	5.85	12.92
1894	10	12	17	10	18	0.5	1.91	2.74	1.81	1.68	8 14
1895	32	18	37	23	90	1.5	2.15	4 95	2.63	1.54	11.27
1896	34	17	30	22	48	1.3	6.39	2.94	5 54	.86	15.73
1897	25	12	27	20	45	1.5	1.24	2.13	2.26	2 51	8.14
1898	37	17	31	26	52	1.6	4 69	6.61	2.78	3.10	17.18
1899	31	11	29	25	77	1.6	6.18	4.76	1.00	4.91	16.85
1900	40	14	34	30	66	1.6	1.87	4.32	8.72	3 56	18.47
1901	24	14	30	30	32	1.8	3.65	4.70	1.24	1.75	11.34
1902	33	10	31	28	120	1.5	1.27	2 22	5.08	2.19	10 71
Averages	31	14	30	24	68	1.5					13.77

MONONA COUNTY.

Area, 648 square miles; area in farms, 386,780 acres; number of farms, 2,491; value of farms (census of 1900), $12,084,550; value of farm buildings, $1,851,220; value of live stock, $2,917,524; value of farm products, not fed to stock, $2,745,540; acreage in cereal crops, 171,640 acres. The following tables contain meteorlogical records of the station at Onawa. Altitude of the station, 1,048 feet.

ONAWA—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Lowest.
1900	27.9	16.1	24.8	54.0	65.8	71.6	74.5	77.3	65.6	60.2	34.6	28.8	50.8	97	-14
1901	25.3	21.9	36.2	51.2	61.8	72 0	82.4	75.0	63 6	54.2	37 8	21.4	50.2	103	-18
1902	23.6	20 4	40.0	50.2	66.4	68.8	74.4	71.5	61.4	55.8	39.2	19.9	49.3	94	-23

ONAWA—PRECIPITATION (INCHES).

1879	.40	1.01	1.67	1.16	4.48	4.07	1.17	3.28	.90	2.85	1.00	1.55	23.33		
1880	1.08	.60	.75	1.37	3 73	3.47	2.12	3.15	2.54	3.36	.65	.65	23 42		
1881	1.50	4 70	1.75	5.02	8 78	8.49	4.17	1.50	5.75	4 56	1.02	.89	49.93		
1882	1.80	1.70	45	4.95	2.82	8.60	6.10	.35	.15	2.42	1.10	.90	31.34		
1883	1.50	1.42	70	2.00	7.74	8.23	4.32	2 55	1.80	2.25	.05	1.12	33.68		
1884	.25	1.28	2.45	3.90	3.99	2.49	7 10	6.20	5 43	3.22	.00	1.25	37.56		
1885	1.30	.75	.50	3.95	8.63	6.10	8.00	5.55	2.90	3.20	1.28	1.05	43.21		
1886	4 85	40	3.60	2.80	2.20	3.48	2.03	3.90	3.80	.48	5.18	.80	38.01		
1887	.86	68	.40	1.44	2.40	2.43	8.59	7.53	3.37	.50	00	2.65	27.30		
1888	1.48	.33	4.65	4.33	9.82	2.63	3.95	4.65	.46	.73	.08	1.10	37.18		
1889	1.50	.20	.30	1.85	2.09	7.66	7.60	72	2.07	.10	2 40	1.05	27.42		
1890	1.55	.77	2.25	1.65	4.70	11.70	3 04	5 05	1.73	2.90	2.00	.03	35.37		
1891	1.62	1.07	1.66	1.78	3.48	5.76	7.41	5.31	1.20	5.25	.48	1.72	36.61		
1892	28	.51	1.68	4.10	6.85	1.65	2.69	4.58	.53	1.90	.25	.85	25.76		
1893	1.46	2.65	1.60	2.33	4.46	1.73	5 83	3.88	.95	.40	85	1.18	27.27		
1894	.75	.50	35	1.04	.81	4.12	2.20	1.90	.72	1.72	.05	1.05	16.01		
1895	.26	.60	1.01	3.54	1.41	9 84	.67	8 68	5.29	06	1.01	.10	31.97		
1896	.30	.28	1.84	6.18	7.34	7 65	8.02	2.38	3.49	3.00	1.81	.88	42.17		
1897	2.27	.68	1.94	5.29	.68	3 76	1.86	2.03	1.06	2.46	.80	1 54	24 37		
1898	.55	.67	1.50	1.76	6.98	6 81	3.20	5.57	1.93	3.01	1.24	.83	31.35		
1899	.09	.58	.91	1.07	3.59	6.86	1.29	2.48	.52	1.22	1.11	1.37	20.59		
1900	0.26	1.09	1.40	3.22	3.66	2.97	10.34	7.49	6.96	4.11	29	41	42.20		
1901	0 29	0 87	2 86	1.27	2.95	5.67	0.92	2.24	8 29	2.19	1.45	1 07	80.07		
1902	1.15	0.36	1.23	2.50	1.48	5.50	13 48	4.24	4.75	1.56	3.15	2.85	42.25		
Averages	1.14	0.94	1.59	2 99	4.88	5.20	4 63	3.89	2.77	2.39	1.13	1.08	32.07		

MONONA COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons	May.	June.	July.	August.	Total.
1890	27	11	31	25	50	1.0	4.70	11.70	3.04	5.05	24.49
1891	34	15	35	26	82	2.5	3.43	5.76	7.41	5 31	21.91
1892	25	15	30	25	50	1.5	6.85	1.65	2.69	4.58	15.77
1893	38	15	30	20	120	1.5	4.46	1.73	5.83	3.83	15.85
1894	15	16	17	17	20	0.6	.81	4 12	2.20	1.90	9.03
1895	32	21	39	30	114	1.3	1.41	9 34	.67	8.68	20.10
1896	42	16	29	31	90	1.4	7.34	7.65	8.02	2.38	25.39
1897	25	11	26	25	56	1.4	.68	3.76	1.86	2.08	14.33
1898	40	19	34	25	95	1.8	6 98	4.61	3.20	5.57	20.36
1899	30	13	35	28	115	1 8	3.59	6.86	1.29	2.48	14.22
1900	38	12	30	25	75	1.3	3.66	2.97	10.84	7.49	24.46
1901	25	15	33	30	30	1.4	2.95	5.67	0.92	2.24	11.78
1902	34	14	25	33	120	2.0	1.48	5.50	13.48	4.24	24.70
Averages	31	15	30	26	78	1.5					18.94

CRAWFORD COUNTY.

Area, 720 square miles; area in farms, 499,956 acres; number of farms, 2,649; value of farms, $19,623,80; value of farm buildings, $3,049,900; value of live stock (in 1900), $3,988,215; value of products of the year not fed to stock, $3,534,097; acreage in cereal crops, 208,380 acres. The following tables contain records of the meteorological station established at Denison in 1893. Altitude of the station, 1,180 feet.

DENISON—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1893	14.0	17.0	32.0	46.0	....	71.0	75.0	....	....	....	....	21.0	....	....	....	....	....
1895	....	21.0	33.0	56.0	60.0	66.0	70.0	72.0	67.0	45.0	32.0	24.0	....	....	....	....	....
1896	23.0	27.0	28.0	....	66.0	71.0	73.0	72.0	54.0	48.0	28.0	32.0	....	....	....	....	....
1897	18.0	25.0	31.0	48.0	5 .0	67.0	73.0	68.0	71.0	58.0	46.0	17.0	47.4	....	....	....	....
1898	25.0	....	36.0	47.0	57.0	69.0	....	....	....	42.0	31.0	17.0	....	....	....	....	....
1899	17.3	10.0	22.3	47.2	59.3	70.3	72.6	73.6	62.6	55.8	41.9	21.6	46.2	98	Sept.	-31	Feb.
1900	26.1	18.4	32.7	54.0	63.7	69.1	73.0	76.4	63.7	51.9	33.0	27.4	49.3	97	July.	-27	Feb.
1901	22.8	18.0	33.1	48.8	58.7	72.2	82.4	74.5	62 1	52.8	35.0	19.2	48.3	100	July.	-21	Dec.
1902	22.4	17.3	38.8	47.1	62.8	64.2	71.8	68.2	59.6	53.3	38.4	18.2	46.8	93	July.	-27	Jan.
Averages	21.1	18.6	31.9	49.3	60.6	68.9	73.8	72.1	63.4	50.8	34.4	21.9	47.6	100	1901 July.	-31	1899 Feb.

DENISON—PERCIPITATION (INCHES).

1893	1.15	2.45	.64	5.18	5.21	3.05	2.46	3.79	....	....	....	.60	....	....	....	....	....
1895	....	....	....	4.76	1.93	3.87	1.15	3.45	1.78	.18	.65	T	....	....	....	....	....
1896	T	T	1.85	6.79	8.16	2.08	6.01	2.72	3.90	2.42	2.42	T	36.40	....	....	....	....
1897	.75	.90	3.14	5.88	1.78	2.96	4.54	2.05	1.20	.95	.05	1.30	25.50	....	....	....	....
1898	.60	.10	1.35	3.25	4.13	2.79	....	....	....	3.60	.88	.14	....	....	....	....	....
1899	.05	.40	1.00	2.63	4.82	6.29	1.95	3.49	.45	3.20	1.05	.92	26 25	....	....	....	....
1900	.20	.45	1.80	2.83	2.37	2.45	6.10	7.32	3.64	6.39	.15	.20	33.90	....	....	....	....
1901	.35	.72	1.69	3.14	1.34	4.11	.22	0.65	7.45	2.26	.61	.86	28.40	....	....	....	....
1902	1.00	.14	1.69	1.19	2.69	4.62	11.34	3.59	4.02	.82	1.40	1.40	33.81	....	....	....	....
Averages	.56	.64	1.63	3.96	3.60	3.58	4.32	3.38	3.21	2.41	.90	.60	29.88	....	....	....	....

CRAWFORD COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	27	20	33	29	66	2.0					
1891	39	17	36	29	200	1.8					
1892	37	13	32	26	51	2.2					
1893	41	15	26	24	84	2.0					
1894	16	16	18	18	41	0.5					
1895	35	18	35	20	150	1.8	1.93	3.87	1.05	3.45	11.20
1896	42	18	30	32	90	2.2	8.16	2.08	6.01	2.72	18.97
1897	30	15	40	30	55	1.8	1.78	2.96	4.54	2.05	11.32
1898	33	16	30	20	58	2.0	4.18	2.79	2.80	2.95	12.67
1899	33	14	33	30	110	1.8	4.82	6.29	1.95	3.49	16.55
1900	39	14	33	25	73	1.8	2.37	2.45	6.10	7.32	18.24
1901	22	15	30	20	25	2.0	1.34	4.11	.22	0.65	6.32
1902	30	11	26	23	79	1.5	2.69	4.62	11.34	3.59	22.24
Averages	32	15	31	25	82	1 8					14.69

CARROLL COUNTY.

Area, 576 square miles; area in farms, 356,987 acres; number of farms, 2,175; value of farms (census of 1900), $13,076,400; value of farm buildings, $2,527,550; value of live stock, $2,875,267; value of farm products not fed to stock, $2,847,62; acreage of cereal crops, 204,470 acres. A voluntary meteorological station was established at Carroll in 1890, and the following tables contain records. Altitude of the station, 1,765 feet.

CARROLL—MEAN TEMPERATURE (DEGREES).

YEAR	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1890	14.0	21.0	28.0	49.0	55.0	72.0	76.0	69.0	63.0	49.0	31.0	19.0	46.2	97	July	-20	Jan
1891	7.0	16.0	25.0	45.0	53.0	67.0	68.0	63.0	61.0	47.0	29.4	16.3	40.3	95	Aug.	17	Feb.
1892	16.0	25.0	31.0	49.0	....	....	75.0	74.0	65.0	50.0	36.0	19.0	.....	96	July, Aug.	-27	Jan
1893	....	18.0	31.0	45.0	57.0	72.0	75.0	68.0	63.0	51.0	32.0	20.0	.....	94	July, Aug.	21	Feb.
1894	17.0	7.0	38.0	50.0	61.0	72.0	75.0	72.0	67.0	51.0	32.0	30.0	48.0	....	....	....	....
1895	15.0	16.0	35.0	53.0	61.0	69.0	71.0	72.0	65.0	53.0	32.0	34.0	46.1	....	....	....	....
1896	24.0	27.0	24.0	53.0	64.0	69.0	72.0	67.0	64.0	52.0	35.0	30.0	47.2	....	....	....	....
1897	15.0	24.0	30.0	47.0	65.0	68.0	76.0	68.0	62.0	50.0	31.0	16.0	46.8	....	....	....	....
1898	22.0	21.0	35.0	44.0	58.0	71.0	74.0	72.0	65.0	47.0	31.0	16.0	46.7	....	....	....	....
1899	18.2	9.4	22.4	47.3	58.3	69.7	71.4	73.4	61.8	55.4	42.6	21.9	46.0	97	Sept	-31	Feb.
1900	24.0	13.0	30.2	52.5	64.3	68.6	73.0	70.7	63.0	49.3	33.7	27.4	48.8	96	June, July.	-18	Feb.
1901	24.0	20.0	35.0	49.7	59.0	71.1	73.0	74.0	70.7	54.0	37.0	21.0	49.0	109	July.	-30	Dec.
1902	22.4	18.6	40.2	48.5	64.2	64.8	72.2	69.4	65.6	53.0	38.7	19.3	47.6	97	Aug.	-21	Jan.
															1901		1899
Averages	19.6	19.0	31 5	49.0	59.5	69.5	73 9	71.2	63 1	51.3	33.2	23 0	46.9	109	July.	-31	Feb.

CARROLL—PRECIPITATION (INCHES).

1890	1.71	.65	1.98	1.78	3.21	9.61	3.80	2.18	1.30	2.70	1.22	.10	30.44	....	.....	....	.....
1891	.90	1.09	4.11	2.92	5.44	6.51	4.10	5.17	1.08	5.60	1.09	2.71	41.63	....	.....	....	.....
1892	.45	.84	2.03	4.73	6.95	3.24	1.71	1.55	.70	.13	1.35	1.12	24.82	....	.....	....	.....
1893	.35	2.09	1.75	3.81	5.82	3.64	4.75	2.92	1.30	.10	.77	1.37	29.63	....	.....	....	.....
1894	1.17	1.00	1.76	2.80	1.10	1.51	1.73	1.61	3.29	3.20	.29	.96	20.42	....	.....	....	.....
1895	.58	....	1.75	3.75	1.61	4.48	2.47	.94	1.73	.30	1.41	.30	.....	....	.....	....	.....
1896	.55	.47	1.77	6.44	9.87	2.32	7.10	1.05	4.30	3.19	1.78	.31	41.83	....	.....	....	.....
1897	2.24	.96	3.37	6.81	2.79	3.60	2.79	5.53	.81	.97	.25	1.71	28.80	....	.....	....	.....
1898	1.20	1.10	2.01	1.73	4.72	2.99	2.61	2.58	4.77	3.23	1.21	.50	28.65	....	.....	....	.....
1899	T	1.55	1.89	2.28	9.04	7.25	1.40	5.07	1.87	1.79	1.28	1.48	34.90	....	.....	....	.....
1900	.18	1.24	2.97	4.50	1.90	3.88	6.95	3.01	4.65	3.96	.60	.30	40.18	....	.....	....	.....
1901	.50	.75	2.78	2.83	2.30	4.47	.74	2.24	8.34	3.12	1.14	.50	29.55	....	.....	....	.....
1902	1.35	.30	2.33	1.89	2.58	9.34	9.52	5.56	5.39	1.10	2.51	2.58	43.94	....	.....	....	.....
Averages	.86	1.08	2 35	3.52	4.41	4.83	3 90	3.77	3.12	2.26	1.15	1.08	32.17	....	.....	....	.....

CARROLL COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST TO SEPT 1ST. May.	June.	July.	August.	Total.
1890	38	15	29	26	91	1.5	3.26	9.61	3.80	2 18	18.85
1891	32	16	29	26	195	1 8	5.44	6.51	4.10	5.17	21.22
1892	32	15	30	25	51	2.0	6.95	3.24	1.71	1.55	13.45
1893	32	14	23	20	65	1.9	5.82	3.64	4.75	2.92	17.13
1894	10	11	12	16	19	0.5	1.10	1.51	1 73	1.61	5.96
1895	38	25	58	22	137	1.4	1.61	4.48	2 47	4.94	13 50
1896	34	17	28	24	77	1.8	9.87	2.32	7.16	3.65	23.00
1897	28	15	27	23	53	1.7	2.79	3.60	2.76	2.53	11.68
1898	33	16	35	33	77	1.7	4.72	2.99	2.61	2.58	12.90
1899	38	16	41	30	100	1.5	9 04	7.25	1.40	5.07	22.76
1900	40	18	40	30	80	1.8	1.90	3 88	6.95	9.01	21.74
1901	32	14	25	24	23	1.4	2.20	4 41	.74	2.24	9.59
1902	33	12	31	20	92	1.8	2 58	9.34	9.52	5 56	27.00
Averages	32	15	32	24	81	1.6					16.20

AUDUBON COUNTY.

Area, 432 square miles; area in farms, 282,456 acres; number of farms, 1,988; value of farms (census of 1900), $9,814,950; value of farm buildings, $1,630,500; value of live stock, $2,650,485; value of farm products of the year not fed to stock, $2,392,791; acreage of cereal crops, 151,830 acres. Meteorological tables are appended, giving records of observations at Hamlin and Audubon. The altitude of Audubon is 1,301 feet.

HAMLIN—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1877	....	....	....	....	....	....	1.26	3.22	2.25	8.77	1.26	2.53	.....	....	.....	....	.....
1878	99	9	....	....	2.25	6.99	6.38	6.60	1.20	.70	.40	.20	.10	....	.....	....	.....
1879	1.10	.46	.61	.06	4.55	2.84	.38	.50	1.09	2.70	2.00	1.51	18.01	....	.....	....	.....
1880	.80	.20	.20	.35	2.55	2.00	1.38	2.30	2.80	1.60	.40	.40	14.90	....	.....	....	.....
1881	.50	2.30	.80	2.05	3.00	7.60	6.40	2.60	4.90	3.10	1.20	.51	34.96	....	.....	....	.....
1882	.40	.60	1.20	1.90	1.55	6.70	4.90	.20	3.00	3.60	2.10	1.30	24.40	....	.....	....	.....
1883	1.10	.30	.20	2.10	4.50	2.20	....	2.50	2.90	3.40	1.00	.10	.....	....	.....	....	.....
1884	.10	.40	2.00	2.60	1.00	1.20	9.40	4.30	3.90	7.00	.10	.70	32.40	....	.....	....	.....
1885	.70	.10	0.00	1.90	3.80	2.70	5.90	6.80	2.70	3.70	.40	1.00	29.40	....	.....	....	.....
1886	1.30	.10	.40	1.80	2.00	2.10	.30	.60	7.00	.60	1.10	.30	17.50	....	.....	....	.....
1887	.20	.40	.20	1.40	.60	2.40	1.20	2.60	1.40	.40	.40	1.10	12.30	....	.....	....	.....
1888	.40	.80	2.90	.40	5.90	2.30	4.60	2.70	.80	.80	0.00	.61	22.21	....	.....	....	.....
Means	.57	.50	.85	1.50	3.31	3.49	3.84	2.38	2.55	2.59	.85	.84	25.39	....	.....	....	.....

AUDUBON—MEAN TEMPERATURE (DEGREES).

1893	11.0	15.0	31.0	46.0	58.0	72.0	75 0	71.0	64.0	52.0	33.0	22.0	45.8	97	July, Aug.	-20	Feb.
1894	18.9	18.0	41.0	52.0	61.0	72.0	76 0	74 0	64 0	51.0	34.0	30.0	49.2	104	July ..	-26	Jan.
1895	15 0	18.0	35.0	54 0	61.0	68.0	72.0	72.0	67.0	44.0	36.0	26.0	47.3	98	July ..	-22	Feb.
1896	25.0	28.0	30 0	53.0	63.0	67.0	70.0	70.0	66.0	46.0	27.0	31.0	47 2	95	July ..	-12	Jan.
1897	17.0	23.0	30.0	46.0	58.0	67.0	73.0	68 0	70.0	54.0	32 0	17.0	46.1	99	July ..	-20	Jan.
1898	24.0	24.0	37.0	48.0	58.0	71.0	73.0	72.0	64.0	46.0	31.0	18.0	47 0	98	July ..	-15	Dec.
1899	20. 6	12.8	24 6	44 4	59.3	69 2	72.2	73.8	62.6	50.4	43.6	23.8	47.3	95	Sept ..	-28	Feb.
1900	26.0	15.3	32.6	52.2	62.4	68.2	....	76 2	....	57 5	33.1	....	.....	....	.....	....	.....
1901	....	18.3	....	....	60.0	....	....	....	....	....	36 6	19.2	.....	....	.....	....	.....
1902	....	....	....	....	64.4	65.2	73.2	70.5	59.8	54.2	38.6	21.0	.....	95	Aug...	....	.....
Averages	19.4	19.2	32.6	49.9	60.3	68.8	72.9	71.9	63.4	51.2	34 5	23 1	46.6	1894 104	July ..	1894 -26	Jan.

AUDUBON—PRECIPITATION (INCHES).

1893	.48	1.59	1.55	3.21	4.84	4 93	2.38	1.98	1.48	.18	1 00	1.55	24.80	....	.....	....	.....
1894	1.10	.85	1.09	2.32	1.73	2.88	.86	1.31	5.27	4.15	3.88	.75	25 09	....	.....	....	.....
1895	.40	.70	.98	4.09	1 71	3 65	1 71	7.57	2 26	.62	1 45	.65	25 77	....	.....	....	.....
1896	.41	.40	2.03	7.32	7 09	2.60	7.20	3.85	5.59	3 07	2 61	.99	43 73	....	.....	....	.....
1897	.80	.75	3.98	5.27	1.32	2 78	3 52	2.98	2.00	1.51	.40	1.70	27.01	....	.....	....	.....
1898	1.10	1.10	1.58	.81	4.99	2.74	4.34	1.55	2.36	2.84	1.01	1.10	25.39	....	.....	....	.....
1899	....	.40	1.20	1.75	8 14	6.27	2 64	5.25	.60	2 80	1.40	1.10	.....	....	.....	....	.....
1900	.87	1.25	2.05	2.95	3.48	2.24	....	6 51	....	3.72	....	....	.....	....	.....	....	.....
1901	....	.23	....	....	1 00	....	....	....	....	....	28	1.67	.....	....	.....	....	.....
1902	....	....	....	....	4 64	5.86	8.72	....	4 98	1.79	1 78	1.75	.....	....	.....	....	.....
Averages	0.68	0.80	1.78	1.92	3.92	3.77	3.92	3 95	3.06	2 23	1.46	1.25	28.64	....	.....	....	.....

AUDUBON COUNTY—CONTINUED.

AUDUBON COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.					
	Corn, in bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.
1890	24	10	26	25	76	1.1
1891	35	15	29	22	121	2.0
1892	33	12	25	19	43	2.5
1893	35	12	20	19	54	1.8
1894	9	14	14	12	43	0.5
1895	30	21	44	31	95	1.2
1896	45	15	25	20	60	2.0
1897	30	18	35	25	85	1.5
1898	35	16	37	25	75	2.0
1899	39	14	32	25	105	1.8
1900	40	13	35	30	70	1.5
1901	26	14	30	25	30	1.4
1902	30	12	27	23	72	1.8
Averages	30	14	29	25	74	1.5

SHELBY COUNTY.

Area, 576 square miles; area in farms, 371,873 acres; number of farms, 2,387; value of farms (census of 1900), $13,813,860; value of farm buildings, $2,418,980; value of live stock, $3,626,677; value of farm products for the year not fed to stock, $3,245,595; acreage in cereal crops, 183,380 acres. The following tables contain meteorological records compiled at Panama and Harlan. Altitude of Harlan, 1,192 feet.

HARLAN—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month.
1899	....	11.9	23.4	48.8	60.4	71.2	72.+	74.2	68.0	57.2	43.0	22.4	....	96	.....	....	.....
1900	26.	14.8	32.5	52.3	63.6	69.6	73.2	75.5	63.6	54.2	33.4	27.2	49.2	98	.....	-26	.....
1901	28.5	19.2	34.8	49.8	60.8	73.2	82.4	73.9	64.2	53.7	35.7	19.6	49.2	111	.....	-22	.....
1902	22.4	17.8	39.2	48.7	64.0	65.8	73.6	69.6	58.4	52.5	38.0	18.6	47.4	95	.....	-22	.....

HARLAN—PRECIPITATION (INCHES).

1899	.....	0.42	0.75	4.21	4.49	7.58	2.31	4.44	0.84	2.16	0.91	1.43	.....	..	.....	..	.....
1900	0.35	1.49	1.99	2.21	2.09	1.89	8.35	7.79	3.91	4.82	0.56	0.67	39.26	....	.....	....	.....
1901	0.38	1.05	8.26	1.97	1.78	7.29	0.76	0.81	8.02	3.25	0.67	0.90	30.14	.....	.....	....	.....
1902	1.67	0.15	2.01	0.96	3.31	7.87	12.63	3.32	5.63	2.25	1.45	2.69	43.94	..	.....	..	.....
Averages	.80	.77	2.00	2.34	2.91	6.14	6.00	4.09	4.60	3.18	.89	1.42	85.14	....		...	.....

PANAMA—PRECIPITATION (INCHES).

1891	.....	1.07	1.00	1.84	2.50	3.62	2.60	2.95	3.80	.24	2.03	2.40	2.98	27.01	....	... ..	....	.....
1892	.....	.17	.37	2.72	3.87	6.84	2.43	4.80	2.48	2.24	1.42	.40	.49	28.22	....	.....	....	.....
1893	.....	.29	1.16	1.10	2.47	5.17	4.44	3.98	2.33	1.35	0.12	.48	1.26	24.19	...	.....	....	.....
1894	.....	.37	.81	.62	4.48	1.03	2.69	1.51	1.63	2.94	2.71	26	1.24	19.59	....	....	....	.....
1895	.....	.17	.46	.88	3.22	.88	4.12	2.03	10.63	2.67	.11	1.22	.00	26.24	....	....	....	.....
1896	.....	.10	.23	1.01	8.16	8.00	4.81	8.05	3.82	4.62	3.17	3.55	.80	45.68	....	.....	....	.....
Averages		0.36	0.50	1.35	4.11	4.36	3.51	3.88	4.11	2.34	1.89	1.88	1.04	28.50		.....	....	.....

SHELBY COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	26	13	27	23	68	1.0					
1891	35	15	29	22	121	2.0	3.62	2.60	2.95	3.80	12.97
1892	33	12	25	19	43	2.5	6.84	2.43	4.80	2.48	16.55
1893	35	12	20	19	54	1.8	5.15	4.44	3.98	2.32	15.89
1894	9	14	14	12	43	0.5	1.03	2.69	1.51	1.63	6.86
1895	30	21	44	31	95	1.2	.88	4.12	2.03	10.63	17.66
1896	45	15	25	20	60	2.0	8.05	4.81	8.05	3.82	24.74
1897	30	18	35	25	85	1.5	.....	....	.....	.....	.....
1898	35	16	37	25	75	2.0	.....	.....	.....	.....	.....
1899	39	14	32	25	105	1.8	4.49	7.58	2.31	4.44	18.77
1900	40	13	35	30	70	1.5	2.09	1.89	8.33	7.79	20.10
1901	26	14	30	25	30	1.4	1.78	7.29	.76	.81	10.64
1902	30	12	27	23	72	1.8	3.31	7.87	12.63	3.32	27.13
Averages	32	14	29	23	70	1.6	.....	.....	.....	.....	17.13

HARRISON COUNTY.

Area, 684 square miles; area in farms, 422,749; number of farms, 3,224; value of farms (census of 1900), $12,530,850; value of farm buildings, $2,481,820; value of live stock, $3,374,820; value of farm products of the year not fed to stock, $3,154,940; acreage in cereal crops, 179,430 acres. Continuous records of temperature and precipitation have been compiled at Logan since May, 1866, and are contained in the following tables. These figures are of great value for reference and comparison, for which the county and state are deeply indebted to one of the pioneer families of that region, Mr. Jacob T. Stern and his faithful wife, Mrs. M. B. Stern. Altitude of the station, 928 feet:

LOGAN—TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb	Mar.	April.	May.	June.	July.	Aug	Sept.	Oct.	Nov.	Dec.	Ann'l	High-est.	Month	Low-est.	Month
1866	....	....	....	....	58.9	65.1	76.3	69.1	58.0	51.0	....	....	....	....	....	....	....
1867	15.6	23.9	18 8	44.2	52.4	68.1	70.6	71.8	66.0	54.3	42 4	27.5	46.3	....	....	....	....
1868	13.0	26.0	43.5	48.7	60.9	68.8	79.6	....	55.4	49.2	34.0	19.2	....	....	....	....	....
1869	23.1	26.5	31.9	45.0	58 0	63.3	68.9	71.0	60.6	42.8	31.8	25.7	47.7	....	....	....	....
1870	21.2	30.5	9.0	50.1	62.8	69 3	75 2	66 1	62.4	51.7	42.0	25.2	48.8	....	....	....	....
1871	22.6	29.7	39.8	54.5	62.6	72.4	70.3	69 6	61.5	53.4	30 0	17.1	48.6	....	....	....	....
1872	17.5	25.6	29.9	48.0	58.2	67.9	72.0	71.2	61.5	52.2	28.4	14.8	45.8	....	....	....	....
18.3	14.1	23.2	35.9	43.5	55 8	72 8	72.9	74.6	59.1	46.7	37 0	....	....	....	....	....	....
1874	20.2	20.7	33.1	42 6	64.2	69 2	77.6	79 0	63.0	55.1	33.6	26.2	48.7	....	....	....	....
1875	7.6	12.6	8.3	43.4	60.5	68.6	71.6	68.2	61.6	48.5	29 9	22.2	44.4	....	....	....	....
1876	26 8	28.4	29.7	49.3	60.3	64.5	72.8	71.0	61.3	48.8	32.6	16.6	46.8	....	....	....	....
1877	17.8	35.2	31.9	47.3	59.2	67.9	73 3	70 7	87.8	50.8	35.6	34.9	49.3	....	....	....	....
1878	28.5	35.1	48.0	51.8	56.1	66 8	76.4	74.0	64.7	52.7	41.2	21.3	51.4	....	....	....	....
1879	21.8	20.7	40.8	60.9	63.7	69.7	77.0	74.2	62.3	60.7	38.5	15.4	49.9	....	....	....	....
1880	34.4	32.6	36 6	51.7	71 3	71 6	75 7	74.1	63 4	49.7	27.5	18.5	50.5	....	....	....	....
1881	12 9	16.5	29.8	48.2	66.8	73 6	79.5	79.6	66.9	54.3	35.8	34.7	49.6	....	....	....	....
1882	26.0	3.4	39.6	51.9	56 6	72.5	69.8	72.1	66.9	56.5	37.4	22 8	50.5	....	....	....	....
1883	10.2	20.2	43.9	53.0	58.5	68.7	77.0	77.2	64.0	50.6	39.3	29.6	48.5	....	....	....	....
1884	17.8	21 3	36.7	48.4	64.3	71 3	72.8	70.8	60.1	53 7	38.5	17.1	48.5	....	....	....	....
1885	4.1	15.5	32.5	51.8	61.7	71.8	76 9	70.4	65.2	51.0	40.6	25.6	48 6	....	....	....	....
1886	7 1	22.0	32.2	52.5	65.5	70.7	77 0	76.8	70.2	55.5	31.3	18.1	48.2	....	....	....	....
1887	10.9	18.6	39.4	55.0	66.7	74.4	77.3	73 5	66.4	50 0	37.5	23.8	49.6	....	....	....	....
1888	7.2	20.8	29.0	53.4	57.4	70.8	79 4	73.6	64.4	50 9	36.8	31.5	48.1	....	....	....	....
1889	24.1	22.9	42.1	54.2	62.7	70.7	74.0	72 4	62.2	52.3	35 4	39.6	51.0	....	....	....	....
1890	19.2	26.5	31.6	56.2	59 7	72.8	77 0	70.4	63.8	53.8	41 9	33.8	50.6	....	....	....	....
1891	30.2	18.7	39.9	55 2	61.2	70.2	71.7	72.1	60.9	54.0	34 7	34.6	50.2	....	....	....	....
1892	19.0	32.0	36.0	49.0	56.0	71.0	76.0	74.0	68.0	57.0	38.0	22.0	49.7	....	....	....	....
1893	15.0	17.0	31	47.0	58.0	72.0	75.0	70.0	67.0	56.0	35.0	24.0	42 2	....	....	....	....
1894	18.0	20.0	41 0	54 0	64.0	76.0	78.0	76.0	65.0	62.0	32.0	31.0	50.6	....	....	....	....
1895	16.0	21.0	35.0	55.0	64.0	70.0	72.0	72.0	67 0	48.0	35.0	27.0	48.5	....	....	....	....
1896	23.0	30 0	31 0	54.0	64.0	70.0	73.0	72.0	59.0	48.0	28 0	31 0	48.7	....	....	....	....
1897	19.0	26 0	33.0	49 0	60 0	70.0	76.0	69.0	72 0	57.0	34.0	18 0	48 6	....	....	....	....
1898	25.0	26 0	37.0	48.0	60 0	73.0	74.0	73.0	65.0	48 0	35 0	19.0	48 7	....	....	....	....
1899	18.3	11.8	20.7	50.2	61 4	71 0	73.6	75.8	64.0	55.2	42.4	23.6	47.3	97	Sept ..	-27	Feb.
1900	27 1	13.6	33.0	51.2	63.0	70.6	75.8	77.5	63.0	58.3	32.4	26.4	49.3	102	July ..	-24	Feb.
1901	23 1	30.6	37 4	51.0	61.6	71.9	83.4	76.2	62.2	52 2	36.4	21 5	49.8	110	July ..	-20	Dec.
1902	24.0	19 3	40.4	51.0	65 4	66.1	73 4	71.1	59.3	54.2	39.0	20.2	48.7	95	July ..	-21	Jan
Averages	19.2	23.6	34.1	50 0	61.2	70.1	75 0	72.5	64.0	52.3	35 6	24.9	48 7	110	1901 July ..	-27	1899 Feb.

HARRISON COUNTY—CONTINUED.

LOGAN—PRECIPITATION (INCHES).

YEAR.	Jan	Feb.	Mar.	Aprtl.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	High est.	Month	Low-est.	Month
1866	....	....	....	....	1.20	3.10	3.00	1.30	4.40	....	....	....	....	....	....	....	....
1867	.20	2.65	2.75	1.60	4 50	4.20	3.80	2.00	1.40	2.90	1 00	.80	27.81	....	....	....	....
1868	....	1.60	2.40	2.80	4.00	6.90	3.25	....	4.30	....	1 50	3 10	29 85	....	....	....	....
1869	.90	1.40	.50	1.10	3 50	9.00	8.90	7.90	7.10	.80	1.35	2.50	44.95	....	....	....	....
1870	.90	....	1.70	.40	2.00	.30	7.00	1.80	8.90	1.10	....	.20	25.30	....	....	....	....
1871	.60	3.10	....	2.70	1.60	1.00	7.30	2.60	3.10	1.80	3 85	1.30	28.93	....	....	....	....
1872	.10	.30	2.50	4.20	6.70	2.00	5 00	3.90	2.50	3.10	1.50	.30	32 10	....	....	....	....
1873	2.30	1.00	2.10	3.60	7.70	8.40	5 10	8.40	1.50	3.20	0.00	....	43 20	....	....	....	....
1874	.70	2.10	2.80	1.80	1.10	6.30	2.80	1.20	6.20	1.20	1.50	.70	28.40	....	....	....	....
1875	.60	1.80	3.80	2.40	2.50	9 90	7 00	7.60	3 50	1.40	.20	1.30	42.00	....	....	....	....
1876	.40	.60	4.50	2.70	1.70	2.40	8.30	1.50	4.80	.90	.20	.20	29.3	....	....	....	....
1877	2.30	1.20	1.50	4.90	11 00	6.70	2.90	4 80	1.40	4.00	1.40	3.00	45.10	....	....	....	....
1878	1.20	.50	2.40	2.70	7.60	10.61	13.00	5.10	4.70	1.20	....	.30	46 31	....	....	....	....
1879	.40	1.10	4.10	.90	5.80	5.30	2.60	3 50	2.50	4.10	2.00	.80	33.10	....	....	....	....
1880	1.80	.30	.60	.77	4 00	3 60	3.60	5.30	2.00	2.30	1.38	.70	27.30	....	....	....	....
1881	3.10	5.30	2.40	5.40	7 30	5.10	9.50	1.25	5.30	6.60	1.50	1.00	56.00	....	....	....	....
1882	1.20	1.30	.60	3.50	3.80	9.60	7 30	.80	.20	3.50	3.30	2.20	37.30	....	....	....	....
1883	2.50	1.20	1.40	2.60	7.60	8.50	3.30	5.00	4.10	2.50	.10	4.10	39.90	....	....	....	....
1884	1.40	1.50	1.70	3.10	2.10	3.40	7.40	5 00	5.50	4.40	.10	1.10	36.60	....	....	....	....
1885	....	1.10	.30	4 90	6.00	9.80	5.1	5.40	1.60	4.20	1.40	1.40	40 20	....	....	....	....
1886	2.60	.30	2.50	2.10	1.80	3.20	2.20	2.20	....	3.80	2.30	....	23.10	....	....	....	....
1887	.90	.70	.60	1.40	1.30	2.90	2.40	4.80	4.20	.90	.30	2.00	23 60	....	....	....	....
1888	1.50	.90	3.40	5.44	5.74	2.00	5 60	6.44	.83	.73	.73	1 80	34.02	....	....	....	....
1889	1.40	T	.69	1.35	3.28	9.86	6.28	3.14	1.32	.46	.40	.14	29.87	....	....	....	....
1890	1.09	1.10	1.76	2 17	6.29	14.09	2 29	1.19	1.78	1.87	1.87	....	34.95	....	....	....	....
1891	1.79	1.00	2.33	2.10	3.93	3.47	6 16	3.31	1.74	5.64	5.64	2.72	35.39	....	....	....	....
1892	.90	1.14	4.58	4.91	7.13	3 16	4.55	3.37	2.00	1.81	.08	1.12	35.25	....	....	....	....
1893	.40	1.50	.84	2.10	4.73	3.97	3.62	1.66	1.35	.15	.53	1.22	22.40	....	....	....	....
1894	.74	.70	.40	1 88	.55	3 75	.41	1.83	2.22	3 01	0 00	1.14	16.69	....	....	....	....
1895	.40	.72	.26	3.70	.84	5.24	1.68	9.84	1.71	.54	1.09	.10	26.12	....	....	....	....
1896	.64	.40	.60	7 17	7.93	7.85	6.70	2 83	4.05	2 81	2.14	....	43.82	....	....	....	....
1897	1.62	.65	2.17	6.18	1.80	2.97	1.38	4.98	.08	1.04	.30	2.93	26.00	....	....	....	....
1898	1.30	.80	1.59	2.82	4.91	3.26	1.50	2.50	1.72	2.93	.90	.70	24.96	....	....	....	....
1899	.10	.70	1.30	2.08	3.62	11.99	1.83	5.10	.42	1.39	1.11	1.51	31 95	....	....	....	....
1900	.20	1.30	1.95	3.50	1.97	1.27	7.30	4.63	4.09	4.60	.41	1.08	31.30	....	....	....	....
1901	.70	.90	3.00	1.44	2.54	7.97	.71	.77	7.66	2.83	.94	1.10	30.56	....	....	....	....
1902	1.30	.50	.43	1.08	2 85	7.52	11 34	5 30	3.40	3.26	1.53	2.14	40.74	....	....	....	....
Averages	1 12	1.20	1.90	2 87	4.19	5.70	4 91	3.86	3.11	2 48	1.16	1.35	33.80	....	....	....	....

HARRISON COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	23	12	26	23	30	1.5	6.29	14.09	2.29	1.19	23.86
1891	39	15	25	30	120	2.0	3.93	3.47	6.16	3 31	16 87
1892	34	12	22	17	37	2.0	7.13	3 16	4.55	3.37	18.21
1893	31	12	21	16	39	2.1	4.73	3.97	3.62	1.99	14.31
1894	9	14	22	15	26	0 4	.55	3.75	.41	1.83	6 54
1895	27	22	43	32	93	1.2	.84	5 24	1.68	9.84	17.60
1896	38	12	20	20	66	1.5	7.93	7.85	6.70	2.83	24.81
1897	31	16	38	20	79	2.0	1.80	2.97	1.38	4.98	11.13
1898	31	17	35	22	82	2.0	4.91	3.26	1.50	2.50	12.17
1899	32	14	30	25	130	1.5	3.62	11.99	1.83	5.90	23.34
1900	38	12	30	26	63	1.7	1.97	1.27	7.30	4 63	15.26
1901	22	15	33	30	50	1.8	2.54	7.97	.71	.77	11.99
1902	32	15	32	25	140	2.0	2.88	7.52	11.34	5 56	27.10
Averages.	30	14	30	23	74	1.6	....	....	....	....	17.16

CENTRAL DISTRICT.

This district includes fifteen counties, as follows: Grundy, Hardin, Hamilton, Webster, Calhoun, Greene, Boone, Story, Marshall, Tama, Poweshiek, Jasper, Polk, Dallas and Guthrie. The mean annual temperature of the district is 47.2 degrees; average annual precipitation, 31.66 inches; average rainfall May 1st to September 1st, 16.60 inches; average yield of corn per acre, 32.8 bushels.

GRUNDY COUNTY.

Area, 504 square miles; area in farms, 316,912 acres; number of farms, 1,783; value of farms (census of 1900), $15,614,530; value of farm buildings, $2,337,520; value of live stock, $2,751,260; value of year's products not fed to stock, $2,955,776; acreage in cereal crops, 178,310 acres. The following tables contain meteorological records compiled at Grundy Center. Altitude of the station, 976 feet.

GRUNDY CENTER—TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l	Highest.	Month	Lowest.	Month
1891	....	....	....	53.0	58.0	68.0	68.0	68.0	67.0	49.0	30.0	32.0	....	....	.....	....	.....
1892	14.0	20.0	31.0	45.0	54.0	68.0	72.0	70.0	63.0	52.0	30.0	15.0	44.9	....	.....	....	.....
1893	5.0	12.0	29.0	44.0	55.0	74.0	74.0	68.0	62.0	51.0	31.0	19.0	43.7	....	.....	....	.....
1894	16.0	17.0	38.0	50.0	59.0	73.0	75.0	73.0	64.0	51.0	31.0	29.0	48.0	....	.....	....	.....
1895	11.0	15.0	32.0	53.0	60.0	69.0	71.0	71.0	66.0	45.0	33.0	24.0	45.8	....	.....	....	.....
1896	21.0	6.0	30.0	52.0	64.0	68.0	70.0	70.0	56.0	47.0	27.0	29.0	46.7	....	.....	....	.....
1897	15.0	23.0	29.0	46.0	57.0	67.0	74.0	67.0	69.0	56.0	32.0	31.0	46.2	....	.....	....	.....
1898	21.0	21.0	36.0	47.0	58.0	70.0	70.0	71.0	63.0	46.0	31.0	16.0	45.8	....	.....	....	.....
1899	17.8	10.6	22.6	48.4	58.3	69.2	71.0	73.0	60.2	53.8	41.8	19.3	45.5	99	{Aug. / Sept.	-29	Feb.
1900	22.4	12.2	28.5	47.7	....	67.9	71.4	77.2	63.8	59.6	42.0	25.9	....	92	Aug.	-15	Jan.
1901	22.1	15.6	32.7	44.0	59.9	70.7	80.2	72.4	62.4	54.0	34.0	17.8	47.6	105	July.	-25	Dec.
1902	20.1	15.6	37.6	46.8	62.4	64.0	72.2	68.3	58.0	52.7	41.2	19.0	46.4	92	July.	-25	Jan.
Averages	16.9	17.6	31.5	47.7	58.7	69.1	72.2	70.7	62.9	51.4	32.8	22.2	46.1	105	1901 July.	-29	1899 Jan.

GRUNDY CENTER—PRECIPITATION (INCHES).

1891	....	....	....	....	.93	2.29	2.73	4.09	4.34	1.82	2.75	1.30	2.33	....	.....	....	.....
1892	.44	.88	1.68	4.59	9.30	5.32	3.51	1.64	.89	2.34	.48	1.87	32.94	....	.....	....	.....
1893	.50	1.17	2.40	5.62	2.71	3.07	2.22	1.56	1.50	2.21	1.11	.98	24.91	....	.....	....	.....
1894	1.00	.49	2.40	4.31	2.71	2.99	.09	1.71	2.16	1.47	.47	1.02	21.39	....	.....	....	.....
1895	.28	.51	.38	2.67	4.87	3.75	4.92	5.50	3.84	1.17	1.79	1.38	31.06	....	.....	....	.....
1896	.22	.25	.28	7.27	4.48	3.38	10.10	2.85	4.93	3.13	1.34	.31	38.54	....	.....	....	.....
1897	1.01	.91	.98	5.81	3.30	4.26	3.61	1.60	4.41	1.36	.40	1.91	29.56	....	.....	....	.....
1898	1.89	.77	1.20	1.94	5.59	7.02	1.32	4.75	3.31	5.29	1.07	.40	34.46	....	.....	....	.....
1899	.21	.30	1.31	1.76	9.15	5.27	1.69	3.95	.78	1.89	2.49	1.66	29.86	....	.....	....	.....
1900	.42	.75	2.84	3.63	1.62	11.44	7.69	3.85	8.54	4.89	1.69	.65	47.51	....	.....	....	.....
1901	.75	1.10	3.17	1.45	2.84	5.12	2.13	1.86	2.97	2.03	.89	.83	25.14	....	.....	....	.....
1902	1.16	.79	2.08	1.70	7.11	16.04	8.74	9.81	4.67	1.65	2.28	2.05	58.08	....	.....	....	.....
Averages	.71	.72	1.60	3.88	4.95	5.84	4.18	3.57	3.32	2.69	1.28	1.28	33.58	....	.....	....	.....

GRUNDY COUNTY—CONTINUED.

GRUNDY COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST TO SEPT. 1ST. May.	June.	July.	August.	Total.
1890	39	9	31	25	82	1.5	....	....	....	....	....
1891	43	16	46	31	185	1.8	....	....	....	....	....
1892	29	13	28	29	68	1.5	2.29	2.73	4.09	4.34	13.45
1893	36	14	36	27	96	1.8	9.30	5.32	3.51	1.64	19.77
1894	9	13	17	24	42	0.6	2.71	3.07	2.22	1.56	9.56
1895	41	21	49	41	121	1.0	2.71	2.99	.09	1.71	7.17
1896	50	15	32	35	145	1.3	4.87	3.75	4.92	5.50	19.04
1897	33	15	39	30	51	1.6	4.48	3.38	10.10	2.85	20.81
1898	42	17	36	28	93	2.0	3.30	4.26	3.61	1.60	12.77
1899	40	18	45	29	140	1.5	5.59	7.02	1.32	4.75	18.68
1900	39	14	30	25	85	1.8	9.19	5.27	1.69	3.95	19.46
1901	30	13	30	22	65	1.8	1.62	11.44	7.69	3.85	24.60
1902	33	10	31	26	110	2.0	2.84	5.12	2.13	1.86	11.95
Averages	35	14	34	29	95	1.5	7.11	16.04	8.74	9.81	41.70
	....	....	....	....	....	....	....	....	....	....	16.84

HARDIN COUNTY.

Area, 576 square miles; area in farms, 351,046 acres; number of farms, 2,294; value of farms (census of 1900), $13,272,250; value of farm buildings, $2,471,260; value of live stock, $2,852,577; value of year's products not fed to stock, $2,915,380; acreage in cereal crops, 168,900 acres. Meteorological stations have been established at Iowa Falls and Whitten, and the records are tabulated below. Elevation of Iowa Falls, 1,107 feet.

IOWA FALLS—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1893	3.0	11.0	27.0	46.0	54.0	69.0	77.0	68.0	63.0	49.0	31.0	17.0	42.0	....	.....	....	.....
1894	14.0	16.0	38.0	48.0	58.0	70.0	77.0	72.0	61.0	50.0	29.0	28.0	46.6	....	.....	....	.....
1895	10.0	11.0	31.0	52.0	61.0	68.0	70.0	69.0	64.0	42.0	31.0	22.0	44.3	....	.....	....	.....
1896	20.0	25.0	29.0	50.0	65.0	67.0	69.0	68.0	55.0	46.0	27.0	22.0	45.8	....	.....	....	.....
1897	14.0	23.0	29.0	46.0	57.0	68.0	74.0	67.0	68.0	55.0	31.0	14.0	45.6	....	.....	....	.....
1898	....	....	36.0	46.0	59.0	70.0	72.0	70.0	63.0	46.0	29.0	15.0	....	....	.....	....	.....
1899	16.9	16.0	32.4	47.2	58.4	69.8	72.4	74.2	60.6	55.4	42.1	19.2	45.7	98	Sept.	-28	Feb.
1900	22.2	12.2	27.7	51.2	63.2	68.9	72.0	75.6	62.0	57.0	40.0	24.2	47.2	95	July	-15	Feb.
1901	20.8	14.6	31.2	43.2	59.8	70.6	80.0	70.8	61.0	51.8	32.3	17.4	46.5	104	July	-22	Dec
1902	17.9	14.5	36.5	46.1	62.1	64.0	71.9	67.5	56.9	50.7	39.5	17.9	45.5	92	July.	-25	Jan.
Averages	15.4	15.3	30.8	47.5	59.7	68.5	73.0	70.2	61.6	50.3	32.2	20.5	45.5	104	1901 July.	-28	1899 Feb.

IOWA FALLS—PRECIPITATION (INCHES).

1893	.52	1.85	2.22	4.45	3.48	2.79	3.24	.95	1.44	.89	1.37	1.50	24.70	....	.....	....	.....
1894	.72	.30	1.65	4.88	1.68	2.85	.09	1.56	1.57	3.78	.35	.89	20.02	....	.....	....	.....
1895	.89	.28	.67	2.78	3.87	4.15	3.79	5.37	3.39	.80	1.69	1.27	28.89	....	.....	....	.....
1896	.84	.09	.59	7.09	7.76	8.97	5.98	2.77	5.43	3.20	2.15	.56	42.49	....	.....	....	.....
1897	1.95	1.15	1.32	4.31	2.45	2.68	2.11	3.25	3.44	1.39	.47	2.00	26.50	....	.....	....	.....
1898	1.55	1.80	1.14	1.84	3.49	3.26	1.73	6.62	2.69	3.49	2.22	.40	30.64	....	.....	....	.....
1899	.10	.99	1.50	1.74	3.65	4.85	1.43	2.57	2.25	1.67	1.00	1.04	23.33	....	.....	....	.....
1900	.46	1.35	2.80	1.61	1.79	5.92	5.30	4.42	5.17	3.77	1.31	.55	34.45	....	.....	....	.....
1901	.82	1.30	2.13	1.90	2.16	5.24	3.47	1.83	4.36	2.39	.49	.65	26.58	....	.....	....	.....
1902	1.60	.84	2.15	1.10	5.86	10.01	11.28	7.66	3.46	1.60	1.90	2.11	45.57	....	.....	....	.....
Averages	.84	.95	1.61	3.15	3.55	4.77	3.84	3.40	3.32	2.30	1.28	1.16	29.86	....	.....	....	.....

HARDIN COUNTY—CONTINUED.

WHITTEN—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1897	....	....	....	....	57.	68.	75.	67.	68.	56.	31.	15.	.....	98	July.	....	.....
1898	20.	21. 0	35.	46.	56.	72.	74.	70.	62.	45.	30.	16.	45.5	96	July.	-17	Dec.
1899	17. 9	9. 7	23. 6	47 2	60. 8	69 3	72. 8	73 7	62. 8	55. 3	40. 7	19. 5	46. 1	97	Sept	-29	Feb.
1900	22. 4	12. 2	28.	50. 6	62. 4	67. 8	71. 4	76. 1	62. 4	57 8	30. 8	27. 0	47. 4	98	Aug.	-16	Feb.
1901	22. 0	16. 7	31 5	50. 0	.....	.....	81. 9	.....	.....	51. 6	.....	.....	.....	106	July.	....	.....
1902	19. 5	15. 9	31. 2	46. 8	63. 4	64. 4	78. 3	68. 1	57. 8	52. 2	41. 8	.....	.....	98	July.	....	.....
Averages.	20. 8	15. 1	31. 0	58. 5	59. 8	68. 3	74. 7	70 9	62. 6	52. 9	34. 8	19. 8	46. 3	1901 106	July	1899 -29	Feb.

WHITTEN PRECIPITATION—(INCHES).

1897	....	....	....	....	2. 50	2. 56	2. 68	1. 62	2. 45	1. 31	. 53	1. 71	.....	....	.....	....	.....
1898	.82	.40	....	1. 78	4 40	5. 82	1. 38	3. 33	2. 33	5. 88	2. 42	. 20	.....	....	.....	....	.....
1899	.02	.80	. 91	1. 67	....	5. 14	42	2. 78	. 73	1. 74	1. 18	1. 61	.....	....	.....	....	.....
1900	.10	.60	. 45	3. 85	1. 48	.....	7. 30	4. 74	8. 61	4. 24	. 68	....	.....	....	.....	....	.....
1901	1. 00	.90	. 70	82	.....	.....	2 46	.....	.....	1. 69	.....	....	.....	....	.....	....	.....
1902	. 95	.10	1. 71	1. 93	6. 69	11. 52	8. 45	6. 98	3. 49	. 88	1 68	....	.....	....	.....	....	.....
Averages.	.57	.56	94	2. 06	3 76	6 26	3. 77	3. 89	3. 52	2. 62	1. 29	1. 17	.....	....	.....	....	.....

HARDIN COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPTEMBER 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	28	11	30	23	40	1.5					
1891	37	16	52	29	117	1 8					
1892	32	11	25	20	62	1.8					
1893	27	12	27	23	65	2.0	3. 48	2. 79	3. 24	.95	10. 46
1894	15	15	22	16	33	0. 6	1 63	2. 85	.00	1. 56	6. 13
1895	48	21	50	42	94	1. 5	3. 37	4. 15	8. 79	5. 37	16. 68
1896	32	13	29	34	77	1. 8	7. 76	5. 97	5. 98	2. 77	22. 48
1897	27	15	31	22	45	1. 6	2. 45	2. 68	2. 11	3. 25	10. 49
1898	36	17	38	32	70	1. 7	3. 40	3. 26	1. 73	3. 62	12. 01
1899	38	17	40	33	98	1. 5	3. 65	4. 85	1 43	2. 57	12. 50
1900	42	15	32	30	76	1. 4	1. 79	5. 92	5. 30	4. 42	17. 43
1901	32	15	31	20	25	1. 4	2. 10	5. 24	3. 47	1 83	12. 64
1902	32	11	31	24	92	1 7	5. 86	10. 01	11. 28	7. 66	34. 81
Averages	32	15	34	27	69	1. 5					15. 56

HAMILTON COUNTY.

Area, 576 square miles; area in farms, 364,042 acres; number of farms, 2,195; value of farms (census of 1900), $13,145,110; value of farm buildings, $2.364,880; value of live stock, $2,704,918; value of the year's products not fed to stock, $2,804,782; acreage in cereal crops, 167,730 acres. A meteorological station was maintained at Webster City from 1891 to 1897, except the years 1895 and 1896, and the records are tabulated below.

WEBSTER CITY—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1891	22. 6	15.	25. 1	49. 1	56. 8	68. 1	71. 8	....	66. 2	46. 7	27. 6	29. 1	.....	101	.....	-14	.....
1892	13. 7	25.	30. 0	42 9	52. 0	67. 4	72 5	70. 0	64. 0	52. 6	32. 6	16. 5	45. 0	96	.....	-28	.....
1893	8. 6	13.	28. 2	41. 1	54. 7	70. 5	75. 3	68. 7	65. 4	50 3	31. 6	21. 0	44. 0	99	.....	-26	.....
1894	15. 3	17. 0	37 8	51. 2	63. 0	73. 9	77. 7	74. 7	63. 7	48. 4	30. 0	27. 6	48. 4	108	.....	-26	.....
1897	15. 0	24. 0	31. 0	48. 0	57. 0	68. 0	76. 0	68 0	68. 0	56. 0	38. 0	17. 0	46. 8	97	.....	-21	.....
Averages.	....	....	....	....	....	....	....	....	....	....	....	....	46. 0	....	....	....	.....

WEBSTER CITY—PRECIPITATION (INCHES).

1891	1. 87	. 76	3. 30	. 59	2. 62	4. 52	4. 37	....	1. 74	3. 0	2. 62	2. 57	....	....	.....	....	.....
1892	. 61	1 53	2. 22	5. 68	6. 12	3 51	8 60	2 25	1. 00	2. 06	56	1 87	35. 81	....	.....	....	.....
1893	. 73	1. 79	1. 18	4. 12	3. 62	2 76	3. 90	2. 90	1. 00	0. 50	1. 40	1. 04	24. 94	....	.....	....	.....
1894	1. 12	. 75	1. 70	4. 85	. 95	3 45	T	1. 95	2. 15	4. 35	. 75	. 90	22. 92	....	.....	....	.....
1897	1. 24	. 42	1. 42	3 81	2. 82	2. 46	1 76	4. 33	1. 68	0. 58	0. 20	1. 44	22. 16	....	.....	....	.....
Averages.	1. 11	1. 05	1. 96	3. 81	3 22	3 30	3 72	2. 85	1. 51	2. 10	1. 10	1 56	27. 28	....	.....	....	.....

HAMILTON COUNTY CROPS.

YEAR	AVERAGE PER ACRE.					
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.
1890						
1891	36	12	31	20	45	1.5
1892	40	18	43	31	149	1.5
1893	22	12	28	21	58	2.0
1894	41	16	23	19	52	1.7
1895	11	9	18	20	30	0.5
1896	47	23	55	37	156	1.7
1897	36	12	29	35	84	1.5
1898	28	17	27	24	54	1.7
1899	37	19	38	30	74	1.8
1900	41	18	44	33	130	1.7
1901	43	18	40	25	81	1.6
1902	30	17	32	21	30	1.4
	30	9	28	22	90	2.0
Averages	34	15	33	26	79	1.6

WEBSTER COUNTY.

Area in farms, according to twelfth census, 428,975 acres, and number of farms, 2,564. Value of farms, $15,556,930. Value of farm buildings, $2,643,920. Value of live stock, $2,733,918. Products not fed to stock, $2,760,576. Area in crops in 1902: Corn, 111,290 acres, wheat, 12,490; oats, 66,110; barley, 2,090; tame hay, 12,240. The county is drained by the Des Moines river. The altitude of Fort Dodge is 1,032 feet, which is not much below the average elevation of the county. Meteorological records in Webster county have been thus far lacking in continuity. A station was established in Fort Dodge in 1900, and the records are given in the table below.

FORT DODGE MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1900	....	12 2	30 6	51.8	62 9	68 3	71.7	76.5	63 3	59 4	32.3	25.4	....	....	....	....	....
1901	22.0	18.0	33.4	48.1	60.2	70.7	81 3	74 6	62 8	54.0	34.2	20.0	47 9	107	....	....	22
1902	20.2	16.3	38 0	46.4	63.4	64.0	72.2	67 7	58.4	....	....	....	....	....	....	....	....

FORT DODGE PRECIPITATION (INCHES).

1900	....	0 10	0 60	4 20	4 04	4 57	5 34	7 55	6 87	3 00	3 58	1 08	0 10	44 03	....	....	....
1901	....	0 85	0 40	1 50	2 88	3 75	2 95	4 82	1 33	7 13	4 20	0 00	0 20	30 91	....	....	....
1902	....	0 90	0 40	2 15	2 10	2 89	....	....	....	....	....	....	....	....	....	....	....

WEBSTER COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.					
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.
1890	26	14	32	20	84	1.0
1891	40	14	46	35	175	1 8
1892	24	13	24	18	40	1.8
1893	39	12	32	15	57	1.6
1894	10	12	20	15	50	0.5
1895	46	20	53	34	113	1 7
1896	40	16	32	30	84	1.8
1897	26	15	28	22	55	1.8
1898	35	17	40	30	43	1.9
1899	35	14	40	25	37	1 7
1900	43	17	45	30	72	1.8
1901	26	16	40	30	40	1.8
1902	38	14	33	22	80	1.5
Averages	33	15	36	25	74	1.6

CALHOUN COUNTY.

Area, 576 square miles; area in farms, 362,873 acres; number of farms, 2,134; value of farms (census of 1900), $13,248,880; value of farm buildings, $1,199,560; value of live stock, $2,496,244; value of the year's products not fed to stock, $3,047,603; acreage in cereal crops, 194,600 acres. The following tables contain meteorological records compiled at Rockwell City; altitude of the station, 1,219 feet.

ROCKWELL CITY—TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1897	....	19	29	47	60	71	76	67	70	52	29	14	46.1	..	.....	-20	.....
1898	19	21	34	46	59	71	73	70	64	47	30	17	45 8	97	Aug..	-20	Dec.
1899	17.6	10.9	41.8	47.9	59.0	70.2	72.7	74.2	62.0	55.9	43 9	22.0	46.5	97	Sept..	-31	Feb.
1900	23.8	13.3	32.6	52.2	63.2	68.6	72.6	76.6	62.8	58.4	32.2	26.3	48 6	95	July..	-14	Feb.
1901	24.0	18.8	34.6	49.2	60.4	68.4	81.4	73.0	62.4	53.8	35.4	20.7	48.5	106	July..	-20	Dec.
1902	22.8	17.8	36 2	46.4	62.0	64.0	71.4	68.0	..	53 1	38 0	19 6	....	....	....	....	....
Averages	21.2	16.8	31.4	48.2	60.6	68.0	73.9	71.4	64.2	52 7	34.0	20.9	47.1	101	1901 July..	-31	1899. Feb.

ROCKWELL CITY—PRECIPITATION.

1897	....	.58	3.42	3.44	3.40	.92	2.27	2.49	1 73	.81	.11	2.20	21.37	....	....	....	....
1898	.46	.54	1.18	2.23	5.29	3.22	2.12	3.81	2.16	4 54	1.25	.15	26.95	....	.....	....	.....
1899	.04	.30	1.62	1.90	4.71	5.42	2.32	1.85	.72	2.03	1.44	1.59	23.94	....	.....	....	.....
1900	.55	1.05	1.81	2.15	1.78	3.36	5.06	6.53	4 54	3.49	.65	.68	37.20	....	.....	....	.....
1901	.80	.70	2.85	1.75	2.53	5.47	1.45	.85	7 06	1.05	.73	.28	26 12	....	.....	....	.....
1902	1.35	.20	1.00	1.65	5.90	6.12	9 85	7.82	3.91	1.45	1.00	3 00	43.51	....	.....	....	.....
Averages	.63	.51	2.30	2.41	3 34	4 50	4.00	3 54	3 07	2 58	.85	1.30	28.13	....	..	....	....

CALHOUN COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	38	10	39	30	56	1.5					
1891	41	14	46	32	143	1.5					
1892	25	11	30	25	58	1 8					
1893	35	12	28	22	54	1.5					
1894	8	11	16	16	34	0 5					
1895	45	25	60	53	158	1.6					
1896	34	17	37	35	53	1.8					
1897	24	15	29	22	48	1 6	3 40	.92	2.27	2.49	8.18
1898	30	20	40	21	48	1.9	5.29	3.22	2.12	3.81	14.44
1899	33	14	35	34	120	1.5	4.71	5.42	2.32	1.85	14 30
1900	43	15	40	30	80	1.8	1.78	3 36	5.06	6.53	22.33
1901	24	14	29	30	25	1.5	2 53	5.47	1.45	.85	10.00
1902	35	8	27	20	90	2.0	4.90	6.12	9.85	7.82	28.69
Averages.	32	14	35	29	74	1.6	....	.....	....	.....	16.32

GREENE COUNTY.

Area, 570 square miles; area in farms, 366,125 acres; number of farms, 2,314; value of farms (census of 1900), $13,018,459; value of farm buildings, $2,186,710; value of live stock, $2,849,654; value of the year's products, not fed to stock, $2,671,972; acreage in cereal crops, 163,380 acres. Meteorological records, compiled at Jefferson and Scranton, are tabulated below. Altitude of Jefferson, 1,052 feet; Scranton, 1,146 feet.

SCRANTON—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Lowest.
1899				49.0	59.4	71.4	73.6	74.6	62.2	57.6	44.3	22.8			
1900	26.7	15.2	32.5	52.5	64.2	70.6	73.8	76.3	63.8	59.2	35.5	28.2	49.7	98	-14
1901	24.1	19.4	34.3	48.9	61.4	72.7	72.2	73.6	62.6	54.4	36.6	22.8	49.3		
1902	22.5	18.6	37.7	48.7	63.9	66.6	74.1	69.2		52.6	38.8	19.8		96	-16

SCRANTON—PRECIPITATION (INCHES).

1899					1.49	5.31	4.68	1.58	3.26	0.72	1.65	0.73	2.00		
1900	T	0.72	2.82	4.58	2.83	4.59	8.68	10.44	6.58	2.50	0.30	0.25	44.35		
1901	0.38	0.30	1.17	1.62	2.27	4.03	1.12	1.84	4.60	2.34	0.82	0.10	20.65		
1902	1.20	1.10	1.41	1.11	3.09	6.77	11.30	5.70	5.40	1.79	1.40	2.50	42.71		

JEFFERSON—PRECIPITATION (INCHES).

1901	0.10	1.41	3.45	2.18	1.44	4.37	1.07	1.01	6.12	2.74	1.41	0.57	25.81		
1902	0.95	0.37	1.21	0.83	4.08	9.21	10.65	8.27	5.32	3.62	2.34	2.32	49.77		

GREENE COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.					
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.
1890	25	13	30	20	36	1.5
1891	35	14	46	29	127	1.5
1892	29	12	26	24	48	1.5
1893	57	9	25	27	53	1.5
1894	8	14	19	16	29	0.5
1895	42	20	52	45	162	1.6
1896	27	15	25	31	69	2.0
1897	33	14	28	23	49	1.8
1898	32	15	30	25	67	1.8
1899	32	14	33	32	130	1.3
1900	38	16	33	28	85	1.8
1901	20	13	28	22	25	1.1
1902	31	12	27	25	70	2.0
Averages.	30	14	31	26	73	1.5

BOONE COUNTY.

Area, 576 square miles; area in farms, 349,930 acres; number of farms, 2,670; value of farms (census of 1900), $13,481,850; value of farm buildings, $2,495,340; value of live stock, $2,656,709; value of the year's products not fed to stock, $2,656,793; acreage in cereal crops, 171,870 acres. A meteorological station was established at Ogden in 1894, and the records are included in the following tables. Elevation of the station, 1,087 feet.

OGDEN—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l	Highest.	Month	Lowest.	Month
1894							81.8	77.1	66	51.9	31.1	29.8		108	July		
1895	14	17	35	54	61	69	70	73	68	47	35	25	47.2	99	June	-24	Feb.
1896	23.9	28.8	31.2	54.4	64.8	70	73	72.3	58.6	48.2	29.5	31.6	48.9	99	Aug.	-15	Jan.
1897	19	35	33	48	59	69	75	69	72	57	35	17	48.2	99	July	-22	Dec.
1898	23	23	37	49	59	71	73	72	66	48	32	17	47.4	99	July	-17	Dec.
1899	20.5	13.0	24.4	48.2	59.6	70.6	72.6	74.1	63.1	58.8	43.4	21.8	47.4	97	Sept.	-28	Feb.
1900	26.2	13.9	31.7	53.4	63.8	68.9	73.3	76.4	64.6	60.2	32.6	24.5	49.1	95	June	-22	Feb.
1901	22.5	17.0	33.6	49.4	60.2	70.7	82.2	73.2	63.0	53.5	35.2	21.2	48.5	108	July	-22	Dec.
1902	23.1	17.6	39.4	48.8	64.0	68.1	73.4	70.2	60.7	55.9	43.3	23.3	48.8	96	Aug.	-24	Jan.
															1894		1899.
															1901		
Averages.	21.5	19.4	33.2	50.5	61.4	69.6	74.9	73.0	64.7	53.4	35.2	23.4	48.2	108	July.	-28	Feb.

OGDEN—PRECIPITATION (INCHES).

1894							.01	2.28	2.44	3.82	.26	.98			
1895	.32	.42	.54	4.13	3.20	5.39	3.41	4.61	2.75	.78	1.74	1.00	28.36		
1896	.21	.52	1.00	4.89	9.66	1.70	8.26	2.69	3.82	2.95	1.70	.47	37.87		
1897	1.18	.54	1.64	5.24	1.75	1.91	2.13	3.64	3.68	1.32	.29	1.54	24.26		
1898	.92	1.01	2.08	1.46	4.78	5.88	1.69	2.87	3.91	3.91	1.27	.33	30.06		
1899	.11	.38	1.36	1.62	7.80	7.21	2.17	3.71	1.25	2.01	1.16	1.65	30.43		
1900	.31	1.09	2.09	3.49	4.82	6.30	8.03	8.34	6.88	3.17	.66	.16	45.82		
1901	.55	.60	1.61	1.57	2.72	2.76	2.41	1.88	6.87	3.31	.87	1.30	25.95		
1902	1.08	.15	1.87	1.23	6.61	7.86	8.87	7.01	3.25	2.49	2.02	1.63	44.27		
Averages.	.59	.59	1.52	2.95	5.16	4.88	4.12	4.06	3.80	2.66	1.11	1.01	32.45		

BOONE COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1st TO SEPT 1st.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	26	12	33	25	30	1.5					
1891	43	17	49	29	156	1.8					
1892	32	12	29	18	44	1.8					
1893	38	13	28	28	56	1.8					
1894	13	12	21	18	28	0.5					
1895	35	17	44	33	101	1.3	3.20	5.39	3.48	4.61	16.68
1896	35	16	27	21	54	1.8	9.66	1.70	3.26	2.69	21.31
1897	31	17	31	25	42	1.7	1.75	1.91	2.13	3.64	9.43
1898	35	15	25	20	50	1.7	4.73	5.88	1.69	2.87	15.17
1899	40	17	41	28	105	1.8	7.80	7.21	2.17	3.71	20.89
1900	41	15	35	30	52	1.5	4.82	6.30	8.03	8.34	27.49
1901	26	12	26	20	21	1.5	2.72	2.76	2.41	1.88	9.27
1902	28	12	33	23	85	1.5	6.61	7.86	8.87	7.01	30.35
Averages.	32	14	31	24	64	1.6					18.82

STORY COUNTY.

Area, 576 square miles; area in farms, 386,654 acres; number of farms, 2,436; value of farms (census of 1900), $15,558,110; value of farm buildings, $2,627,360; value of live stock, $2,859,544; value of the yearly products not fed to stock, $3,131,013; acreage in cereal crops, 165,010 acres. Meterological records have been compiled at the agricultural college at Ames since 1876, and the records are included in the following tables. Elevation of the station, 926 feet.

AMES—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov	Dec.	Ann'l	Highest	Month	Lowest.	Month
1876	16	30	26	48	61	68	75	74	61	46	29	11	45.5				
1877	12	33	26	48	61	68	75	72	64	49	20	17	45.3				
1878	23	24	45	52	58	68	78	75	62	48	39	16	48.9				
1879	14	21	37	50	63	70	78	72	60	58	34	16	47.7				
1880	32	30		46	69	73	77	76	61	47	24	15					
1881	8	16	37	43	69	72	79	77	66	53	33	31	47.8				
1882	32	32	35	50	54	70	72	73	65	54	36	19	48.5				
1883	3	14	29	51	55	68	76	70		44							
1888	0	20	23	49	43	68	75	70	60	47		28					
1889	21	18	39	50	60	67	73	71	61	47	32	37	48.0				
1890	18	25	28	54	58	73	77	78	60	49							
1891	25	19	28	51	59	69	70	69	68	48	30	32	47.3				
1892	16			46	52	69	74	72	64	54	33	15		95	Sept	-34	Jan.
															July		
1893	6	18	31	44	54	73	79	72	68	55	36	22	46.6	102	July	-21	Jan.
1894	16	17	39	50	60	72			65	51	31	29				-37	Jan.
1895	12	16	34	54	61	68	70	72	68	49	32	25	46.8	96	Aug	-27	Feb.
1896					65	70	72		56	47	30	31					
1897	17	25	32	48	50	69	78	70	72	56	34	15	47.9	100	July	-20	Jan.
1898	23	23	38	49	60	71	73	72	65	47	37	10	47.3	100	July	-15	Dec.
1899	20.1	18.2	25	48.6	60.8	70.7	73.2	74.2	62.8	47.2	44.1	21.1	48.0	98	Sept.	-27	Feb.
1900	26.4				64.4	69.4	73.0	76.8	66.0	59.8	33.0	27.2		96	June	-12	Feb.
1901	23.6	18.0	34.3	49.0	61.4	74.4	83.3	72.8	61.6	55.9	37.9	20.5	49.2	109	July	-19	Dec.
1902	21.8	15.3	40.1	48.6	64.2	65.6	72.8	69.3	59.8	52.8	40.8	20.6	47.6	94	July	-23	Jan.
Means	17.1	21.6	32.5	49.1	59.6	70.0	75.0	72.2	63.4	50.9	33.2	21.8	47.5				

AMES—PRECIPITATION (INCHES).

1876	1.90	.40	2.35	1.50	4.25	4.28	6.50	8.29	5.14	.75	1.72	.02	37.10
1877	.45		1.41	1.96	4.43	7.94	3.60	6.48	.90	3.14	.69		
1878			4.09	3.39	4.35	7.53	5.33	1.95	3.00	1.38	.35	.83	
1879	.43	1.08	.78	1.27	4.46	4.05	.48	3.98	2.62	3.34	6.75	.25	29.12
1880	1.25	.52		2.06	3.06	2.37	4.18	6.02	6.34	1.18	1.20	.84	
1881	.68	2.50	.94	2.37	2.82	6.70	16.31	3.25	7.63	6.24	2.07	.89	51.90
1882	.57	1.14	3.09	2.44	5.21	7.43	2.64	2.15	.51	3.37	2.17	.98	31.72
1883	1.24	1.39	.32	3.55	7.11	3.52	6.90	2.92	1.67	2.80			
1884	.31	1.12	1.79	3.30	1.80	2.66	4.71	2.50	5.68	4.02	.85	1.89	30.00
1885		.34	.24	3.76	3.29	6.01	4.31	9.40	3.64	2.06	.25	.88	33 41
1886	3.57	.22	.98	3.05	2.78	1.87	.06	.53	4.96	1.11	1.12	66	20 61
1887	.63	1.44	.66	1.26	.39	1.81	2.78	1.78	9.77	1.50	.43	.90	22.76
1888	1.06	1.30	2.86	2.25	6.49	3.65	5.15	3.37	.85	1.45		1.90	
1889	1.80	.48	T	2.21	4.18	4.90	4.10	.87	3.47	.40	1.15	.95	23.51
1890	1.95	.96	1.20	2.10	4.62	5.65	1.85	4.55	3.20	2.38	0.10	0.55	29.40
1891	2.25	1.20	2.15	1.85	2.25	4.92	3.87	3.35	1.05	2.78	1.95	2.40	30.22
1892	1.00	.30	2.80	4.28	8.80	3.74	7.06	1.95	.16	1.79	.63	.92	32.99
1893	.28	1.37	1.73	2.42	4.89	4.70	2.47	1.08	1.86	.52	.62	1.05	22.99
1894	1.06	1.00	1.51	4.25	.87	3.51	.94	2.10	3.84	4.71	.45	.61	23.95
1895	.09	.53	.60	4.08	4.28	3.69	2.70	4.93	3.93	.47	1.09	1.56	28.95
1896	.44	.25	1.12	4.29	6.18	2.06	2.96	2.24	4.10	2.44	1.21	.37	34.66
1897	1.29	.22	.29	5.70	2.58	2.16	2.45	1.48	4.24	1.69	.49	1.56	23.09
1898	.46	1.42	.78	1.52	3.88	7.10	1.10	3.80	3.07	6.03	1.46	.54	29.60
1899	.11	.30	.49	2.01	7.23	6.45	1.60	3.70	.89	2.03	1.25	2.35	28.99
1900	.38	.45	2.81	2.61	4.30	6.48	9.14	5.46	7.12	3.73	.51	.19	43.24
1901	.57	.90	1.64	1.82	3.69	2.36	2.26	1.21	3.65	2.98	.67	.57	22.82
1902	1.32	.38	2.70	2.31	6.09	10.91	8.06	7.12	1.66	2.56	1.11	1.87	45.97
Averages	0.97	0.84	1.48	2.75	4.23	4.75	4.58	3.54	3.53	2.52	1.10	1.02	31.29

STORY COUNTY—CONTINUED.

STORY COUNTY CROPS.

YEAR.	YIELD PER ACRE						RAINFALL, MAY 1ST TO AUG. 31ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Totals
1890	26	11	25	20		1.	4.62	5.65	1.85	4.55	16.67
1891	38	12	47	32	105	1.6	2.25	4.72	3.87	3.28	14.18
1892	25	12	30	21		1.6	8.85	3.74	7.06	1.95	21.61
1893	34	16	24	28		1.6	4.29	4.70	2.47	1.68	13.14
1894	11	12	17	15		0.6	.87	3.51	.94	2.10	6.52
1895	47	24	57	41	152	1.5	4.28	4.69	2.70	4.93	16.60
1896	37	17	33	31	82	1.8	6.18	2.06	9.96	2.24	20.44
1897	31	16	33	29	45	1.5	2.58	2.16	1.45	1.48	8.67
1898	36	17	34	25	59	1.8	3.88	7.10	1.10	3.80	15.88
1899	28	15	40	33	105	1.5	7.23	6.45	1.60	3.70	18.78
1900	43	13	40	30	35	1.6	4.30	6.48	9.14	5.46	25.44
1901	25	15	30	32	45	1.9	2.36	2.26	1.21	3.65	9.52
1902	32	17	32	25	80	1.2	6.69	10.91	8.06	7.12	31.88
Averages.	32.5	15	33.3	28.5	81.7	1.5					17.13

MARSHALL COUNTY.

Area, 576 square miles; area in farms, 360,238 acres; number of farms, 2,400; value of farms (census of 1900), $15,403,970, value of farm buildings, $2,933,000; value of live stock, $3,132,071; value of yearly farm products not fed to stock, $3,318,962; acreage in cereal crops, 183,910 acres. The following tables contain meteorological records compiled at Albion and Marshalltown. Altitude of the station at Marshalltown, 947 feet.

ALBION—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1879	11.0	19.0	34.0	48.0	61.0	67.0	74.0	69.0	57.0	46.0	35.0	16.0	45.6	96	July	-22	Jan.
1880	30.0	25.0	32.0	46.0	64.0	68.0	72.0	70.0	58.0	44.0	21.0	12.0	45.2	98	July	-20	Dec.
1881	5.0	12.0	24.0	40.0	64.0	68.0	74.0	73.0	62.0	50.0	30.0	28.0	44.2	100	Aug.	-24	Jan.
1882	8.0	27.0	30.0	46.0	62.0	66.0	66.0	70.0	60.0	51.0	33.0	17.0	44.7	90	Sept.	-20	Dec.
1883	0.0	11.0	26.0	47.0	53.0	65.0	71.0	66.0	55.0	44.0	31.0	18.0	40.6	94	June	-30	Jan.
1884	6.0	13.0	27.0	44.0	56.0	67.0	69.0	67.0	64.0	49.0	29.0	12.0	41.9	95	July	-32	Jan.
Averages	11.6	17.3	28.7	45.3	58.4	66.9	79.0	69.0	59.5	49.1	29.7	17.1	42.0	1881 100	Aug.	1884 -32	Jan.

ALBION—PRECIPITATION.

1878	.05	.03	5.15	3.15	5.70	7.10	3.89	3.29	6.10	1.75	.72	.57	37.50
1879	.31	.30	.71	.55	6.24	1.47	.92	3.83	3.80	2.68	4.10	1.30	26.16
1880	1.40	.83	.70	1.92	2.65	2.85	3.72	5.45	7.50	1.50	1.25	.98	30.06
1881	.95	6.25	4.05	1.88	1.73	8.89	13.53	1.91	4.15	6.77	2.93	1.26	54.30
1882	.40	.90	1.95	2.87	5.88	6.20	2.42	1.90	1.05	3.50	2.29	1.40	30.82
1883	2.85	2.53	.42	3.07	4.65	4.88	2.85	2.35	2.00	3.80	.89	.65	31.36
1884	.38	1.62	1.93	1.54	2.39	4.48	3.90	2.35	6.20	2.27	.78	1.53	29.34
Averages	91	1.89	2.17	2.04	4.18	5.11	4.54	3.02	4.40	3.17	1.84	1.18	34.22

MARSHALL COUNTY—CONTINUED.

MARSHALLTOWN—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l	Highest.	Month	Lowest.	Month
1891		16	37	50	57	70	68	68	66	50	30						
1892		29	31	45	53	67	72	71	63	54	33	18					
1893	10	17	33	47	57	71	74	70	64	54							
1894																	
1895		14	32	53	61	70	72	73	68	53	33	25					
1896	12	26	32	53	54	69	72	71	57	48	39	28	47.5				
1897	17	25	32	48	58	67	69	71	58	48	33	17	47.8				
1898	23	23	39	48	60	70	74	72	65	48	32						
1899		16.6	35.6	49.1	59.4	70.4	73.6	71.4	63.8	50.4	45.2	22.6					
1900	26.4	16.0	31.3	53.6	64.4	69.8	73.8	73.3	65.1	60.2	34.2	27.1	50.0				
1901	24.4	18.2	35.0	50.4	62.2	73.0	82.6	74.2	64.2	55.5	35.6	30.8	49.6				
1902	23.0	17.6	33.2	48.6	64.8	65.9	74.3	70.9	59.6	53.7	43.6	21.4	48.5				
Averages	20.1	20.0	32.2	49.6	60.1	69.4	73.8	72.0	64.2	53.0	35.7	25.5	47.9				

MARSHALLTOWN—PRECIPITATION (INCHES).

1891		1.09	3.35	1.68	2.06	4.49	4.00	3.61	.16	2.89		2.50					
1892		1.31	2.24	3.53	9.73	3.38	6.66	1.52	1.03	3.71	.32	1.65					
1893	.44	.62	1.97	3.98	3.10	4.64	2.66	2.43	1.73	.62							
1894																	
1895	.90	.28	.48	1.58	3.45	3.08	3.07	3.87	2.77	.63	1.15	1.76	22.99				
1896	.15	.54	.50	6.82	6.32	1.55	8.32	2.83	4.00	3.50	1.43	.55	36.60				
1897	1.76	.61	1.93	5.98	2.23	3.76	5.87	.76	1.95	1.57	.68	1.75	31.85				
1898	1.02	.62	.33	1.87	4.26	6.48	2.73	3.31	2.38	3.94	1.84	.60	29.50				
1899	.72	.26	1.54	2.12	7.33	4.05	1.00	4.62	.78	.62	1.81	2.17	27.07				
1900	1.08	1.37	3.78	2.83	3.04	7.79	7.14	7.31	5.35	4.46	1.26	.87	46.32				
1901	1.05	1.17	3.71	1.82	2.81	2.80	2.70	1.16	2.62	2.27	.77	.87	23.92				
1902	1.11	.72	1.37	2.05	7.65	12.31	7.69	7.87	5.70	1.81	2.66	2.10	53.04				
Averages	.94	.78	1.93	3.11	4.74	4.94	4.45	3.57	2.67	2.47	1.33	1.48	32.40				

MARSHALL COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	24	12	26	23	88	1.0					
1891	41	17	47	22	130	1 5	2.06	4 49	4.00	3.61	14.16
1892	34	12	26	22	61	2.0	9.73	3.38	6.66	1.52	21.29
1893	39	18	20	20	51	1.6	3.10	4 64	2.66	2.43	12.83
1894	9	12	17	14	40	0.5					
1895	36	23	48	37	113	1 5	3.45	3.08	3.07	3.87	13.47
1896	37	16	26	29	91	1.8	6.32	1.55	8.32	2 83	19.02
1897	31	15	35	29	62	1.6	2.23	3.76	2.37	.76	9.62
1898	36	16	34	22	76	1.9	4 26	6.48	2.73	3.31	16.80
1899	38	18	42	31	95	1.3	7.33	4.05	1.00	4.62	17.00
1900	41	15	41	30	80	1.5	3.08	7.79	7.14	7.31	25.32
1901	33	15	32	25	57	1.5	2.89	2.80	2.79	1.16	9.64
1902	39	14	32	25	58	1.5	7.65	12.31	7.69	7.87	35.52
Averages	33	15	32	26	71	1.5					17.70

TAMA COUNTY.

Area, 720 square miles; area in farms, 438,586 acres; number of farms, 2,725; value of farms (census of 1900), $18,403,280; value of farm buildings, $3,277,300; value of live stock, $3,895,081; value of the year's products not fed to stock, $3,845,577; acreage in cereal crops, 200,010 acres. The following tables contain climatic data compiled at Dysart, Buckingham (near Traer), and Toledo. The altitude of Toledo is 857 feet. The meteorological observations at Dysart were made by Hon. Jos. Dysart, of that town.

DYSART PRECIPITATION.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1876.				3.10	10.34	10.85	3.65	7.45									
1877.	1.15		1.75	2.75	3.20	6.10	2.00	9.70	1.50	3.95	1.80	1.60	35.45				
1878.	.37	.20	3.55	3.98	4.50	7.45	1.50	3.85	3.90	1.70		1.50					
1879.	.06	.70	1.35	1.00	4.10	6.40	2.40	3.60	1.90	1.40	6.30	1.45	30.66				
1880.	1.50	.30	1.30	2.50	3.40	1.80	10.60	9.50	5.80	2.40	1.00	1.20	41.70				
1881.	1.40	4.20	2.00	1.35	1.55	7.85	9.10	1.00	9.50	6.80	2.50	1.80	49.05				
1882.	.75	1.85	2.55	3.80	5.45	7.10	3.15	2.20	1.85	4.50	1.45	1.95	37.60				
1883.	1.05	1.60	.45	2.20	1.40	4.00	5.00	.80	3.65	2.95	1.70	1.45	29.74				
1884.	.60	1.30	2.20	1.40	3.45	2.55	4.55	1.80	6.50	2.55	.75	3.20	31.43				
1885.	2.55	.50	.10	1.50	4.00	6.25	6.85	9.50	4.75	4.30	.20	3.45	43.65				
1886.	2.95	.75	1.75	1.90	3.45	1.90	6.55	1.25	5.75	4.30	.90	.75	26.00				
1887.	1.75	2.20	1.35	.90	.55	1.58	2.30	2.20	8.10	.70	.80	1.85	23.66				
1888.	1.75	.85	4.20	1.78	9.25	1.20	3.80	2.40	.95	1.90	1.95	1.35	28.38				
1889.	1.10	.82		2.80	5.40	5.45	3.70	1.10									
Averages	1.24	1.24	1.73	2.11	3.89	4.97	4.75	3.80	4.75	3.13	1.79	1.68	34.80				

TOLEDO—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1894	19.7	20.5	41.8	52.1	63.5	70.2	75.4	75.6	64.0	51.3	32.4	29.0	50.5	106	July	-30	Jan.
1895	13.1	17.0	33.0	53.0	61.0	69.0	74.0	74.0	68.0	45.0	33.0	24.0	47.0	100	July	-23	Feb.
1896	21.1	25.4	31.0	54.6	64.8	69.0	72.3	70.3	57.0	46.2	29.0	29.8	47.6	95	July	-12	Jan.
1897	16.0	25.0	32.0	47.0	58.0	68.0	75.0	68.0	70.0	56.0	30.0	16.0	47.5	98	July	-22	Jan.
1898	22.0	23.0	37.0	48.0	60.0	72.0	78.0	71.0	64.0	49.0	32.0	17.0	47.1	96	July	-14	Dec.
1899	20.0	13.1	26.0	48.6	60.6	71.6	78.2	74.0	64.8	58.3	45.6			103	Sept.	-26	Feb.
1900	24.6	15.4	29.2	52.7	65.2	69.2	72.9	77.5	65.8	56.8	34.6	28.0	49.7	96	May	-13	Feb.
1901	21.2	17.0	35.9	51.0	62.0	73.2	83.3	74.0	64.8	54.8	33.2	21.3	49.6	109	July	-19	Dec.
1902				48.7				69.2	59.4	53.9	42.8	20.6					
Averages	19.7	19.6	32.2	50.6	61.8	70.7	74.9	72.4	64.1	52.5	36.1	23.2	48.4	100	July	-33	1894 Jan.

TOLEDO—PRECIPITATION (INCHES).

1894	.72	.80	2.50	1.80	.50	2.50	.05	.90	2.61	1.70	.97	.88	15.83				
1895	1.10	.27	.55	1.85	4.13	2.15	2.70	2.58	2.50	.62	1.37	1.83	21.74				
1896	.25	.93	.30	6.28	4.85	1.28	9.04	2.98	3.82	3.25	1.84	.90	35.76				
1897	1.36	.60	1.80	4.88	2.57	3.11	2.25	.75	1.90	.56	.25	1.70	22.62				
1898	1.57	.82	1.30	2.27	3.58	4.37	1.36	5.56	4.64	4.05	1.99	.50	32.04				
1899	.13	.12	1.66	3.18	8.56	4.88	2.37	3.93	.45	.40	2.47						
1900	.33	.98	1.72	2.96	.57	6.74	5.47	6.89	4.37	2.95	1.51	.65	37.14				
1901	1.00	1.30	3.97	2.12	2.87	4.04	2.56	1.58	3.15	2.01	.75						
1902				1.91				9.35	4.50	2.10	2.57	1.40					
Averages	.81	.69	1.75	3.08	3.71	3.60	3.23	3.82	3.11	1.87	1.53	1.14	28.29				

BUCKINGHAM (TRAER POSTOFFICE)—PRECIPITATION.

1900	.42	1.37	3.20	3.32	2.08	6.04	6.63	3.39	3.79	4.03	1.10	.27	35.65				
1901	1.25	1.20	2.59	1.89	3.06	2.99	1.59	1.06	2.23	1.32	.67	.93	20.78				
1902	1.04	1.06	1.60	1.45	3.78	13.56	7.66	10.13	4.13	1.82	2.17	1.40	49.85				

TAMA COUNTY—CONTINUED.

TAMA COUNTY CROPS.

YEAR.	Average per acre.						Rainfall, May 1st to Sept. 1st.				
	Corn, bushels	Wheat, bushels	Oats, bushels	Barley, bushels	Potatoes, bushels	Hay, tons	May.	June.	July.	Aug.	Total.
1890	30	12	21	26	52	1.0					
1891	42	16	44	35	187	1.5					
1892	31	12	29	24	90	1.8					
1893	36	12	35	17	47	1.8	.55	2.50	.05	.96	4.06
1894	38	13	17	20	50	.6	4.13	2.15	2.70	2.85	11.83
1895	37	22	46	35	132	1.4	4.85	1.28	9.04	2.98	18.15
1896	42	13	24	25	129	2.0	2.57	3.11	2.26	.75	8.69
1897	32	14	31	27	40	1.7	3.58	4.37	1.36	5.56	14.87
1898	35	15	28	27	95	1.9	8.56	4.58	2.37	3.93	19.44
1899	34	15	38	30	108	1.5	2.57	6.74	5.47	6.89	21.67
1900	41	14	35	25	90	1.6	2.87	4.04	2.56	1.58	11.05
1901	33	15	29	23	48	2.0	3.78	13.56	7.66	9.35	34.35
1902	31	12	32	24	93	1.6					
Averages	33	14	31	26	89	1.6					16.01

POWESHIEK COUNTY.

Area, 576 square miles; area in farms, 366,620 acres; number of farms, 2,322; value of farms (census of 1900), $14,983,600; value of farm buildings, $2,824,640; value of live stock, $3,966,124; value of the year's products not fed to stock, $3,249,660; acreage in cereal crops, 165,130 acres. The following meteorological tables were compiled at Grinnell; elevation, 935 feet.

GRINNELL—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept	Oct.	Nov.	Dec	Ann'l.
1890	17	23	25	51	57	72	76	69	60	50	40	29	47.9
1891	25	22	24	50	58	68	68	68	64	52	31	31	47.5
1892	17	28	32	46	55	69	74	73	64	54	32	18	46.8
1893	9	18	32	45	55	71	78	70	62	55	30	22	45.9
1894	21	22	18	51	62	74	77	75	58	44	34	25	48.6
1895	11	17	36	55	62	71	72	73	70	47	35	27	48.0
1896	24	27	32	57	67	70	72	71	50	50	30	31	49.2
1897	17	25	33	48	59	70	75	71	70	55	36	19	48.2
1898	24	24	39	48	60	72	74	73	66	48	33	19	48.2
1899	20	14	26	49	61	71	73	72	63	55	44	23	47.3
1900	25.8	6.2	30.7	52.8	63.0	69.2	73.0	76.0	64.4	60.0	34.0	27.6	49.6
1901	24.3	17.4	34.8	49.4	59.0	72.9	83.0	74.0	64.2	56.6	35.0	20.2	49.2
1902	22.7	17.8	35.6	48.0	64.0	64.0	72.0	68.0	59.0	53.2	42.0	20.6	47.2
Averages	17.5	21.1	32.7	50.4	60.2	70.3	74.0	71.8	63.4	52.3	35.8	24.2	47.8

GRINNELL—PRECIPITATION (INCHES).

1890	3.80	.65	.68	1.38	3.26	5.30	1.62	4.28	1.44	6.09	2.15	T	30.65
1891	.88	.6	2.19	1.65	3.44	7.15	2.55	5.04	1.28	2.34	1.18	1.52	29.92
1892	1.04	1.32	2.60	2.98	8.64	2.79	4.44	2.15	1.86	1.50	1.09	1.81	32.26
1893	.12	.87	1.60	3.35	2.85	3.80	4.20	2.26	2.31	1.59	1.85	2.62	27.30
1894	.91	.45	3.47	2.51	2.71	2.0	.40	2.46	2.74	1.15	1.02	1.20	21.26
1895	.73	.50	.3	1.73	5.28	4.20	3.95	2.00	3.35	.79	1.81	2.16	27.78
1896	.08	.85	.55	8.62	9.03	4.80	5.50	3.80	2.95	3.30	1.77	.32	41.57
1897	1.98	1.00	.46	7.04	1.53	2.90	2.20	2.10	2.55	.42	.58	1.14	24.90
1898	3.19	.75	1.17	4.31	4.36	4.45	2.60	2.15	2.05	4.14	1.79	.01	30.97
1899	.58	.77	1.23	5.05	6.68	4.00	2.10	1.30	.21	.61	2.69	1.57	29.79
1900	.54	1.23	3.38	2.84	4.94	7.80	5.74	7.55	4.39	4.73	1.02	.70	44.90
1901	.75	.68	2.98	1.46	2.82	4.72	1.46	1.27	.29	1.63	.66	.47	22.19
1902	.49	1.92	1.52	2.82	4.92	9.39	11.57	7.45	4.57	3.60	2.16	2.26	52.67
Averages	1.16	.87	1.70	3.52	4.65	4.89	3.72	3.66	2.46	2.45	1.52	1.29	31.98

POWESHIEK COUNTY—CONTINUED.

POWESHIEK COUNTY CROPS.

YEAR.	Average per acre.						Rainfall, May 1st to Sept. 1st.				
	Corn, bushels	Wheat, bushels	Oats, bushels	Barley, bushels	Potatoes, bushels	Hay, tons	May.	June.	July.	August.	Total.
1890	21	12	26	19	28	1.0	2.26	5.30	1.62	4.28	14.48
1891	44	16	40	28	126	2.0	3.44	7.15	2.55	5.04	18.18
1892	28	13	24	25	61	2.0	8.08	2.79	4.41	2.15	18.06
1893	38	9	21	20	48	1.6	2.85	3.80	4.20	2.20	13.05
1894	13	13	23	23	71	0.9	2.71	2.30	.40	2.40	7.81
1895	41	18	45	34	120	1.2	5.28	4.20	3.95	2.90	16.33
1896	42	11	21	22	108	1.8	9.03	4.80	5.60	3.80	23.13
1897	30	15	33	24	55	1.9	1.53	2.90	2.20	2.10	8.73
1898	34	16	32	27	110	2.0	4.38	4.45	2.00	2.15	13.56
1899	38	16	29	30	120	1.5	6.68	4.00	2.10	4.30	17.08
1900	42	17	40	30	80	1.8	4.94	7.80	5.74	7.55	26.08
1901	32	14	30	31	40	1.8	2.82	4.72	1.46	1.27	10.27
1902	38	12	30	25	73	1.5	4.92	9.39	11.57	7.45	33.30
Averages	34	14	32	26	80	1.6					14.60

JASPER COUNTY.

Area, 720 square miles; area in farms, 464,105 acres; number of farms, 3,320; value of farms (census of 1900), $18,995,090; value of farm buildings, $3,344,060; value of live stock, $4,447,620; value of the year's products not fed to stock, $4,138,061; acreage in cereal crops, 153,890 acres; The following tables contain climatic data compiled at Newton; elevation of the station, 944 feet.

NEWTON—TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1878	...	34.4	44.4	53.2	56.7	67.5	77.7	74.1	63.7	49.0	39.6	17.8	49.6				
1879	11.7	19.9	32.6	43.4	57.7	65.4	72.9	67.7	53.8	50.8	32.0	13.0	43.4	....	....	....	....
1880	27.8	21.5	27.3	41.2	65.1	74.5	76.1	71.4	57.9	44.6	23.3	11.2	45.5	....	....	....	....
1881	8.0	15.6	25.6	41.8	69.7	70.2	78.6	73.6	72.8	50.8	31.2	29.9	46.2		....	....	....
1882	20.9	29.4	33.8	48.2	53.6	67.4	68.6	68.9	59.7	51.2	34.8	18.7	46.3		......	....	....
1893	9.0	16.9	33.5	46.3	..	72.0	74.6	70.0	64.6	53.2	34.3	21.4	46.1	....	....		......
1894	19.4	19.2	41.9	52.3	57.4	74.1	78.4	75.2	65.8	52.3	33.2	31.2	45.4	..	....	....	......
1895	15.0	16.6	35.0	54.0	61.8	71.0	73.0	74.0	69.0	46.0	35.0	26.1	48.0	..	....	....	....
1896	24.9	27.7	32.0	55.6	62.0	70.2	72.8	70.8	57.7	48.6	30.2	31.5	48.9	.	....	....	....
1897	18.0	25.0	33.0	49.0	65.2	76.0	76.0	70.0	1.0	57.0	34.0	17.0	48.2	.	......	....	....
1898	23.4	24.5	39.0	49.4	59.0	73.2	74.6	73.4	66.6	48.2	32.5	18.8	48.7	....	......	....	....
1899	20.8	13.2	26.8	48.6	60.7	71.6	73.6	74.0	62.9	57.4	44.2	21.2	47.9	99	Sept	-28	Feb.
1900	..	15.0	31.3	52.8	60.8	69.4	73.4	76.9	64.8	59.4	34.2	27.0	48.8	93	Aug July.	-13	Jan. Feb.
1901	24.8	17.6	34.2	49.7	64.0	72.8	83.1	73.8	64.2	55.5	35.5	19.6	49.4	107	July	-22	Dec.
1902	22.6	17.9	38.3	47.9	62.2	64.3	72.4	68.6	58.7	53.3	43.0	20.5	.	....	....	....	..
Av'gs.	17.7	20.4	33.2	48.9	60.9	70.2	75.5	72.2	62.9	51.8	34.5	22.0	47.7	107	1901. July.	-28	1899. Feb.

JASPER COUNTY—CONTINUED.

NEWTON—PRECIPITATION.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest	Month
1878	.04	.19	4.12	2.42	5.70	5.19	4.01	2.16	2.08	1.49	.65	.54	28.30	....	....	....	....
1879	.51	.87	.34	.84	5.13	4.73	.28	3.42	3.41	2.29	5.72	1.21	28.80		....	....	....
1880	.23	.58	.88	5.24	4.10	1.30	3.08	5.83	6.49	1.81	1.50	1.12	33.52	....	....	....	....
1881	.76	2.60	1.52	3.00	4.50	8.92	5.00	2.27	5.12	5.75	3.65	1.30	44.16			....	....
1882	.51	.90	1.09	3.80	6.65	10.02	2.35	3.24	1.47	4.14	1.80	1.91	38.47	....	....	....	....
1883	1.41	2.05	.43	.90			....						....	....		....	....
1893	.62	1.08	1.30	6.41	2.92	3.05	5.21	3.35	2.11	1.17	1.43	1.11	29.30		....	....	....
1894	.60	.50	2.21	2.41	1.06	1.12	T	1.33	2.23	2.71	.82	1.30	19.04		....		....
1895	.81	.44	.39	2.73	5.63	6.45	5.22	3.10	4.22	.69	1.56	1.98	32.46	....	....	....	....
1896	.40	.63	.82	6.92	7.13	4.90	10.73	4.61	3.49	3.47	1.12	.89	44.91	....	....	....	....
1897	2.30	1.01	2.65	6.10	2.98	2.85	2.17	1.08	2.98	.58	.38	2.03	27.45		....		....
1898	2.22	.85	1.16	2.23	4.04	4.66	1.44	4.13	2.82	4.17	2.19	.58	30.48		....		....
1899	.86	.77	.74	4.52	6.61	2.00	2.30	4.51	.50	.61	1.22	2.54	27.29		....		....
1900	.37	1.30	3.35	2.79	4.69	6.35	4.98	6.11	3.73	4.29	1.06	.97	40.07		....	....	....
1901	1.40	1.80	3.47	1.94	2.24	3.58	2.80	1.30	2.94	1.80	.85	1.32	25.15	....	....		....
1902	1.36	.72	1.61	2.79		8.87	7.91	7.08	4.15	6.06	2.56	2.15	....	....	....		....
Av'ge	.92	1.02	1.56	4.38	4.46	4.97	3.88	3.87	3.23	2.77	1.80	1.33	33.79		....	....	....

JASPER COUNTY CROPS.

YEAR.	Average per acre.						Rainfall May 1st to Sept. 1st.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons	May.	June.	July.	August.	Total.
1890	30	12	17	35	45	2.0					
1891	44	14	41	36	162	2.0					
1892	31	11	29	21	57	1.5	2.92	3.65	5.24	3.85	15.16
1893	29	11	24	25	74	1.7	1.06	1.12	T	4.53	6.71
1894	13	12	20	15	56	0.5	5.03	6.45	5.22	3.0	19.80
1895	47	18	51	24	122	1.5	7.73	4.93	10.73	4.01	27.40
1896	44	14	20	25	81	1.9	2.98	2.85	2.17	1.68	8.68
1897	31	13	30	24	60	1.8	4.04	4.66	1.43	4.13	14.26
1898	32	16	31	30	93	1.8	6.61	2.00	2.30	4.51	15.42
1899	45	16	42	32	93	1.2	4.03	6.35	4.98	6.11	21.47
1900	43	18	29	23	74	1.6	2.24	3.58	2.89	1.30	10.01
1901	30	15	33	35	55	1.6	4.95	8.87	7.91	7.06	28.82
1902	37	12	26	28	53	1.8					
Averages	35	14	31	26	78	1.6	.....		.....	.....	16.87

POLK COUNTY.

Area, 576 square miles; area in farms, 370,252 acres; number of farms, 3,171; value of farms (census of 1900), $18,779,700; value of farm buildings, $3,272,560; value of live stock, $3,135,246; value of the year's products not fed to stock, $3,556,235; acreage in cereal crops, 179,800 acres. The meteorological tables below contain records compiled at the United States Weather Bureau Station in Des Moines during the years 1878 to 1892, inclusive. Elevation of station, 869 feet.

DES MOINES—TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1878	....							78 1	67.6	50.3	42.0	19.8		....		....	.....
1879	18.9	25.2	39.6	50.7	6 .7	69.9	77.4	73.2	60.0	59.6	38.9	21.1	47.8	95	July.	-21	Jan.
1880	36.2	32.0	37.2	49 8	67.4	11.5	73.6	72 4	61.6	48.9	27.1	19.9	49.9	96	Aug.	-17	Dec.
1881	14.0	20.4	28.9	43.4	66.8	70.6	76.2	77.9	66.2	54.7	35.8	35.0	49.2	103	Aug.	-19	Jan.
1882	26.7	36.0	37.8	51.1	54.8	67.9	68.4	71.1	64.2	55.4	39.3	23.9	49.7	92	Sept. June July.	-17	Dec.
1883	8.8	19.1	32.9	51.8	55 8	67.5	73.6	69.7	59.4	48 7	39.0	27.3	46.1	97	July.	-26	Jan.
1884	16.0	21 5	34.6	48.7	59.8	70.0	71.8	68.7	67.9	55.6	37.6	18.4	47.5	95	June July.	-30	Jan.
1885	11.5	14.6	33.8	48.9	59.1	69.0	75.9	68 8	63 5	48.8	39.2	28 4	46.8	100	July.	-20	Jan.
1886	10 9	24 7	34.9	52.7	64.4	71.3	78.4	76.8	65 1	57.3	35.8	19.2	49.3	104	July.	-24	Jan.
1887	11.5	19 4	35.7	52.5	65.7	71.9	77.5	72 4	64.8	48.4	37.3	22.9	48.2	102	July.	-24	Jan.
1888	6.9	22 6	29.0	51 6	54.5	68 6	75 6	69 2	58 3	46.8	35.8	29 2	45.6	99	July.	-27	Jan.
1889	23.0	21 0	4.22	51 8	60 9	67 8	73.8	72.1	62 8	49 2	34.8	39 6	49 9	93	Aug.	-13	Jan.
1890	20.6	26.9	29 7	52.8	58 4	73 2	76.9	69.6	61.0	51.5	41 2	32.3	49.5	101	July.	-18	Jan.
1891	28.3	23.2	28 8	52 6	57.8	69.2	68.6	69.8	68.2	52.2	32.0	34 6	48 7	93	Aug.	-10	Feb.
1892	17.8	29.1	33.6	47.0	54.8	69.0	73.8	72 2	65.8	55.2	34.9	19.6	47.7	95	July. Aug.	-26	Jan.
1893	10 2	17.4	33.4	46 0	56.0	71.4	75 5	70.0	66.2	54.8	35.8	23.0	46.7	95	July. Sept.	-16	Feb.
1894	21 0	20 5	42 6	53.0	62.0	74.4	77.7	76.0	66 7	53.6	34.5	32.6	51.2	104	July.	-27	Jan.
1895	16 7	19.2	35.9	55 4	62.7	70.5	72 7	73 8	69 4	48.2	36.4	27 2	49.0	98	July.	-18	Feb.
1896	25.0	29.8	32.2	56.0	66.5	70 1	73.2	72.7	59.6	50.6	32.0	34.0	50.1	95	July.	- 8	Jan.
1897	19.5	26.7	34.8	49.4	59.7	70 0	76 4	70.4	73 7	58 6	36.4	19.6	49.7	98	July Sept.	-17	Jan.
1898	25.6	26 2	39 8	50.0	60.7	72 2	74.2	73.8	67 4	49 2	34 1	20.6	49.5	99	Aug.	-10	Dec.
1899	23 8	15.6	27.8	49.8	60 4	72 0	73.5	75.0	64.0	50 2	45 8	23.6	49.3	99	Sept.	-24	Feb.
1900	27 6	17.0	29.5	54.4	64 2	70.1	74 2	77.7	65 4	60.4	30.6	28.6	50.7	95	July	-10	Feb.
1901	26.3	20.0	35.8	50 4	61.6	73.4	84.0	75.0	64.8	56.2	37.0	21.9	50 6	109	July	-18	Dec.
1902	24.4	19.8	40.5	49.6	64.7	65.8	74.5	70.4	59.8	55.4	43.2	22.4	49 2	94	Aug.	-16	Jan.
Averages.	19.6	22.8	34.6	50.8	60 9	70.3	74 5	72 7	63.7	53.2	36.9	25.8	48 8	1901 109	July.	-30	1884 Jan.

POLK COUNTY—CONTINUED.

DES MOINES—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month.	Lowest.	Month.
1878								2.21	2.40	2.81	.30	1.15					
1879	.69	1.90	1.08	1.03	4.74	6.09	.29	1.98	2.79	3.15	5.49	1.39	32.82				
1880	.70	.17	.70	1.56	5.48	4.11	3.82	6.09	5.21	1.98	1.97	.86	30.67				
1881	1.55	2.08	1.8	1.96	3.82	15.70	5.57	5.29	4.70	6.45	3.90	1.8	56.81				
1882	.63	1.21	2.18	4.47	8.53	12.1	4.79	3.14	.5	5.99	2.81	2.50	47.6				
1883	1.72	2.51	.57	3.48	9.76	7.58	2.27	2.80	1.88	1.42	1.22	1.06	39.02				
1884	.85	1.10	2.24	2.97	1.44	3.84	7.16	3.84	5.46	5.33	1.26	1.93	41.14				
1885	1.00	.42	.04	3.02	1.70	5.60	6.65	5.30	4.82	4.18	.61	1.96	35.62				
1886	3.47	.52	1.41	4.32	4.01	1.21	.27	1.30	7.16	2.62	1.86	.81	29.52				
1887	.83	1.65	1.79	2.48	2.31	2.25	1.94	2.66	5.20	.40	.52	1.41	24.06				
1888	1.15	1.51	3.06	.45	7.84	2.32	3.42	4.57	.48	.84	2.09	2.44	31.15				
1889	1.22	.57	.11	2.66	1.84	4.30	1.37	2.23	3.41	.52	1.29	.57	25.90				
1890	2.62	1.17	.91	.78	3.06	4.91	1.10	3.35	1.57	4.48	.74	.11	24.74				
1891	1.8	1.13	2.25	2.17	3.29	5.60	2.78	4.22	1.64	2.41	1.24	1.54	30.14				
1892	1.06	1.35	2.47	3.26	8.77	3.41	8.64	2.45	1.12	2.54	.76	1.36	38.42				
1893	.58	1.28	1.15	5.61	2.84	4.62	3.55	1.06	1.39	.22	1.51	1.30	25.64				
1894	1.08	1.30	1.78	1.70	1.41	1.67	.29	1.89	4.46	2.21	.96	.15	20.06				
1895	1.30	.40	.50	3.41	2.86	5.26	3.10	3.57	3.20	.29	.85	1.86	26.86				
1896	.60	.70	1.24	3.47	6.58	2.69	8.17	5.40	3.61	2.69	1.01	.85	37.69				
1897	2.02	.71	2.13	7.37	2.31	3.15	2.88	1.77	1.59	.85	.34	1.98	27.07				
1898	1.50	.82	1.35	2.64	4.22	6.85	1.86	1.09	1.91	3.56	1.87	.57	28.33				
1899	.29	.57	1.04	2.22	6.71	3.52	3.20	3.51	1.17	.50	1.76	2.12	26.71				
1900	.20	.50	3.07	3.82	4.76	4.89	5.15	8.02	3.66	3.08	.96	.35	38.46				
1901	1.01	1.11	3.02	2.26	1.40	2.41	1.72	.67	2.40	2.14	.40	1.03	19.77				
1902	.91	.82	1.15	1.55	4.69	7.27	5.95	7.82	5.03	3.70	1.65	1.77	42.01				
Averages	1.23	1.11	1.56	2.95	4.60	5.07	3.70	3.48	3.09	2.85	1.50	1.38	32.52				

POLK COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	23	13	28	26	53	1.0	3.00	4.91	1.10	3.35	12.36
1891	43	17	44	34	158	2.0	3.29	5.60	2.78	4.22	15.89
1892	29	14	24	29	48	2.0	8.77	3.41	8.64	2.45	23.30
1893	37	13	22	26	42	1.6	2.84	4.69	3.55	1.60	12.68
1894	10	14	16	20	34	0.6	1.41	1.67	.29	1.89	5.26
1895	42	23	50	26	80	1.4	2.86	5.26	3.10	3.57	14.79
1896	43	18	24	30	81	1.8	6.50	2.69	8.17	5.49	22.85
1897	29	16	30	20	42	1.6	2.31	3.15	2.88	1.77	10.11
1898	34	16	30	20	47	1.8	4.22	6.85	1.86	1.09	14.01
1899	41	16	40	35	71	1.5	6.71	3.53	3.20	3.53	16.97
1900	42	15	30	30	65	1.6	4.76	4.89	5.15	8.02	22.82
1901	28	15	28	21	45	1.6	1.40	2.41	1.72	.67	6.20
1902	40	13	33	20	72	1.8	4.69	7.27	5.95	7.82	25.73
Averages	34	15	30	25	65	1.6					15.69

DALLAS COUNTY.

Area, 576 square miles; area in farms, 359,280 acres; number of farms, 2,607; value of farms (census of 1900), $14,124,010; value of farm buildings, $2,505,300; value of live stock, $3,279,689; value of the year's product not fed to stock, $3,187,544; acreage in cereal crops; 149,860 acres. Meteorological stations have been established recently at De Soto, Perry and Waukee. The records of the De Soto station for three years are tabulated below:

DE SOTO TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month.	Lowest.	Month.
1900	24.9	16.8	33.2	51.6	65.9	70.4	75.6	78.6	[illegible]	59.6	35.0	29.0	50.7				
1901	26.2	29.6	33.4	51.6	62.6	75.5	82.0	75.1	65.8	55.4	37.5	22.8	51.8				
1902	25.0	27.6	41.4	50.8	72.2	72.2	76.1	71.2	[illegible]	54.4	43.6	22.5	52.2				
Averages																	

DE SOTO PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month.	Lowest.	Month.
1900	.20	1.17	2.64	2.88	4.14	4.79	5.84	9.39	3.57	2.19	1.41	.39	39.5				
1901	.60	1.45	1.82	1.84	3.04	4.42	1.58	.72	2.64	2.35	1.20	.95	21.81				
1902	.80	.25	1.96	1.00	3.26	8.02	7.86	7.68	5.73	3.76	1.90	2.79	43.5				
Averages																	

DALLAS COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.					
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.
1890	26	11	30	22	48	2.0
1891	41	14	47	28	124	1.8
1892	30	13	29	25	38	2.0
1893	39	13	23	20	63	1.9
1894	10	13	19	16	22	0.6
1895	50	20	51	40	111	1.9
1896	36	12	20	40	81	1.8
1897	30	11	29	30	59	1.6
1898	33	16	31	17	70	1.8
1899	42	13	35	50	110	1.5
1900	41	13	35	30	65	1.6
1901	27	14	33	18	22	1.4
1902	39	15	31	25	70	2.0
Averages	34	14	32	26	67	1.8

GUTHRIE COUNTY.

Area, 576 square miles; area in farms, 357,076 acres; number of farms, 2,492; value of farms (census of 1900), $11,201,840; value of farm buildings, $2,025,720; value of live stock, $3,096,133; value of the year's products not fed to stock, $2,794,223; acreage in cereal crops, 131,830 acres. The following tables contain meteorological records of stations at Stuart and Guthrie Center. Elevation of Stuart, 1,216 feet; Guthrie Center, 1,078 feet.

GUTHRIE CENTER—TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1892		19.0	36.0	54.0	60.0	69.0	71.0	71.0	67.0	45.0	34.0	25.0	.....	98	July	...	.....
1896	27.6	29.2	33.8	52.4	65.6	69.4	73.0	72.2	57.4	49.7	.....	.....	.....	98	July	-11	Jan.
1897					59.0	69.0	75.0	69.0	70.0		34.0	18.4	.....	.....	July	-14	Dec.
1898	24.0	25.0	37.0	49.0	60.0	71.0	73.0	73.0	66.0	48.0	32.0	33.0	47.8	100	July	...	.....
1899	19.8	16.2	24.0	48.6	59.2	69.6	71.9	74.4	63.1	50.2	43.2	22.0	47.4	98	Sept	-26	Feb.
1900	22.5	16.0	33.0	52.6	63.3	68.5	73.7	78.2	60.4	50.5	31.8	20.3	50.4	100	Aug / Sept	-18	Jan.
1901	22.4	15.6	35.4	.....	.....	75.9	81.8	74.8	62.8	54.3	35.8	21.7	.....	.....	.....	...	.....
1902	23.0	18.2	39.3	44.2	60.2	64.6	73.0	67.9	58.4	53.0	40.6	20.2	46.9	95	July	-28	Jan.
Averages	22.6	19.9	33.6	50.1	61.0	69.6	74.0	72.4	63.7	52.5	36.6	21.3	48.0	100	1898 1900 July, Aug, Sept	-26	1899 Feb.

GUTHRIE CENTER—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest	Month
1895		.55	.80	5.88	3.11	4.57	2.64	8.80	5.01	.29	.97	.67	.....	.....	.....	.....	.....
1896	.10	.35	1.77	4.60	7.74	1.50	8.66	4.95	1.92	2.39							
1897					3.00	3.25	5.00	2.40	1.01	1.94	.35	1.61	.....	.....	.....	.....	.....
1898	1.06	.97	1.31	.78	4.96	4.29	3.07	1.28	2.38	3.12	1.10	.25	24.58	.....	.....	.....	.....
1899	T	.50	.72	1.25	6.52	3.85	2.80	4.16	.57	1.76	.45	2.50	25.08	.....	.....	.....	.....
1900	T	1.05	1.78	1.92	3.34	4.26	3.16	6.52	5.16	3.76	1.30	.84	33.03	.....	.....	.....	.....
1901	.75	1.16	1.55	2.02		4.74	1.76	1.25	4.17	2.15	1.35	.79	.....	.....	.....	.....	.....
1902	1.25	.16	1.86	.88	3.30	6.99	9.27	7.91	5.49	2.27	1.91	2.27	43.96	.....	.....	.....	.....
Averages.	.53	.67	1.40	2.47	4.57	4.06	4.54	4.66	3.46	2.92	1.05	1.27	33.54	.....	.....	.....	.....

STUART—MEAN TEMPERATURE (DEGREES).

1896					66.4	70.2	71.6					31.6					
1897	18	26	34	48	59	70	76	70	72	59	36	17	48.8	98	July	-18	Jan.
1898	23	25	38	48	59	73	74	74	66	49	30	18	48.1	97	Aug.	-13	Dec.
1899	21.1	13.6	23.8	48.4	60.4	70.2	75.9	76.2	64.1	57.2	43.4	21.7	48.2	100	June	-27	Feb.
1900	24.4	15.3	28.8	50.4	64.4	69.8	75.8	77.6		60.3	33.2	26.7	.....	.....	.....	.....	.....
1901	23.6	18.6	34.0	51.4	60.4	72.4	80.1	75.5						108	July	...	.....
1902				49.2	65.4	66.7	74.5	70.8									
														1901			
Averages.	22.0	19.7	31.7	49.2	62 1	70 8	76 3	73.9	67.4	56.4	34.8	20.8	48.3	108	July	-27	Feb.

STUART—PRECIPITATION (INCHES).

1896					8.00	3.93	9.93					1.67	.....	.....	.....	.....	.....
1897	1.10	.66	6.16	7.03	4.20	2.23	7.00	2.57	1.44	2.05	.18						
1898	.90	.40	2.12	1.75	4.91	6.26	4.15	.60	2.23	1.48		.15					
1899	.05	.40	.85	1.37	6.85	3.35	3.75	2.90		1.55	1.82	1.94					
1900		.60	2.12	2.73	3.84	3.90	3.15	6.55		4.28	.35	.10					
1901	.30	.80	2.00	3.16	.85	4.34	1.22	.20									
1902				1.40	6.12	6.13	10.34	8.17									
Average	.59	.57	2.65	3.21	4.45	3.97	4.97	2.56	1.88	2.98	.88	.73	29.42				

GUTHRIE CENTER—CONTINUED.

GUTHRIE COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels	Wheat, bushels.	Oats, bushels.	Barley, bushels	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST TO SEPT 1ST. May.	June.	July.	Aug.	Total.
1890	23	11	28	23	43	1.5	.....	.....	.....	.....	.....
1891	35	14	38	30	153	1.8	.....	.....	.....	.....	.....
1892	31	12	28	25	50	2.0	.....	.....	.....	.....	.....
1893	30	11	18	18	45	1.9	.....	.....	.....	.....	.....
1894	6	11	13	7	37	0.5	.....	.....	.....	.....	.....
1895	48	21	57	42	117	1.7	3.11	3.57	2.64	8.80	18.12
1896	31	13	20	28	78	1.4	7.74	1.50	8.66	4.95	24.85
1897	27	10	35	22	67	1.7	3.00	3.25	5.00	2.40	13.65
1898	32	14	30	24	84	1.7	4.96	4.29	3.07	1.28	13.60
1899	39	12	31	25	95	1.5	6.52	3.85	2.80	4.16	17.33
1900	37	14	31	30	82	1.5	3.34	4.26	3.16	6.52	17.28
1901	25	12	25	22	20	1.5	.85	4.74	1.76	1.25	8.60
1902	35	10	30	25	105	1.5	5.30	6.99	9.27	7.91	27.47
Averages..	30	13	28	25	75	1.5	.....	.....	.....	.....	17.36

EAST CENTRAL DISTRICT.

This district comprises fourteen counties, as follows: Dubuque, Delaware, Buchanan, Black Hawk, Benton, Linn, Jones, Jackson, Clinton, Scott, Muscatine, Cedar, Johnson, Iowa. The mean annual temperature of the district is 47.2°; average yearly precipitation, 31.61 inches; average rainfall May 1st to September 1st, 16.12 inches; average annual yield of corn per acre for past thirteen years, 33.6 bushels.

DUBUQUE COUNTY.

Area, 601 square miles; area in farms, 367,203 acres; number of farms, 2,485; value of farms (census of 1900), $13,931,470; value of farm buildings, $3,336,240; value of live stock, $2,894,899; value of farm products of the year not fed to stock, $2,961,925; acreage in cereal crops, 121,560 acres. A regular United States Weather Bureau station has been in service since July, 1873, in the city of Dubuque, and records of the station are tabulated below. Altitude of the station, 698 feet.

DUBUQUE—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1873							76.0	74.2	58.7	46.4	30.8	28.9					
1874	21.2	23.2	33.2	41.3	65.2	72.4	78.3	74.3	65.2	52.0	34.4	26.0	48.9	101	July.	-12	Jan.
1875	6.6	6.1	27.6	45.0	60.9	67.5	73.3	65.7	61.7	52.1	33.7	33.9	44.8	92	July	-31	Feb.
1876	27.8	27.8	31.0	48.6	61.6	69.1	74.9	73.8	61.4	47.6	34.1	13.7	47.6	95	July. Aug.	-19	Dec.
1877	15.2	34.8	27.1	48.2	62.2	67.7	74.7	72.0	66.2	51.7	35.0	40.0	49.6	95	July.	-19	Jan.
1878	27.7	35.3	45.4	53.6	56.0	66.8	76.3	73.7	63.8	49.9	39.7	19.5	50.6	97	July.	-13	Feb.
1879	17.4	22.8	37.2	50.7	62.6	68.9	76.6	71.6	59.4	58.7	37.4	20.3	48.6	95	July.	-22	Jan.
1880	34.2	38.4	34.7	48.4	66.4	70.6	73.5	72.4	60.7	48.2	27.5	18.3	48.6	97	July. Aug.	-19	Dec.
1881	12.5	20.1	30.4	43.9	67.7	67.9	75.2	74.5	66.3	58.2	36.2	34.7	48.6	97	Aug.	-24	Jan.
1882	24.1	35.7	37.0	48.5	54.4	67.2	69.0	71.6	62.6	55.3	39.2	23.4	48.0	91	June.	-17	Dec.
1883	10.2	18.8	30.5	49.7	51.6	67.7	72.5	68.5	58.8	48.8	38.5	27.0	45.5	96	July.	-26	Jan.
1884	14.1	22.2	32.2	48.4	60.0	68.6	70.0	68.4	67.9	55.1	36.2	21.3	47.1	92	July. Sept.	-24	Jan.
1885	12.3	13.3	30.3	47.2	57.7	66.7	73.8	66.4	61.7	46.8	37.6	25.0	44.8	97	July.	-22	Jan.
1886	12.7	21.8	31.3	51.0	61.1	68.4	75.2	74.1	68.6	54.8	33.2	15.7	46.9	100	July.	-24	Dec.
1887	10.6	20.7	32.4	50.7	66.5	72.4	78.2	71.0	61.8	46.3	35.0	22.6	47.4	101	July.	-32	Jan.
1888	7.0	18.8	26.7	47.9	58.9	69.1	75.4	70.8	59.6	48.5	39.0	29.9	45.6	93	Aug.	-30	Jan.
1889	23.6	17.4	41.0	50.0	59.4	66.2	73.0	71.6	62.6	47.6	34.8	37.4	48.7	95	July.	-16	Jan.
1890	22.2	28.6	27.9	51.1	56.4	73.6	75.4	68.8	59.8	50.6	39.8	27.2	48.5	99	Aug.	-16	Jan.
1891	26.8	24.1	27.7	50.8	58.2	69.8	68.8	70.2	69.3	51.0	31.0	33.0	48.3	96	Aug.	-13	Feb.
1892	14.6	28.6	31.0	45.8	58.2	68.2	74.2	72.6	64.2	54.6	31.4	17.9	48.5	95	July.	-18	Jan.
1893	20.3	15.0	32.0	45.0	57.0	72.0	76.2	71.0	64.0	53.3	36.0	22.0	47.0	96	July.	-23	Jan.
1894	22.0	20.0	41.4	51.8	62.0	74.5	77.1	74.2	66.2	52.0	31.2	32.3	50.6	102	July.	-22	Jan.
1895	18.0	16.0	36.6	54.0	62.0	73.0	74.0	74.0	70.0	48.0	35.0	28.0	48.7	98	July.	-21	Feb.
1896	24.3	27.1	31.9	54.7	68.2	71.0	73.3	72.6	59.6	48.9	32.9	30.5	49.6	99	Aug.	-10	Jan.
1897	18.0	25.0	32.0	48.0	59.0	68.0	76.0	69.0	70.0	57.0	36.0	22.0	48.2	99	June.	-23	Jan.
1898	24.0	24.0	38.0	48.0	60.0	71.0	74.0	71.0	65.8	48.8	33.8	19.2	48.1	95	July.	-10	Dec.
1899	20.3	13.8	25.8	50.6	60.8	70.6	74.0	74.4	62.4	56.8	44.0	23.5	48.1	96	Sept.	-26	Feb.
1900	25.6	15.4	28.4	51.6	63.2	69.7	72.8	78.0	65.4	60.2	35.0	27.4	49.4	95	Aug.	-18	Jan.
1901	23.6	14.5	32.8	50.1	60.2	72.5	8 .2	73.6	62.8	54.4	35.8	21.8	48.6	106	July.	-17	Dec.
1902	22.8	17.6	39.3	48.5	63.4	65.0	73.4	68.6	59.6	53.5	44.0	21.9	48.1	90	July.	-18	Jan.
Averages	19.1	24.4	32.8	49.1	60.4	69.5	74.6	71.9	63.4	51.7	35.7	25.3	48.2	106	1901 July.	-32	1887 Jan.

DUBUQUE COUNTY—CONTINUED.

DUBUQUE—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1873							1.27	5.88	1.53	2.07	.77	2.07					
1874	2.45	.49	1.28	1.54	1.08	2.29	3.24	2.13	7.08	2.18	4.79	.65	30.80				
1875	1.06	2.12	1.45	2.71	3.62	4.75	5.74	1.07	7.11	2.71	.48	2.71	35.46				
1876	3.20	1.53	4.00	1.62	5.96	7.88	8.15	5.9	5.10	1.10	2.49	.52	50.29				
1877	.49	.26	4.53	3.74	3.81	6.75	2.96	3.96	.67	5.35	3.31	2.70	38.97				
1878	.49	1.33	2.44	1.34	4.65	4.35	6.71	1.72	6.94	2.85	.80	1.12	38.3				
1879	.44	1.01	1.20	2.02	2.94	4.10	6.78	2.43	2.58	.90	5.41	1.28	32.4				
1880	1.95	1.01	2.55	3.51	3.72	6.49	3.55	7.15	6.84	.66	2.11	1.25	40.32				
1881	1.87	3.75	3.78	1.30	2.20	7.50	10.51	2.46	10.26	6.70	3.19	1.52	55.15				
1882	.84	.54	1.49	1.47	4.16	6.29	1.48	2.29	2.60	5.29	1.55	1.79	32.84				
1883	1.59	2.60	.32	1.93	4.13	5.34	7.10	2.70	2.09	4.44	1.65	1.88	39.57				
1884	.16	2.19	3.85	2.77	4.88	4.80	5.30	4.35	4.07	4.16	1.43	4.08	42.80				
1885	1.80	.72	.41	3.69	2.62	6.16	6.85	8.02	4.58	2.82	.64	3.14	40.45				
1886	3.17	1.96	1.32	2.12	4.17	.71	.89	.67	3.10	4.08	1.89	1.06	27.51				
1887	3.32	3.5	1.80	1.37	2.53	1.32	2.44	4.40	7.02	2.22	.74	3.07	34.40				
1888	1.20	1.31	3.44	2.58	5.84	5.28	3.59	1.70	2.01	1.02	2.15	1.16	33.31				
1889	1.55	3.34	.30	3.56	1.00	3.85	4.22	.29	1.54	.07	1.57	1.38	24.25				
1890	2.31	1.25	1.08	2.94	5.36	9.59	1.21	6.00	3.72	6.43	1.85	.82	43.10				
1891	1.27	.98	2.69	1.63	2.54	2.34	4.59	3.31	.08	2.20	3.24	2.08	27.55				
1892	2.43	1.02	1.91	1.37	9.18	14.16	5.08	2.51	3.79	.44	1.89	2.08	48.77				
1893	1.00	1.30	2.52	4.82	3.06	5.49	3.57	.58	3.31	1.06	2.03	1.33	30.77				
1894	1.11	1.22	3.06	2.26	1.75	2.25	.02	1.32	3.86	1.39	1.53	.35	20.39				
1895	1.41	.66	.59	.49	2.63	1.05	3.00	1.7	2.06	.80	2.12	2.75	19.74				
1896	.75	1.93	.76	7.80	7.63	3.11	7.72	2.05	5.07	2.50	1.06	.71	42.29				
1897	2.55	1.43	2.07	4.39	2.09	2.36	4.34	1.51	3.19	1.02	1.23	2.08	28.14				
1898	2.19	2.01	2.75	4.06	4.47	4.36	2.83	4.37	3.07	3.80	1.15	.33	35.45				
1899	.51	.67	1.52	4.24	5.75	4.08	4.12	1.95	.39	1.63	.97	1.85	28.29				
1900	1.15	2.13	1.84	2.39	4.75	2.04	8.00	1.35	3.34	2.38	1.64	.42	33.43				
1901	1.07	1.07	2.88	1.01	3.10	1.23	2.31	.25	3.72	1.64	.67	1.44	20.39				
1902	.74	1.43	1.76	1.11	8.67	6.67	6.80	1.57	3.13	2.26	.86	2.24	38.34				
Averages	1.58	1.48	2.22	2.94	4.29	4.78	4.15	2.92	3.96	2.50	1.88	1.69	34.43				

DUBUQUE COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	RAINFALL, MAY 1ST TO SEPT. 1ST. May.	June.	July.	August.	Total inches.
1890	27	10	27	26	43	1.0	5.36	9.59	1.21	6.00	22.16
1891	37	13	36	31	125	1.5	2.54	2.34	4.59	3.31	12.78
1892	28	12	25	27	98	1.5	9.18	14.16	5.08	2.51	30.93
1893	35	10	30	29	58	1.5	3.06	5.49	3.57	.58	12.70
1894	20	13	24	24	25	1.0	1.75	2.25	.02	1.32	5.34
1895	23	10	22	20	70	.5	2.63	1.05	3.00	1.75	8.43
1896	42	13	30	30	64	1.4	7.63	3.11	7.72	2.05	20.51
1897	33	16	32	30	76	1.2	2.09	2.36	4.34	1.51	10.30
1898	40	15	38	25	96	1.5	4.47	4.36	2.83	4.37	16.02
1899	34	15	35	28	94	1.0	5.75	4.08	4.12	1.95	15.90
1900	43	18	32	30	95	1.2	4.75	2.04	8.00	3.35	18.14
1901	25	18	30	28	40	1.2	3.10	1.23	2.31	.25	6.89
1902	40	16	35	32	102	1.8	8.67	6.97	6.80	1.57	24.01
Averages	33	14	30	31	70	1.4	4.84	4.64	4.12	2.86	15.70

DELAWARE COUNTY.

Area, 576 square miles; area in farms, 355,619 acres; number of farms, 2,241; value of farms (census of 1900), $14,607,900; value of farm buildings, $3,123,380; value of live stock, $3,038,823; value of the year's farm products not fed to stock, $2,951,827; acreage in cereal crops, 148,820 acres. In the town of Hopkinton the late Theodore Marks began keeping records of weather observations in 1852, and continued this line of public service until his death. These valuable records are tabulated below, and also the tables compiled at Delaware, since 1891, by observer William Ball.

HOPKINTON—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annl.	Highest.	Month	Lowest.	Month
1852	22	29	34	42	61	69	76	71	69	58	39	21	47.5				
1853	20	21	34	47	58	72	74	65	49	38	25	18.5					
1854	16	28	41	53	68	70	76	73	68	57	39	28	50.8				
1855	24	19	31	50	63	68	73	70	69	49	39	20	49.1				
1856	10	18	29	50	60	74	76	69	61	53	34	15	45.5				
1857	6	28	30	38	58	68	74	69	65	50	32	33	45.8				
1858	32	22	41	47	55	72	74	71	65	52	33	24	49.0				
1859	21	25	41	43	63	66	76	72	63	49	40	15	48.0				
1860	22	23	45	51	65	70	75	70	60	53	36	21	49.5				
1861	17	33	34	51	59	71	71	72	62	52	36	30	48.0				
1862	16	17	34	43	61	68	73	70	62	51	34	29	46.7				
1863	27	24	33	50	61	66	70	69	62	45	35	24	47.0				
1864	17	24	32	46	60	68	73	70	63	46	34	16	45.8				
1865	17	27	31	46	60	69	68	71	70	50	41	20	47.5				
1866	18	19	29	56	59	66	74	66	58	52	38	21	46.0				
1867	15	24	28	45	58	70	72	74	66	54	42	33	46.7				
1868	12	22	39	43	62	69	80	67	57	50	38	24	46.7				
1869	29	27	30	47	59	68	71	72	62	44	33	27	47.2				
1870	22	25	36	52	66	72	77	71	67	55	41	24	50.2				
1871	22	28	40	53	65	72	74	74	62	54	32	18	48.7				
1872	20	24	29	50	60	71	74	73	64	52	30	15	47.0				
1873	14	18	34	45	59	73	72	75	66	47	32	25	48.7				
1874	22	27	36	41	65	71	77	75	65	54	35	26	49.2				
1875	7	8	29	47	62	67	74	71	64	50	30	33	45.5				
1876	25	28	38	49	62	69	74	75	62	50	34	14	48.0				
1877	16	30	27	49	62	65	74	73	68	53	35	15	50.0				
1878	28	36	48	55	58	68	78	76	68	52	41	19	52.0				
1879	15	21	39	49	63	68	75	71	60	59	36	20	47.7				
1880	31	29	34	45	66	70	72	72	61	49	29	17	47.7				
1881	11	17	29	43	67	67	74	75	66	52	34	31	48.0				
1882	21	34	35	48	53	67	68	71	69	56	38	21	48.3				
1883	7	15	29	49	54	67	72	70	59	47	36	24	44.0				
1884	11	19	30	45	61	68	70	68	67	54	30	18	45.7				
1885	8	10	28	45	56	68	74	67	62	47	37	24	44.0				
1886	11	21	32	51	61	69	75	74	64	56	34	16	47.0				
1887	10	21	33	50	65	71	76	70	61	46	34	24	46.7				
1888	8	14	27	47	57	69	75	69	59	47	37	32	45.0				
1889	23	17	40	49	60	67	72	71	62	47	34	36	48.0				
1890	22	28	28	51	56	72	74	67	59	49	39	27	48.0				
1891	10	19	33	46	56	....	76	71	68	55	37	23					
1892	14	30	32	49	55	67	72	72	64	57	35	20	47 3				
1893	10	19	33	46	56	....	76	71	68	55	37	23					
1894	23	24	42	53	58	72	72	75	62	52	33	30	49.9				
1895	13	14	33	....	....	....	....	....	....	....	....	....	....				
Mean	17.5	20.5	33.2	47.8	59.8	69.5	73.7	71.3	63.4	51 3	35.6	20.7	46.9	....	....	....	....

DELAWARE COUNTY—CONTINUED.

HOPKINTON—PRECIPITATION (INCHES).

1869					4.15	5.16	7.40	1.10	4.15								
1870					2.30	1.20	1.20	7.50									
1875																	
1876										1.70	.0	1.80					
1877	1.87	.91	2.49	2.14	2.38	4.53	3.88	3.60	4.33	.71	.0	.52	28.21				
1878	1.01	.16	1.16	1.91	2.22	7.25	1.42	5.83	1.77	4.45	2.51	1.80	31.45				
1879	.40	.27	2.83	3.16	5.48	6.91	3.51	1.16	5.00	2.18	.46	.61	34.17				
1880	.35	1.31	.52	.69	5.59	5.64	3.41	5.43	1.79	1.51	3.05	1.69	33.68				
1881	1.30	.33	.69	3.82	3.28	5.31	8.32	4.62	3.78	1.45	.10	.15	33.85				
1882	.64	1.55	1.61	1.13	2.30	6.31	5.80	2.75	6.50	.22	1.55	1.25	35.52				
1883	.50	1.20	1.50	4.31	4.12	2.90	3.32	1.60	2.63	3.61	2.45	2.07	29.21				
1884	2.30	1.70	.38	1.80	5.05	1.74	5.88	1.37	1.10	3.78	.00	2.38	31.40				
1885	1.00	.99	1.98	1.80	3.41	1.13	6.05	3.18	7.23	2.20	1.07	1.25	29.29				
1886	2.35	1.80	.39	2.28	3.60	3.91	7.30	7.60	5.58	1.55	.18	1.70	39.10				
1887	1.18	.55	.96	1.90	3.15	.94	1.68	.30	7.03	.72	.44	1.11	19.71				
1888	1.55	2.20	1.60	1.00	.90	1.55	2.95	2.20	9.00	.50	.60	1.12	25.17				
1889	1.52					.97	5.59	1.80		.84	1.75						
1890		.48	.41	2.07	4.91	2.22	1.03	4.68	4.01	.64	1.73	1.52					
1891	.51	.42	.54	5.05	6.15	2.60	7.50	3.25	4.36	2.80	1.80	.42	37.70				
1892	1.78	.87	1.54	5.16	2.03	4.32	4.10	1.25	2.77	.93	.62	1.55	29.96				
1893	1.45	1.19	1.80	2.46	4.22	4.31	1.66	3.47	2.05	4.70	1.97	.33	29.44				
Means.	1.20	1.11	1.50	2.58	3.59	3.60	3.98	3.59	4.25	2.27	1.44	1.30	29.67				

DELAWARE—MEAN TEMPERATURE (DEGREES).

1891	....	....	....	....	55.0	66.0	64.0	66.0	64.0	46.0	30.0	29.1	....	....	....	....	....
1892	10.0	25.0	27.0	42.4	54.1	66.0	72.0	69.0	60.0	49.0	28.4	14.0	40.0	....	....	....	....
1893	2.0	11.0	28.0	42.0	55.0	70.0	74.0	67.0	62.0	48.0	30.0	19.0	42.0	....	....	....	....
1894	18.0	16.0	37.0	49.0	59.0	71.0	75.0	71.0	61.0	48.0	29.0	28.0	46.8	....	....	....	....
1895	9.0	10.0	30.0	51.0	60.0	70.1	71.0	72.0	65.0	40.0	30.0	24.0	44.4	....	....	....	....
1896	20.0	26.0	29.0	52.0	65.0	69.0	71.0	70.0	58.0	44.0	29.0	38.0	46.5	....	....	....	....
1897	14.0	22.0	30.0	46.0	67.0	67.0	74.0	66.4	66.0	52.0	31.0	14.0	44.9	....	....	....	....
1898	20.9	20.0	35.0	45.4	59.0	70.0	72.0	69.0	62.0	45.0	29.0	15.0	45.0	....	....	....	....
1899	6.5	11.8	23.4	47.4	55.5	70.6	71.0	72.5	61.2	55.5	42.2	20.4	46.0	96	Sept ..	-28	....
1900	24.1	13.4	27.1	37.7	61.8	67.4	74.0	75.8	62.9	57.4	32.0	24.8	47.2	99	June ..	-15	Feb.
															Aug. ..		Feb.
1901	20.5	11.8	30.3	48.0	58.4	72.3	81.0	72.5	61.7	51.8	32.5	19.4	46.6	108	July ..	-21	Dec.
1902	19.5	14.2	36.0	46.4	61.5	63.5	71.4	66.4	57.0	51.0	40.9	18.2	45.6	96	July ..	-22	Jan.
Averages.	15.8	16.2	30.3	46.0	58.7	68.0	72.6	69.8	61.4	49.0	32.0	21.2	45.2	108	1901 July ..	-28	1899 Feb.

DELAWARE—PRECIPITATION (INCHES).

1891	....	....	....	....	2.80	3.12	3.64	5.66	1.01	2.83	2.60	2.51	....	....	....	....	....
1892	1.63	1.13	2.00	4.02	5.99	9.51	4.99	3.09	4.15	1.39	1.23	1.08	40.91	....	....	....	....
1893	.86	.95	2.31	3.71	2.92	4.29	3.98	1.66	2.39	3.27	1.81	1.44	29.03	....	....	....	....
1894	.96	.57	2.71	2.88	1.81	2.48	.11	1.77	3.48	2.66	1.75	1.63	22.99	....	....	....	....
1895	.72	.23	.65	.95	2.51	3.11	2.70	3.70	3.25	.85	1.98	2.59	23.49	....	....	....	....
1896	.69	.62	.75	4.81	9.57	3.66	7.64	2.24	6.19	2.55	1.93	.94	40.93	....	....	....	....
1897	2.28	.92	2.10	4.89	2.72	3.13	1.84	2.00	2.62	1.69	1.06	1.24	29.29	....	....	....	....
1898	1.42	1.04	2.12	2.37	2.69	5.62	1.45	2.59	3.47	3.77	.71	.52	28.88	....	....	....	....
1899	.45	1.11	1.16	3.00	7.44	5.93	2.12	3.27	1.11	1.14	1.21	2.14	29.18	....	....	....	....
1900	.74	1.42	2.36	4.42	2.25	2.70	8.16	3.72	3.63	5.60	1.77	.58	35.25	....	....	....	....
1901	.74	.55	2.16	1.18	1.70	2.72	1.52	.62	3.77	2.17	.48	1.07	18.68	....	....	....	....
1902	.67	1.09	1.78	1.26	7.49	6.62	5.17	3.31	3.56	1.50	1.79	2.25	37.29	....	....	....	....
Averages	1.01	.88	1.83	3.04	4.12	4.28	3.68	2.86	3.24	2.22	1.61	1.52	30.29	....	....	....	....

DELAWARE COUNTY—CONTINUED.

DELAWARE COUNTY CROPS.

YEAR.	AVERAGE PER ACRE						RAINFALL MAY 1ST TO SEPT. 1ST				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1880	35	8	28	24	70	1.0	4.30	11.77	1.83	5.16	23.46
1881	39	17	39	30	106	1.8	2.86	3.12	8.64	5.66	15.28
1882	35	12	36	25	61	1.5	5.99	9.51	4.39	3.09	23.58
1883	36	14	33	25	88	1.5	2.62	4.29	3.98	1.06	12.25
1884	11	15	24	24	54	0.8	1.91	2.48	.11	1.77	6.27
1894	25	14	37	20	63	0.5	2.51	3.11	12.70	3.70	12.02
1895	38	18	41	33	111	1.4	2.57	3.00	7.64	2.24	13.45
1896	34	18	37	31	74	1.3	2.12	3.13	1.94	3.00	10.19
1897	36	16	35	26	120	1.3	2.62	5.62	1.45	2.50	12.20
1898	35	13	37	33	130	1.2	7.44	5.05	2.12	3.25	17.86
1899	41	15	32	30	70	1.2	2.25	2.70	8.06	3.72	16.73
1900	35	15	30	23	90	0.9	1.70	2.72	1.52	.62	6.56
1901	39	17	32	30	120	2.0	7.49	6.62	5.97	3.31	23.39
Averages.	32	15	31	29	92	1.4	....	.....	.....	.....	15.56

BUCHANAN COUNTY.

Area, 576 square miles; area in farms, 357,516 acres; number of farms, 2,447; value of farms (census of 1900), $12,852,520; value of farm buildings, $2,755,840; value of live stock, $3,014,781; value of the year's farm products not fed to stock, $3,115,964; acreage in cereal crops, 140,600 acres. A meteorological station has been maintained at Independence since January 1, 1864, and the records are tabulated below. Records were kept by D. B. Wharton at a place called Brookside from 1862 to 1878 inclusive. The temperature tables are printed herewith. Altitude of Independence, 921 feet.

INDEPENDENCE—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annl.	Highest.	Month	Lowest.	Month
1864	15.3	24.4	31.6	44.6	61.9	69.8	74.6	70.1	61.6	45.3	32.4	16.7	45.7	....	.....	....	.....
1865	18.4	26.8	29.6	....	57.9	68.2	67.5	68.5	64.2	49.0	37.9	18.2	....	....	.....	....	.....
1866	16.5	16.2	26.8	47.4	57.1	66.0	74.3	65.4	56.5	50.2	26.6	21.2	44.5	....	.....	....	.....
1867	13.9	23.2	20.6	44.9	56.5	70.4	72.9	72.6	2.6	50.6	38.0	20.3	44.8	....	.....	....	.....
1868	7.8	18.0	....	41.0	60.8	68.9	80.9	67.2	54.2	....	34.3	16.2	....	....	.....	....	.....
1869	18.0	21.0	25.0	43.7	58.6	64.3	70.3	71.4	60.2	48.9	30.2	21.6	43.5	....	.....	....	.....
1870	17.7	21.8	28.9	50.9	66.2	72.2	76.5	68.8	65.0	49.2	36.9	20.4	47.7	....	.....	....	.....
1871	19.8	24.4	36.3	50.4	64.1	71.5	73.3	72.2	61.0	50.8	37.6	12.4	46.9	....	.....	....	.....
1872	14.6	21.8	24.7	47.5	59.6	74.9	74.4	72.4	61.6	46.3	36.1	10.0	44.5	....	.....	....	.....
1873	8.1	14.4	30.6	48.3	52.3	75.0	74.2	74.4	59.6	43.4	29.2	22.4	43.9	....	.....	....	.....
1874	18.1	19.5	....	46.0	64.0	72.8	76.6	71.5	62.2	51.4	30.5	21.8	....	....	.....	....	.....
1875	1.8	4.9	25.8	43.9	0.8	66.5	72.2	67.8	59.2	48.9	28.0	49.1	42.0	....	.....	....	.....
1876	21.9	24.3	27.2	47.1	61.4	68.8	75.3	73.3	60.9	47.2	30.8	9.9	45.7	....	.....	....	.....
1877	12.6	33.9	24.2	46.9	61.4	67.6	73.0	70.2	63.9	49.8	33.8	10.8	48.2	....	.....	....	.....
1878	27.2	30.2	46.1	53.8	56.4	67.7	76.0	73.5	62.8	48.5	40.4	19.0	50.6	....	.....	....	.....
1879	15.7	21.2	38.2	52.5	64.2	69.3	67.1	72.0	59.8	58.0	36.8	17.4	48.4	....	.....	....	.....
1880	33.7	28.1	34.3	49.5	68.9	6.5	71.3	70.8	59.2	48.4	24.2	15.8	47.6	....	.....	....	.....
1881	9.6	18.1	28.8	43.1	65.6	67.3	74.4	73.8	64.2	51.1	32.6	31.0	46.6	....	.....	....	.....
1882	19.0	31.0	33.8	47.9	54.4	66.9	68.5	70.3	63.5	52.6	36.1	30.2	47.2	....	.....	....	.....
1883	3.2	13.7	28.2	50.8	55.1	68.0	71.2	67.5	59.0	45.5	34.3	22.0	43.2	....	.....	....	.....
1884	9.3	16.5	29.0	46.7	58.6	67.7	69.4	67.6	64.0	52.1	32.6	15.4	44.1	....	.....	....	.....
1885	5.2	9.1	27.6	45.1	56.8	66.1	73.7	65.8	60.8	45.2	25.6	23.2	42.8	....	.....	....	.....
1886	9.1	19.2	30.2	50.4	62.1	69.0	75.0	73.4	62.0	52.7	31.3	13.6	45.7	....	.....	....	.....
1887	7.9	18.1	31.1	48.7	57.0	71.7	76.0	69.4	60.5	44.7	32.7	21.0	45.7	....	.....	....	.....
1888	4.8	16.0	25.2	46.6	52.5	68.5	73.2	69.0	57.4	46.2	30.5	28.9	43.7	....	.....	....	.....
1889	21.0	16.5	39.4	....	59.7	66.8	....	71.0	60.5	46.0	....	35.0	....	....	.....	....	.....
1890	17.	21.4	27.3	50.4	56.2	72.2	73.6	67	1 48.6	48.7	37.9	26.6	46.4	....	.....	....	.....
1891	25.6	20.4	27.2	50.2	58.0	68.1	68.4	67.9	66.1	49.0	29.5	31.7	46.8	....	.....	....	.....
1892	14.5	25.8	9.5	43.7	52.9	64.7	73.1	70.5	63.2	53.2	21.9	16.3	45.1	....	.....	....	.....
1893	8.6	13.3	30.9	42.3	54.8	69.0	73.9	67.9	63.6	53.1	33.9	20.0	44.1	....	.....	....	.....
1894	19.4	18.2	40.4	49.9	59.4	71.3	74.6	72.2	64.4	50.6	31.6	29.3	49.3	....	.....	....	.....
1895	11.0	13.0	32.0	52.0	60.0	68.0	71.0	72.0	66.0	44.0	33.0	24.0	45.5	....	.....	....	.....
1896	20.4	24.2	30.0	52.4	63.4	69.8	70.8	68.7	56.0	45.6	29.5	28.2	46.3	....	.....	....	.....
1897	14.0	22.0	26.0	42.0	55.0	65.0	72.0	65.0	68.0	54.0	30.0	14.0	43.9	....	.....	....	.....
1898	19.8	24.8	37.0	46.0	58.0	69.0	73.0	70.0	64.0	46.0	31.0	18.0	46.0	....	.....	....	.....
1899	16.2	11.1	22.6	48.0	58.8	68.8	71.1	72.3	60.8	55.6	42.6	20.0	45.7	90	Sept.	-29	Feb.
1900	23.2	12.4	27.0	50.1	61.6	68.0	71.1	75.6	63.1	58.3	31.7	24.3	47.2	92	{ Aug. Sept.	-13	Feb.
1901	....	12.8	32.0	48.6	59.0	70.7	81.2	72.6	62.1	52.5	33.2	18.3	....	100	July.	-22	Dec.
1902	19.6	13.6	37.0	46.2	61.8	69.4	71.0	67.3	58.0	51.8	41.4	18.2	45.8	89	July.	-24	Jan.
Means.	14.7	21.8	29.9	47.2	59.7	69.1	73.4	70.2	61.3	48.2	33.2	21.7	45.7	....	.....	....	.....

INDEPENDENCE - PRECIPITATION (INCHES).

1867	.12	....	....	....	7.95	9.20	3.70	2.20	2.90	2.00	....	1.40	29.47	....	.....	....	.....
1868	1.70	.50	....	2.10	3.60	2.90	3.10	1.90	6.00	1.70	1.90	....	25.40	....	.....	....	.....
1869	2.50	3.10	.30	2.60	4.20	8.91	7.90	8.15	4.42	1.50	1.55	2.65	48.80	....	.....	....	.....
1870	1.73	.70	.10	.15	2.20	.70	6.83	4.12	5.65	.90	.80	.9	27.58	....	.....	....	.....
1871	1.20	2.45	.65	1.20	3.15	2.35	2.65	2.47	.10	3.20	3.60	1.55	25.57	....	.....	....	.....
1872	.15	.10	.60	3.05	4.61	3.45	2.85	8.45	2.77	.95	.50	.50	29.08	....	.....	....	.....
1873	1.80	.65	.40	2.90	6.14	3.65	.85	2.60	2.05	2.03	.35	3.81	29.15	....	.....	....	.....
1874	1.10	1.11	.95	2.40	4.30	5.85	4.05	2.60	4.50	1.85	2.12	.10	31.93	....	.....	....	.....
1875	1.20	1.00	....	1.82	4.24	8.20	5.02	1.80	9.35	1.12	.32	1.43	34.60	....	.....	....	.....
1876	2.10	1.38	2.91	3.34	3.99	8.66	11.92	7.19	7.20	.80	2.05	.30	51.82	....	.....	....	.....
1877	.80	T	1.30	1.70	2.70	6.60	5.20	1.15	1.80	7.30	.12	2.00	30.67	....	.....	....	.....
1878	.20	T	2.15	3.70	3.49	7.39	3.08	.43	4.72	3.73	.48	.98	30.35	....	.....	....	.....

BUCHANAN COUNTY—CONTINUED

INDEPENDENCE—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month.	Lowest.	Month.
1879	.50	.87	.75	.70	4.03	5.45	4.95	2.55	3.57	2.58	[illegible]	1.20	31.09	....	....	....	.
1880	1.05	.71	.87	2.28	4.05	7.42	10.40	4.97	5.00	1.70	1.45	.45	41.77	....	......		......
1881	1.30	.70	.10	1.10	1.06	6.05	7.10	[illegible]	10.25	.25	2.25	.36	31.22	....		..	
1882	.70	1.23	2.50	4.10	4.87	3.98	2.06	[illegible]	1.3	5.85	2.10	1.25	[illegible]	....	......		......
1883	1.40	1.40	.20	1.36	5.85	7.10	7.52	[illegible]	2.75	4.80	2.45	2.75	[illegible]		......		
1884	1.35	1.70	3.15	1.68	3.70	1.55	6.60	1.75	10.30	2.10	1.10	2.04	45.06	....	......		.....
1885	1.62	.86	.53	[illegible]	2.83	5.78	4.9	7.10	3.75	1.62	.26	1.86	34.14	.		....	.....
1886	3.09	.80	1.0	1.78	5.00	1.62	.98	1.12	1.38	3.00	.10	.81	[illegible]	..	......	..	..
1887	1.22	2.35	2.02	1.80	1.66	2.98	4.42	2.71	12.87	1.25	.8	2.44	35.00	....	......		.....
1888	1.40	1.70	5.08	2.33	5.37	2.27	4.82	5.56	1.12	2.07	1.47	2.63	32.51		......	.	.....
1889	1.23	.52	.38	3.37	5.88	4.83	1.62	.84	3.29	T	.62	1.24	24.52	..	......	...	....
1890	1.19	1.08	1.10	2.98	4.63	8.00	1.65	2.97	4.48	4.19	1.50	.51	35.11	...	......	...	.....
1891	1.54	.70	2.30	2.17	3.32	2.06	3.84	4.35	1.23	2.78	1.37	2.38	28.13	....	....	....	......
1892	.61	.87	1.73	3.24	6.18	7.00	5.63	2.77	1.87	1.00	.55	1.29	33.74	.	......	...	......
1893	1.41	1.64	1.75	1.96	2.52	3.57	1.73	[illegible]	1.15	1.95	.6	.35	21.10		......		......
1894	.87	.90	3.25	2.4	1.80	3.44	T	2.10	1.19	1.94	1.11	.35	19.98	...	....	....	......
1895	.90	1.00	.47	1.00	3.45	1.73	1.17	3.12	4.28	.45	1.40	1.72	20.67		....	....	......
1896	.50	.59	.00	5.88	4.24	3.25	7.67	2.15	3.50	3.51	1.82	.49	31.29	..	....		
1897	1.08	.75	1.58	6.13	2.10	5.03	2.42	1.26	2.76	.40	.36	1.33	25.74	..	.....	....	.....
1898	1.76	1.34	1.71	1.85	4.14	4.65	1.66	2.60	2.14	4.51	1.53	.42	28.31	...	....		......
1899	.46	.87	1.02	3.45	5.80	4.35	1.16	2.55	.64	.72	.72	1.07	23.41	...	....	..	......
1900	.34	.70	1.02	3.37	1.74	3.83	11.02	3.12	6.15	4.20	1.26	.62	37.35		....	....	......
1901	.93	.90	1.02	1.55	2.00	2.81	2.07	1.87	3.18	2.38	.32	.48	19.61	...	......		
1902	.93	1.10	1.51	1.14	10.46	9.03	9.51	4.42	3.2	1.65	1.40	1.72	46.14		......	....	......
Means	1.37	1.05	1.79	2.21	4.17	5.03	4.72	3.43	4.70	2.37	1.29	1.48	33.84	.	....		

BROOKSIDE—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month.	Lowest.	Month.
1862				44	60	68	72	66	63	52	33	27	.....				
1863			32	50	61	67	72	70	61	41	33	24	..				
1864	15	25	32	46	61	70	74	70	61	45	31	5	45.3				
1865	17	22	28	45	58	69	68	70	69	48	36	14	45.2				
1866	13	12	25	48	57	66	75	65	56	49	35	16	43.2				
1867	9	20	18	43	49	70	72	72	.	50	37	19	.				
1868	6	16	37	41	60	69	82	67	54	45	33	15	43.6				
1869	19	20	25	44	58	64	70	71	63			21	.				
1870	16	21	33		65	72	77	70	65	50	37	21	.				
1871	19	25	36	50	64	71	74	72	60	52	25	12	46.6				
1872	14	21	24	48	61	71	74	73	63	48	25	8	44.1				
1873	8	11	30	44	57	78	.	74	59	44	28	23	.				
1874	17	19	29	40	60	72	77	72	60		30	20	.				
1875		4	27	43	70	69	73	67	60	42	26	26	41.2				
1876	18	21	23	44	59	65	73	76	60		25	5	42				
1877	7	30		42	58	64	69	68	64		33						
1878	10	33	45	52	53	64	74	71	60		36	15	46.5				
Averages	12.7	19.9	29.1	45.1	59	68.6	73.4	69.9	61.0	46.6	31.4	17.5	44.5				

BUCHANAN COUNTY CROPS.

YEARS.	AVERAGE YIELD PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	38	14	32	31	37	1.5	4.63	8.00	1.65	2.97	17.25
1891	36	12	41	25	144	1.5	3.32	2.06	3.84	4.35	13.57
1892	20	13	32	20	58	2.0	6.18	7.00	5.63	2.77	21.58
1893	35	12	22	18	60	1.5	2.52	3.57	1.73	8.75	16.57
1894	10	11	30	15	46	1.0	1.80	3.44	T	2.10	7.34
1895	30	18	45	16	110	1.2	3.45	1.73	1.17	3.12	9.47
1896	42	14	41	22	72	1.6	4.24	3.25	7.67	2.15	17.31
1897	31	19	28	21	62	1.8	2.10	5.03	2.42	1.26	10.81
1898	25	15	33	30	110	2.0	4.14	4.65	1.66	2.60	13.05
1899	39	20	40	30	110	1.5	5.80	4.35	1.16	2.55	13.86
1900	42	15	33	25	72	1.3	1.74	3.83	11.02	3.12	19.71
1901	20	17	26	25	30	1.6	2.00	2.81	2.07	1.87	8.25
1902	30	15	32	31	80	2.0	10.46	9.03	9.51	4.42	33.42
Averages	31	13	33	24	76	1.5	....	....	....	....	15.55

BLACK HAWK COUNTY.

Area, 576 square miles; area in farms, 349,194 acres; number of farms, 2,257; value of farms (census of 1900), $14,943,470; value of farm buildings, $3,354,200; value of live stock, $3,067,935; value of the year's product, not fed to stock, 3,040,066; acreage in cereal crops, 161,700 acres. The following tables contain meteorlogical records compiled at Cedar Falls and Waterloo. Altitude of Waterloo, 856 feet; Cedar Falls, 865 feet.

WATERLOO—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month.	Lowest.	Month.
1895		12	32	53	62	71	73	73	67	46	34	25					
1896	21	25	30	54	68	70	73	71	58	48	29	28	47.7	....	....	....	.....
1897	16	23	31	46	57	67	75	68	70	56	33	15	46.4	....	....	....	.....
1898	21.2	21.7	37	47	59	71	74	71	65	47	32	17	46.9	....	....	....	.....
1899	18.2	12.0	23.4	48.5	59.8	70.4	72.8	73.6	61.6	56.2	43.4	21.6	46.8	97	Sept.	-27	Feb.
1900	24.1	13.2	28.8	51.5	63.6	69.0	72.2	77.5	64.0	58.6	32.0	26.3	48.4	95	Aug.	-12	Jan
1901	22.0	5.9	23.1	49.6	60.8	71.8	81.8	73.0	62.8	53.7	34.3	19.0	48.2	107	July.	-21	Dec
1902	28.4	15.6	37.5	47.9	60.3	64.6	72.7	68.8	59.4	53.2	41.9	19.6	47.0	94	July.	-23	Jan
Averages	17.8	18.2	30.2	47.2	60.0	68.7	74.0	70.8	62.4	49.7	35.2	21.1	46.3				

WATERLOO PRECIPITATION.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month.	Lowest.	Month.
1876	1.87	.94	2.10	2.14	2.38	4.50	3.88	3.00	4.43	.71	.16	.52	28.21				
1877	1.01	.16	1.96	1.94	2.22	7.25	1.42	5.83	1.77	3.55	2.51	1.80	31.42	....	....	....	......
1878	.40	.21	2.83	3.07	5.48	6.91	3.51	1.16	3.60	2.18	.46	.63	30.44	....	....	....	......
1879	.35	1.31	.92	.69	5.50	5.04	3.41	5.43	1.79	1.20	6.03	1.69	33.64	....	....	....	......
1880	1.20	.34	.60	3.32	3.28	5.31	8.32	4.62	3.78	1.65	1.00	.45	33.87	....	....	....	......
1881	.04	3.55	1.61	1.13	2.30	6.30	3.86	2.75	6.00	7.27	1.53	1.27	38.52	....	....	....	......
1882	.59	1.20	.80	4.31	4.02	2.93	3.37	1.06	2.06	3.51	2.45	2.02	29.24	....	....	....	......
1883	2.36	1.70	.30	1.80	5.07	1.74	5.88	1.31	3.16	4.78	1.40	2.90	31.40	....	....	....	......
1884	1.06	.99	1.98	1.80	3.41	1.43	8.66	3.18	7.23	2.29	1.07	1.25	29.29	....	....	....	......
1885	2.85	1.80	.29	2.28	3.01	3.91	7.93	7.60	5.59	1.50	.30	1.60	38.16	....	....	....	......
1886	1.18	.35	.96	1.90	3.15	.94	1.68	.30	7.0	.77	.44	1.09	19.79	....	....	....	......
1887	1.50	2.30	1.60	1.00	.90	1.25	2.95	2.20	9.00	.70	.60	1.17	25.17	....	....	....	......
Averages	1.15	1.23	1.48	2.11	3.40	3.96	4.15	3.25	4.68	2.52	1.44	1.37	30.74				

WATERLOO PRECIPITATION—1895-1902.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month.	Lowest.	Month.
1895		.48	.41	1.07	4.91	2.22	1.03	4.68	4.01	.64	1.73	1.52					
1896	.51	.42	.64	6.65	6.12	2.60	7.49	3.29	4.36	2.86	1.86	.45	37.60	....	....	....	......
1897	1.78	.87	1.54	5.16	2.63	4.32	4.16	1.25	2.77	.16	.62	1.52	26.95	....	....	....	......
1898	1.45	1.19	1.89	2.09	4.22	4.81	1.66	3.47	2.07	4.79	1.97	.33	29.41	....	....	....	......
1899	.27	1.18	2.23	2.38	6.08	6.94	1.61	3.59	.84	1.55	1.38	1.80	29.85	....	....	....	......
1900	.70	1.19	2.86	2.79	1.37	5.47	7.92	3.48	5.48	4.14	.97	.98	37.35	....	....	....	......
1901	1.07	1.0	2.95	1.56	1.79	3.48	3.04	1.40	3.57	2.18	.84	.50	23.53	....	....	....	......
1902	.96	1.47	2.20	1.28	8.54	6.81	10.61	7.70	4.86	1.50	1.88	1.94	49.76	....	....	....	......
Averages	0.95	0.98	1.83	2.99	4.38	4.50	4.24	3.60	3.49	2.82	1.40	1.14	31.82				

CEDAR FALLS—TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month.	Lowest.	Month.
1891	25	15	28	49	55	72	67	69	61	50	29	31	46.2	...	....		.....
1892	12	....	31	44	52	...	72	73	64	52	31	16	. .	....	....	....	.....
1893	6	15	31	...	.....	70	75	70	64	53	32	19					
1894	17	19	39	52	60	73	77	75	65	52	31	29		99	Sept..	-29	Feb.
1895	11	15	33	54	61	69	73	73	68	46	34	24	49.1	105	July..	-27	Jan.
1896	22	27	32	52	66	69	73	71	57	47	29	31	46.7	95	J'ly Ag.	-2[illegible]	Feb.
1897	...	24	31	48	59	69	76	...	71	56	32	16	47.9	98	Aug..	-14	Jan.
1898	22	23	38	48	61	72	74	72	65	48	31	17		....	......	....	......
1899	15.7	11.9	22.6	47.8	.....		. .	....	62.8		44	....	47.7	97	July..	-16	Dec.
1900	....	....	29	51.4	.....	....	.. .	...	....	...		...	....	....	....	-27	Feb.
Averages	16.3	18.7	31.5	49.4	59.1	71	73.4	71.7	62.8	50.5	32.6	20.3	47.5				

BLACK HAWK COUNTY—CONTINUED.

CEDAR FALLS—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1881	1 10	1.17	3.0	...	2.66	2.55	3.94	3.63	2.10	...	1 70	2.74	29.07	...	...	...	...
1882	.47	.73	1.34	3.82	11.00	4.89	5.67	2.21	2.2	2.09	1.01	1.00	36 41	...	...	...	...
1883	1.40	1.90	2.78	2.70	3.20	3.15	4 47	1 09	1.75	3.51	.55	1.00	28.45	...	...	...	...
1884	1.73	.50	.98	2.07	1.80	3.55	.61	1.95	2.47	1.07	98	1 80	22.07	...	...	...	...
1885	1.25	.75	.22	2 80	4 24	2 87	1 80	4 03	3.98	.50	1 55	.90	25 43	...	...	...	...
1886	.50	.45	.58	7.20	6.24	4.23	6.76	2.39	4.00	2 94	2.70	.30	37.91	...	...	...	...
1887	1.00	.70	1.15	5 50	2.64	4 85	6 25	1 42	1.50	.90	.51	1.80	32 31	...	...	...	...
1888	1.90	.70	1.34	2.15	7 15	5.33	2.05	4.42	2.22	4 38	1 90	.20	33.74	...	...	...	...
1889	.50	1.50	1.45	2. 5	...	...	...	...	.58	...	.88	...	...	...	...	...	...
1900	...	...	1.96	1.80	...	...	...	...	...	...	...	...	...	...	...	...	...
Averages	1.12	.93	1.42	4.3	4.89	3.80	3.95	2.96	2.78	2.52	1 31	1.02	29.93	...	...	...	...

BLACK HAWK COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	Aug.	Total.
1880	30	18	32	20	51	1.5	...	...	...	...	...
1891	43	16	46	32	183	1.5	2.66	2.55	3 94	3.63	12.78
1892	24	9	29	18	36	1.8	11 00	4.89	5.67	2.21	23.77
1893	34	14	27	27	58	1.9	3.20	3.15	4.47	1.09	11 91
1894	11	10	23	21	40	1.0	1.80	3 55	.61	1.95	7 91
1895	35	15	44	33	101	1.4	4.26	2.87	1.80	4.03	13 62
1896	40	14	35	34	88	1.5	6.13	2 01	7.93	3.29	19.95
1897	35	20	33	29	85	1.9	2 03	4.32	4.16	1.25	11.76
1898	41	18	35	32	95	2.0	4 22	4 31	1.66	3 47	13.66
1899	41	18	43	33	112	1.7	6.68	6.91	1.61	3.59	18.22
1900	42	18	38	28	90	1 3	1.37	5.47	7.92	3.48	18.24
1901	24	18	33	20	37	1.5	1.79	3.48	3.04	1.40	9.71
1902	28	15	30	25	105	2.0	8.54	6.81	10 61	7 70	33.66
Averages	33	15	34	28	75	1.6	...	...	...	...	15.43

BENTON COUNTY.

Area, 720 square miles; area in farms, 458,801 acres; value of farms (census of 1900), $20,788,190; value of farm buildings, $3,966,730; value of live stock, $3,896,730; value of the year's farm products not fed to stock, $3,828,346; acreage of cereal crops, 210,260 acres. Meteorological stations were established at Vinton and Belle Plaine in 1890, the records are included in the following tables. Altitude of Vinton, 810 feet; Belle Plaine, 828 feet.

VINTON—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April	May.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1890	19	6	25	50	59	72	74	66	57	48	38	27	44.6	...	...	...	...
1891	24	20	26	49	57	68	8	67	65	49	30	26	46 2	...	...	...	...
1892	14	15	31	45	54	67	72	70	63	52	31	17	45.3	...	...	...	...
1893	7	16	31	44	55	70	74	69	63	51	33	21	44.7	...	...	...	...
1894	16	20	40	51	61	73	76	73	65	50	32	20	48.9	...	...	...	...
1895	12	14	34	53	61	70	72	73	78	48	34	26	48.4	...	...	...	...
1896	23	26	32	54	66	70	73	71	57	47	31	32	48.4	...	...	...	...
1897	17	25	33	47	58	68	76	66	68	57	34	17	47.2	...	...	...	...
1898	23	21	38	47	60	71	74	71	65	43	32	19	47.0	...	...	...	...
1899	20.2	13.4	25.9	49.2	60.3	70.4	72.9	74.9	...	...	43.3	23.1	...	...	...	...	...
1900	25.4	16	28.7	51.8	63.2	70	72.4	77	63 8	58.3	33	24.1	48 8	93	Aug.	-11	Jan.
1901	24.4	15 8	33.4	51	60.6	72 3	81.2	72.8	62.5	53 4	34.2	19.6	48 6	103	July	-17	Dec.
1902	20.9	16.1	38	48	64	64.9	73	68.5	58 5	53	42.4	21.1	47.3	91	July	-27	Jan.
Averages	18 9	19.9	32.1	49.2	59 9	69.7	73.7	70.7	62.8	50.6	34.4	23.9	47.1	103	1901 July	-27	Jan.

VINTON—PRECIPITATION (INCHES).

1880	3 04	.50	1.38	2.65	4.26	9.20	1.13	3.07	2.65	4 4.	1.74	.89	34.38	...	...	...	...
1891	.94	.87	3.24	.84	3 48	4.31	2.75	3 24	2.00	2.99	1.35	2.58	28.61	...	...	...	...
1892	.37	1.82	1.70	4.61	7.54	4.12	3 86	1.77	2 02	1.51	.73	2.00	32 65	...	...	...	...
1893	.86	.49	1.65	3.22	2 60	3 19	1.6	1.40	1 85	2.57	.81	.64	20.93	...	...	...	...
1894	.88	.80	2.41	2.21	1.94	2.82	.30	2 28	3.46	2.32	90	.74	21.06	...	...	...	...
1895	1 65	.96	.31	1 68	5.04	1.38	2 16	2 24	2.73	.87	1.11	1.74	21.02	...	...	...	...
1896	.60	.92	.50	4 43	3 65	.81	8 21	2.71	4 03	3.13	2 01	.68	31.68	...	...	...	...
1897	1.74	.90	2.20	6 73	1.87	3 31	2.40	1.51	2 67	.62	.42	1 55	26.31	...	...	...	...
1898	2.27	1.45	1.41	2 53	3.02	2.76	.85	1 67	2 47	3 90	1.64	.28	24.45	...	...	...	...
1899	.51	1.00	2.18	2 96	7.20	4.51	1.94	2.55	2.40	1.75	1 02	.28	28 27	...	...	...	...
1900	.20	.85	1.57	4.02	1.98	3.87	3.10	2.74	2 77	3 19	1.16	2.70	30 85	...	...	...	...
1901	.95	1.5	2.65	1.74	2.42	3.20	4.64	.76	2.95	1.31	.35	.25	22.12	...	...	...	...
1902	.75	1.13	1.59	.91	6.64	8.26	8.75	8.03	3.39	2 03	1.76	1.35	44.50	...	...	...	...
Averages	1.15	1.01	1.78	2 92	3 95	3.98	3 39	2.61	2 79	1 60	1.15	1.21	28.27	...	...	...	...

BENTON COUNTY—CONTINUED.

BELLE PLAINE MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annl	Highest.	Month	Lowest.	Month
1890	20	24	28	44	56	72	74	70	67	49	38	22	47.0	102	Aug.	-16	Jan.
1891	25	24	32	46	58	68	76	72	65	50	42	32	47.4	94	Aug.	-13	Nov.
1892	14	24	32	45	56	71	74	69	65	52	34	30	44.8	97	Aug.	-20	Jan.
1893	8	15	32	45	56	71	73	74	64	53	32	29	43.3	106	July.	-24	Jan.
1894	19	19	41	52	60	74	76	74	64	53	32	29	48.8	101	Sept.	-29	Feb.
1895	12	18	36	50	62	71	73	74	71	47	37	28	47.8	97	July.	-15	Jan.
1896	22	26	31	53	65	71	72	69	65	45	30	26	47.5	97	July.	-22	Jan.
1897	17	25	34	48	56	73	76	74	64	46	32	19	47.6	100	July.	-15	Feb.
1898	20	32	34	...	57	74	72	69	64	46	32	19	...	100	July.	-32	Feb.
1899	19.6	14.2	36.7	48.6	58.8	71.0	...	73.0	62.3	51.2	33.2	23.4	...	...	...	...	...
1900	....	15.6	30.0	52.0	63.1	70.6	74.1	77.0	64.9	....	42.5	25.4	....	....	.....	....	.....
1901	24.8	10.0	34.3	49.2	64.6	72.5	81.6	72.8	65.2	53.8	41.7	....	....	104	.....	....	.....
1902	20.1	8.1	38.0	47.8	63.4	74.0	73.0	67.8	58.2	51.5	42.5	26.4	47.2	92	July	-22	Jan.
														1894		1899	
Averages	18.4	21.6	32.5	45.7	59.3	69.8	73.6	70.6	63.7	50.6	34.4	21.6	47.1	106	July	-32	Feb.

BELLE PLAINE—PRECIPITATION (INCHES).

1890	2.15	1.00	1.15	1.42	4.34	6.64	.42	3.84	2.32	3.86	1.93	.42	29.38	....	.....	....	.....
1891	2.52	.89	3.95	2.62	4.21	4.26	2.69	3.31	1.28	3.28	2.07	1.91	33.01	..	.....	..	.....
1892	1.30	1.40	2.00	4.04	6.26	4.10	3.18	2.53	2.13	1.74	.66	2.24	31.38	....	.....	..	.....
1893	.90	1.20	2.40	3.55	3.24	3.43	2.24	1.99	1.90	2.67	1.51	1.17	26.35	....	.....	..	.....
1894	1.23	.85	3.06	2.04	1.19	2.56	.08	1.34	3.88	2.09	1.17	.80	21.05	....	.....	..	.....
1895	2.08	.52	1.05	2.60	2.80	2.15	3.45	5.25	1.9	.15	1.70	1.20	28.32	....	.....	..	.....
1896	.63	1.23	.75	4.81	4.61	2.43	1.13	2.26	2.37	3.35	2.64	.31	32.72	....	.....	..	.....
1897	1.51	1.35	2.78	7.69	3.42	3.51	4.59	1.8	2.23	.78	.94	2.20	32.80	....	.....	..	.....
1898	3.32	1.30	2.05	4.89	5.48	3.80	2.20	7.85	5.87	3.18	2.15	2	42.25	....	.....	..	.....
1899	.82	.70	1.42	5.76	8.60	6.02	2.87	....	....	.50	1.15	2.97	2.21	....	.....	..	.....
1900	....	2.17	4.64	4.14	1.67	7.30	6.65	6.10	5.12	....	1.90	.55	....	....	.....	....	.....
1901	.66	1.98	5.02	1.10	4.07	4.04	1.68	1.27	2.56	1.04	2.00	1.45	26.54	....	.....	....	.....
1902	1.07	2.39	3.45	2.57	7.13	7.12	6.20	13.53	5.64	2.85	3.13	2.40	57.48	....	.....	....	.....
Averages.	1.52	1.30	2.60	3.61	4.54	4.23	3.64	4.30	2.90	2.28	1.85	1.49	33.35	.....			

BENTON COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						MAY 1ST TO SEPTEMBER 1st.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Totals.
1890	24	11	29	23	58	1.5	4.26	9.20	1.13	3.07	17.66
1891	42	15	42	28	141	1.4	3.48	4.31	2.75	3.24	13.78
1892	31	12	29	25	67	2.0	7.54	4.12	3.86	1.77	17.29
1893	35	14	27	23	92	1.8	2.60	3.19	1.65	1.40	8.84
1894	12	12	28	18	50	.6	1.94	2.82	.30	2.28	7.34
1895	36	16	58	25	140	.5	5.00	1.38	2.16	2.24	10.87
1896	38	12	26	24	58	1.8	3.65	.81	8.21	2.71	15.38
1897	35	15	33	26	90	1.6	1.87	3.31	2.40	1.51	9.09
1898	30	14	30	31	95	1.6	3.02	2.76	.85	1.67	8.30
1899	39	15	40	31	140	1.5	7.20	4.51	1.94	2.55	16.20
1900	42	15	35	32	95	1.3	1.68	3.87	6.10	2.74	12.39
1901	30	15	24	25	35	1.4	2.42	3.20	4.04	.76	10.42
1902	35	12	30	25	90	1.5	6.64	8.26	8.75	8.03	31.68
Averages	33	14	31	26	88	1.4	..	..	..	..	13.86

LINN COUNTY.

Area, 720 square miles; area in farms, 432,888 acres; number of farms, 3,567; value of farms (census 1900), $19,207,170; value of farm buildings, $1,254,110; value of live stock, $3,848,381; value of year's farm products not fed to stock, $3,828,154; acreage in cereal crops, 158,160 acres. The following tables contain meteorological records compiled at Mt. Vernon and Cedar Rapids.

MT. VERNON—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annl	Highest.	Month	Lowest.	Month
1891	14.8	23.0	31.8	48.5	54.6	69.7	70.6	69.8	60.5	50.1	34.8	20.4	46.2	....	.....	....	.....
1892	12.9	12.0	30.3	....	....	65.4	72.8	70.0	63.9	49.6	32.5	27.5	....	....	.....	....	.....
1893	25.8	....	31.5	49.1	61.2	67.2	....	69.7	61.0	41.3	31.5	24.2	....	....	.....	....	.....
1894	15.8	24.3	30.6	43.9	62.4	69.3	74.9	70.0	62.8	45.8	32.6	16.2	45.6	....	.....	....	.....
1895	18.6	27.7	31.2	46.6	61.0	70.2	67.7	70.1	69.8	50.0	39.0	18.6	47.6	....	.....	....	.....
1896	18.0	18.2	28.9	50.0	57.4	67.2	75.4	65.8	57.3	51.0	37.1	21.1	45.6	....	.....	....	.....
1897	14.2	23.9	22.0	44.7	49.8	70.2	72.7	71.3	63.2	52.1	39.7	21.8	45.4	....	.....	....	.....
1898	11.2	21.0	40.8	42.2	60.0	69.6	73.7	69.8	55.9	45.8	36.0	19.4	45.7	....	.....	....	.....
1899	24.3	25.2	27.5	45.3	57.1	65.2	71.2	71.1	59.8	39.8	30.4	24.4	45.2	....	.....	....	.....
1870	20.7	24.0	29.4	52.2	64.7	69.4	75.3	69.1	64.4	49.6	37.5	23.4	48.3	....	.....	....	.....
1871	22.9	25.6	37.1	51.4	62.0	71.1	73.2	71.6	62.6	50.8	29.3	15.4	47.8	....	.....	....	.....
1872	16.8	21.9	26.6	49.1	60.5	71.8	72.9	71.4	63.4	....	36.9	12.0	....	....	.....	....	.....
1873	10.4	15.4	31.2	44.5	56.4	74.2	72.1	72.5	5-.2	44.2	29.8	25.1	44.5	....	.....	....	.....
1874	18.3	21.2	31.6	39.4	63.7	70.7	76.8	73.4	62.9	51.4	32.0	22.9	47.0	....	.....	....	.....
1875	3.6	4.8	26.3	42.4	58.1	....	72.8	67.2	....	45.6	29.7	31.4	....	....	.....	....	.....
1876	24.7	25.9	27.8	48.4	60.4	68.6	75.2	73.0	61.6	45.5	30.4	....	....	....	.....	....	.....
1877	12.0	31.6	24.6	46.5	....	....	....	....	....	....	32.9	39.4	....	....	.....	....	.....
Averages	16.7	21.6	29.9	46.5	59.4	69.4	73.4	70.2	61.7	47.3	33.2	24.1	46.2	....	.....	....	.....

MT. VERNON—MEAN TEMPERATURE (DEGREES).

1892	15.2	29.8	32.7	46.6	56.4	69.6	....	....	....	55.4	33.0	....	....	....	.....	....	.....
1893	7.9	17.4	32.7	47.0	57.9	72.9	77.4	....	65.9	53.1	34.2	22.4	....	....	.....	....	.....
1894	20.8	19.4	40.4	52.8	61.4	....	....	....	....	52.2	32.8	30.3	....	....	.....	....	.....
1895	12.0	14.0	33.0	54.0	62.0	73.0	....	75.0	69.0	46.0	35.0	26.0	....	....	.....	....	.....
1896	23.9	25.5	31.6	53.0	66.5	71.1	74.9	72.4	59.7	45.0	32.4	31.0	49.2	96	July / Aug.	-15	Jan.
1897	16.0	25.0	33.0	58.0	63.0	71.0	77.0	....	70.0	59.0	35.0	19.0	....	....	.....	....	.....
1898	20.4	24.0	39.0	49.0	61.0	73.0	76.0	....	....	49.0	33.0	19.0	....	....	.....	....	.....
1899	20.3	18.9	26.6	51.2	61.4	72.3	75.0	....	60.3	58.0	44.9	22.7	....	....	.....	....	.....
1900	26.2	15.2	29.4	52.9	64.0	69.7	72.5	78.1	75.0	60.0	35.4	26.2	49.6	96	Aug.	-12	Feb.
1901	21.8	16.1	33.5	50.3	61.2	74.4	84.8	76.7	65.8	56.8	30.0	22.2	50.0	107	July.	-13	Dec.
1902	21.7	16.6	38.3	48.6	64.5	65.5	73.9	70.0	59.8	55.1	44.4	21.0	48.3	95	July.	-21	Jan.
Averages	18.7	20.1	33.5	50.5	61.4	71.2	77.3	74.4	64.4	53.6	35.8	23.9	48.2	....	.....	....	.....

MT. VERNON—PRECIPITATION.

1890	....	....	....	3.40	1.82	6.95	2.95	3.79	2.68	1.40	.80	....	....	....	.....	....	.....
1897	2.37	.36	1.35	6.52	1.88	2.17	2.95	....	1.65	.56	93	2.05	....	....	.....	....	.....
1898	....	....	2.23	2.68	4.43	2.69	3.20	....	....	3.40	1.43	....	....	....	.....	....	.....
1899	....	....	.56	3.39	9.28	4.18	5.49	....	.80	1.30	1.47	2.17	....	....	.....	....	.....
1900	.91	1.90	2.90	2.90	4.22	3.09	6.03	4.00	3.97	3.56	.93	.56	34.45	....	.....	....	.....
1901	1.08	1.23	3.32	1.43	1.87	4.25	.61	.80	4.74	1.48	.97	1.88	21.16	....	.....	....	.....
1902	.90	70	1.73	1.30	4.49	8.10	7.30	10.65	5.80	3.86	.77	2.40	47.90	....	.....	....	.....
Averages	1.31	1.07	2.03	3.03	4.09	3.75	4.63	4.57	2.81	2.40	1.12	1.66	....	....	.....	....	.....

LINN COUNTY—CONTINUED.

CEDAR RAPIDS—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month.	Lowest.	Month.
1882	25.4	3[illegible]	35.7	51.0	55.0	69.[illegible]	7[illegible]	69.2	60.1	53.0	36.5		48.[illegible]				
1883	3.6	17.3	28.4	49.0	54.2	66.2	72.3	69.2	57.8	45.9	34.8		43.3				
1884		17.6	29.4	43.5	57.7	67.8					32.2						
1885	7.4	10.0	28.1	45.2	55.6	67.6	73.9	66.2	58.3	45.0	35.6	22.1	42.9				
1886	10.8	21.7	28.7	51.5	62.5	71.1	77.2	78.5	64.1	53.6	33.0	16.5	47.5				
1887	13.5	16.0	31.8	49.5	66.3	74.1	77.8	72.4	63.2	46.4	34.2	22.7	47.3				
1888	9.2	20.6	27.8	48.6	52.8	69.8	76.0	68.1	58.6	47.8	30.[illegible]	28.8	45.4	98	July.		
1889	22.4	18.3	39.8	48.1	58.6	65.4	72.6	71.2	60.6	46.8	35.0	38.[illegible]	48.1	95	July.		
1890	23.8	28.7	28.7	52.2	57.5	73.5	75.6	70.0	59.6	50.6	30.4	29.1	49.1	98	July.		
1891	26.6	23.6	28.2	51.8	57.7	69.9	70.1	69.8	67.6	49.1	31.0	32.8	48.2	95	Aug.		
1892	15.2	30.6	32.5	46.6	55.8	71.3	73.7	75.4	67.4	55.6	33.0	19.7	48.6	96	July.		
1893	9.2	17.4	33.1	45.9	57.2	72.2	76.3	70.2	64.9	52.7	34.	22.9	46.4	94	July.		
1894	21.9	20.9	42.5	53.2	61.8	74.4	76.1	74.7	65.3	52.2	34.0	32.6	50.8	101	July.		
1895	15.6	17.0	36.0	54.4	63.0	73.0	74.0	75.0	70.0	46.6	35.0	27.[illegible]	48.8	97	July.		
1896	25.0	25.8	33.7	50.2	69.8	73.2	74.2	77.8	59.1	47.6	31.7	30.[illegible]	50.2	100	May.		
1897	17.0	21.0	33.0	47.6	58.0	69.0	76.0	69.0	71.0	58.0	36.0	17.0	47.9	102	July.		
1898	22.0	23.0	39.6	49.0	61.0	73.0	75.0	73.0	67.0	49.0	34.0	19.0	48.7	100	July.		
1899	21.4	14.4	26.8	51.0	63.4	73.2	76.0	77.1	66.0	50.6	47.2	24.[illegible]	50.0	102	Sept.		
1900	28.4	16.4	30.3	54.2	65.6	71.0	74	79.4	66.0	60.6	34.9	27.6	50.7	97	Aug.		
1901	25.8	15.2	34.6	51.2	61.8	74.2	83.0	74.2	65.4	55.0	36.2	21.4	49.9	107	July.		
1902	22.2	15.6	39.6	49.5	65.4	66.4	74.7	69.9	61.0	55.2	44.0	22.[illegible]	48.9	94	July.		
Averages	18.8	20.5	32.8	48.4	60.0	70.7	75.8	72.7	63.6	51.5	35.8	25.3	48.0				

CEDAR RAPIDS—PRECIPITATION.

YEAR.	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1882	.50	1.15	2.92	4.87	9.13	3.78				4.38	1.72	2.30	
1883	.82	2.71	.76	2.40	5.41	5.09	5.08	1.03	1.34	4.06	1.22	1.03	30.95
1884		1.41	2.47	2.12	3.08	3.38					.48	3.01	
1885	2.15	1.79	.74	7.82	5.92	3.46	6.35	9.19	2.84	2.50	.65	1.48	44.8[illegible]
1886	2.48	.87	4.47	2.16	2.60	1.25	.58	1.7[illegible]	2.8[illegible]	4.92	1.55	.40	25.9[illegible]
1887	2.92	5.00	3.50	.98	1.20	2.53	4.58	1.40	4.9[illegible]	2.07	.70	2.72	32.62
1888	1.39	1.37	3.52	1.74	8.10	2.29	6.0[illegible]	2.42	1.0[illegible]	2.35	4.12	2.16	34.5[illegible]
1889	1.44	.87	.42	2.91	5.15	4.11	5.79	1.65	3.70	1.49	1.03	1.62	30.1[illegible]
1890	2.10	1.04	2.08	2.42	3.06	9.51	1.97	4.27	2.1[illegible]	4.62	1.87	.40	36.2
1891	1.89	1.13	3.64	1.63	4.11	3.21	3.20	5.44	1.80	2.44	2.98	1.77	33.2
1892	2.82	2.18	2.38	1.15	10.12	7.48	4.45	2.07	2.33	1.63	1.60	2.62	42.6[illegible]
1893	.72	1.82	2.99	3.89	2.79	4.89	1.98	2.47	2.85	2.63	1.24	2.40	30.[illegible]
1894	1.51	1.58	4.52	1.65	3.08	2.43	.18	2.51	3.86	2.23	1.53	1.19	26.27
1895	1.56	.5[illegible]	.69	1.26	2.84	2.23	3.22	1.50	3.64	1.23	1.84	2.90	23.3
1896	.27	.48	.50	5.23	3.99	1.91	6.59	2.40	3.18	2.76	1.61	.85	29.77
1897	1.98	.71	1.28	5.16	2.10	3.96	4.35	2.62	3.78	1.01	.55	1.02	29.24
1898	1.02	3.65	1.71	2.47	3.41	3.60	1.90	4.38	3.11	2.92	.76	.65	29.1[illegible]
1899	.53	.50	.53	2.89	9.21	3.46	3.20	1.82	.37	.88	2.04	1.27	29.7[illegible]
1900	.61	1.08	2.37	3.62	3.13	4.22	3.74	4.46	2.83	4.12	.15	.92	31.29
1901	1.05	1.84	2.74	1.17	1.86	3.86	2.74	.42	2.04	1.37	.61	1.76	22.0[illegible]
1902	1.03	.96	1.55	1.30	4.61	5.57	7.52	9.93	1.83	2.71	1.47	1.96	43.38
Average	1.44	1.55	2.18	2.98	4.52	3.92	3.87	3.25	2.89	2.50	1.42	1.61	32.22

LINN COUNTY CROPS.

YEAR.	Average per acre: Corn, bushels	Wheat, bushels	Oats, bushels	Barley, bushels	Potatoes, bushels	Hay, tons	Rainfall May 1st to Sept. 1st: May.	June.	July.	August.	Total.
1890	31	13	23	21	58	2.5	3.06	9.54	1.97	4.27	18.84
1891	40	17	45	30	149	1.8	4.11	3.21	3.20	5.44	15.96
1892	25	12	28	24	34	1.8	10.12	7.48	4.45	2.07	24.12
1893	41	14	30	20	44	1.8	2.79	4.89	1.98	2.47	12.13
1894	19	12	31	22	60	1.1	3.08	2.43	.18	2.51	8.00
1895	30	14	31	25	103	0.4	2.84	2.23	3.22	1.50	9.79
1896	50	13	32	31	132	1.6	3.99	1.91	6.59	2.40	14.89
1897	35	10	33	25	71	1.6	2.10	3.96	4.35	2.62	13.01
1898	37	17	33	31	94	1.8	3.41	3.60	1.90	4.38	18.29
1899	34	15	40	32	120	1.5	9.21	3.46	3.20	1.82	17.69
1900	42	16	35	22	82	1.4	3.13	4.22	3.74	4.46	15.55
1901	22	15	32	28	33	1.5	1.86	3.86	2.74	.42	8.88
1902	28	15	31	24	112	1.8	4.61	5.57	7.52	9.93	27.63
Averages	33	14	3[illegible]	26	84	1.6					15.36

JONES COUNTY.

Area, 576 square miles; area in farms, 354,699 acres; number of farms, 2,373; value of farms (census of 1900), $14,761,750; value of farm buildings, $3,081,660; value of live stock, $3,484,931; value of the year's farm products not fed to stock, $3,074,637; acreage in cereal crops, 122,530 acres. Meteorological stations are maintained at Monticello and Olin. The records compiled at Monticello cover a period of forty-nine consecutive years. The service was begun by M. M. Moulton in 1854 and continued by him until 1874, after which Henry D. Smith served as observer until his death in the spring of 1897. Altitude of Monticello, 925 feet; Olin, 760 feet.

MONTICELLO—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month.	Lowest.	Month.
1854	16.0	28.0	41.0	53.0	60.0	70.[illegible]	76.0	73.0	6[illegible].0	57.0	30.0	28.0	50.7				
1855	24.0	19.0	41.0	56.0	53.0	68.0	73.0	70.0	55.0	49.0	30.0	20.0	46.4				
1856	10.0	18.0	26.0	50.0	0.0	74.0	76.0	69.0	51.0	53.0	34.0	15.0	44.[illegible]				
1857	6.5	28.0	30.0	38.0	56.0	68.0	74.0	69.0	65.0	50.0	31.0	[illegible]3.0	45.7				
1858	26.2	33.5	26.0	51.5	62.5	69.0	73.[illegible]	67.0	66.[illegible]	53.1	25.0	15.0	48.[illegible]				
1859	13.1	21.0	43.1	48.5	64.2	60.5	70.5	68.1	56.2	46.5	41.5	8.1	45.0				
1860	9.5	21.5	44.0	50.5	52.1	66.5	69.1	66.0	69.1	55.1	30.0	13.5	45.[illegible]				
1861	9.2	24.5	32.0	50.1	57.1	68.2	67.5	77.1	61.2	54.1	32.0	31.1	45.5				
1862	4.6	9.7	32.0	45.1	[illegible]2.2	65.0	72.1	71.0	61.0	52.0	35.1	26.3	44.0				
1863	26.4	11.2	31.2	50.5	57.0	64.1	63.2	[illegible]4.3	56.1	33.4	24.4	24.4	43.8				
1864	8.1	4.1	30.2	53.4	57.8	68.0	75.6	71.0	60.1	43.8	28.4	17.5	43.[illegible]				
1865	14.1	26.0	29.1	45.5	59.9	69.0	66.6	68.9	73.1	49.0	40.5	17.5	45.9				
1866	15.0	14.0	26.2	4[illegible].4	56.6	64.9	76.1	66.0	56.9	50.4	37.2	23.5	44.[illegible]				
1867	16.0	25.2	23.8	45.8	51.8	70.[illegible]	71.8	70.8	61.5	49.[illegible]	38.5	20.4	45.4				
1868	11.8	22.0	[illegible]1.0	44.[illegible]	61.0	68.5	79.3	67.4	55.6	45.0	36.4	[illegible]8.4	45.8				
1869	22.0	24.1	27.9	43.8	5[illegible].2	65.6	70.3	71.0	61.8	[illegible]9.6	30.9	20.8	44.7				
1870	18.3	23.1	28.8	51.9	63.0	70.8	76.4	69.4	66.7	51.5	37.2	22.4	48.[illegible]				
1871	21.9	24.5	38.2	56.2	63.3	71.2	72.8	71.0	63.4	..		14.5					
1872	17.4	21.1	26.2	48.2	58.2	66.7	71.8	71.4	59.1	50.7	26.5	14.4	44.[illegible]				
1873	11.2	16.4	28.7	46.4	59.4	73.7	73.3	73.8	60.0	56.0	30.7	24.1	44.4				
1874	19.1	22.2	31.9	39.0	62.3	67.9	74.0	72.0	64.6	53.0	32.2	21.4	46.8				
1875	3.6	7.5	27.1	45.2	65.5	65.5	70.6	67.6	62.5	45.0	30.5	31.2	43.[illegible]				
1876	24.2	25.5	29.1	49.5	61.5	68.8	74.9	73.0	61.1	47.0	31.[illegible]	11.8	46.[illegible]				
1877	13.1	32.8	27.1	43.4	59.1	66.0	73.6	70.1	65.1	49.7	32.8	39.5	47.[illegible]				
1878	26.1	34.6	45.8	53.2	56.6	67.4	77.2	70.9	61.2	49.9	38.6	18.4	48.[illegible]				
1879	15.7	22.1	37.0	53.2	62.7	68.9	76.7	72.[illegible]	58.8	58.0	36.7	19.5	48.[illegible]				
1880	32.9	27.7	34.6	46.8	64.5	69.5	72.5	71.3	59.5	47.7	27.0	19.1	47.[illegible]				
1881	10.9	19.3	30.5	46.1	[illegible]8.1	68.1	74.4	72.5	65.0	52.8	33.4	32.0	47.[illegible]				
1882	21.3	33.9	35.0	48.2	53.8	68.0	71.5	74.4	59.0	54.3	38.0	21.0	48.[illegible]				
1883	6.[illegible]	15.8	28.4	59.9	55.6	68.9	72.0	68.0	57.1	47.1	35.0	22.4	43.1				
1884	9.4	18.1	29.2	46.6	58.6	68.2	70.1	67.6	66.6	51.8	32.0	15.8	44.[illegible]				
1885	5.9	8.7	27.2	45.2	56.8	67.5	74.4	65.8	60.5	45.4	33.2	22.6	42.[illegible]				
1886	9.8	19.8	30.2	50.9	61.[illegible]	68.9	75.0	73.5	63.0	53.0	31.7	14.2	45.[illegible]				
1887	8.9	19.5	32.0	49.6	65.1	72.0	76.2	69.8	61.0	43.8	32.5	21.4	46.[illegible]				
1888	6.7	18.1	26.5	47.3	53.9	68.9	75.5	69.5	58.4	46.2	36.9	28.6	44.[illegible]				
1889	22.3	17.9	39.4	48.8	59.9	66.8	73.2	69.7	61.1	44.7	33.0	36.9	47.[illegible]				
1890	2[illegible].7	27.5	27.8	50.9	5[illegible].6	73.2	73.9	66.7	58.2	48.0	37.5	20.[illegible]	4[illegible]				
1891	25.6	21.6	27.0	50.0	58.0	69.8	68.4	68.1	6[illegible].5	48.8	29.9	31.8	47.[illegible]				
1892	13.8	28.2	30.6	44.[illegible]	54.5	67.8	72.6	70.2	62.0	52.8	29.7	16.4	45.[illegible]				
1893	5.6	14.6	29.4	43.6	54.8	70.4	74.0	68.2	62.6	49.8	31.5	19.9	43.7				
1894	18.7	[illegible]7.4	38.4	50.9	60.5	72.8	75.4	75.0	62.8	49.3	30.7	28.9	48.[illegible]				
1895	12.0	18.0	31.0	52.0	6[illegible].0	69.0	70.0	69.0	64.0	40.0	31.0	22.0	44.[illegible]				
1896	19.9	[illegible]1.3	27.6	50.7	63.3	66.8	69.5	70.0	57.8	46.4	31.5	29.9	46.[illegible]				
1897	17.0	25.0	32.0	47.0		....	74.0	68.0	68.0	57.0	34.0	17.0	....				
1898	23.6	23.4	38.0	47.0	60.0	73.0	75.0	71.0	66.[illegible]	49.0	33.0	18.0					
1899	19.7	13.6	26.4	49.4	60.1	69.6	72.9	72.4	59.1	56.6	44.4	24.6	47.6	98	Sept.	-25	Feb.
1900	25.[illegible]	13.4	29.0	53.0	61.4	67.0	72.1	76.3	64.2	57.7	33.4	25.0	48.2	96	Aug.	-13	Feb.
1901	22.6	15.2	32.6	49.5	61.2	70.6	....	70.4	62.3	52.6	33.8	20.8	....	108	July	-18	Dec.
1902	20.2	15.6	38.4	....	64.6	65.9	74.4	67.4	57.8	54.4	....	19.6	....	92	July / Aug	....	....
Averages	16.0	22.9	31.9	47.4	59.5	68.5	72.9	70.1	61.6	49.5	33.5	22.1	46.1	....	....	....	....

JONES COUNTY—CONTINUED.

MONTICELLO—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.				
1855	2 71	1 87	2 92	3 60	3 15	4 50	3 12	4 75	2 15	3 91	3 21	3 79	40 07	....	.....	....	.....
1856	.91	3 97	77	2 80	4 15	2 76	2 97	1 17	2 67	4 07	4 21	6 00	38 40	..	.....	....	.....
1857	1 16	4 22	1 40	3 70	2 18	.74	3 97	4 85	1 67	1 18	2 84	2 05	30 62	....	.....	....	.....
1858	1 35	2 32	2 31	2 16	7 97	6 63	7 16	4 18	6 21	5 06	4 42	2 27	52 07	..	.....	..	.....
1859	1 31	1 29	4 06	2 71	6 02	4 92	3 10	1 66	1 74	1 02	1 47	1 47	32 31	..	.....	..	.....
1860	1 23	1 16	1 20	2 08	2 11	4 21	4 72	2 70	3 14	1 25	2 85	5 96	32 90	....	.....	....	.....
1861	1 16	2 74	2 65	4 16	2 15	1 25	1 85	3 16	6 79	5 77	2 25	2 30	37 08	..	.....	..	.....
1862	1 25	1 65	4 71	5 78	4 15	6 26	4 35	6 38	6 85	3 05	5 72	1 27	52 05	..	.....	..	.....
1863	2 85	2 37	1 97	.63	4 27	1 18	1 15	3 98	2 10	5 35	5 12	6 05	34 02	..	.....	..	.....
1864	2 14	1 50	2 18	1 14	2 42	2 57	3 20	2 37	1 17	2 55	2 57	1 85	25 84	....	.....	....	.....
1865	.22	2 28	3 50	5 47	.86	9 02	4 35	2 78	5 62	2 80	.12	1 00	38 09	....	.....	....	.....
1866	3 77	1 02	1 32	2 67	3 16	4 00	5 63	8 20	3 73	3 21	1 45	2 15	40 31	....	.....	....	.....
1867	1 23	3 46	1 35	1 25	4 67	6 32	4 30	3 37	2 18	1 15	.10	.65	30 85	....	.....	....	.....
1868	.30	.55	4 02	2 78	4 50	3 75	2 90	1 70	6 72	.65	3 05	1 58	31 50	....	.....	....	.....
1869	1 71	1 13	.07	1 90	5 55	6 05	8 31	6 41	2 75	1 35	2 45	2 25	40 13	....	.....	....	.....
1870	1 35	1 31	3 00	1 05	4 11	1 60	5 25	3 65	3 95	1 55	1 65	1 54	29 97	....	.....	....	.....
1871	2 70	3 45	4 11	1 66	1 20	3 18	1 24	2 81	....	3 11	4 05	3 32	31 12	....	.....	....	.....
1872	.90	.92	2 62	3 63	3 47	4 70	3 63	7 05	4 12	.43	1 38	.93	32 87	....	.....	....	.....
1873	2 50	2 52	2 08	2 97	4 07	4 45	1 76	1 31	.81	4 03	2 78	2 83	31 72	....	.....	....	.....
1874	3 27	2 50	1 76	1 78	.76	3 16	.60	2 81	6 26	1 18	3 45	3 22	30 75	....	.....	....	.....
1875	1 61	1 58	.70	2 72	3 08	4 32	5 34	2 37	2 95	.55	.38	2 95	28 55	....	.....	....	.....
1876	2 29	1 88	4 06	2 83	4 75	7 00	10 45	5 74	8 62	1 24	2 61	.77	52 36	....	.....	....	.....
1877	2 10	.32	6 54	3 40	3 70	8 74	2 22	6 75	1 47	6 21	3 84	2 67	47 97	....	.....	....	.....
1878	.48	1 35	2 94	2 79	5 96	5 02	2 16	3 07	6 30	3 82	.99	1 14	35 69	....	.....	....	.....
1879	.51	1 21	1 71	1 08	3 4.	5 30	8 60	6 94	3 69	.93	5 20	2 04	40 70	....	.....	....	.....
1880	2 30	1 20	2 83	2 75	3 92	6 32	5 95	7 22	3 32	.89	1 85	1 50	36 05	....	.....	....	.....
1881	1 79	2 90	2 74	1 35	4 17	7 98	5 67	2 23	10 15	7 21	2 90	.94	50 03	....	.....	....	.....
1882	.62	1 25	2 32	4 97	5 45	3 61	2 00	3 10	2 83	5 58	1 67	2 16	35 50	....	.....	....	.....
1883	.87	2 05	.88	1 55	5 29	3 85	10 93	1 22	1 65	4 43	1 35	1 20	35 94	....	.....	....	.....
1884	.61	1 15	3 90	1 80	3 74	2 82	3 39	3 78	6 8	3 19	1 59	4 34	37 77	....	.....	....	.....
1885	1 75	.72	.22	4 16	3 60	5 54	6 16	8 54	3 95	2 65	.61	2 48	40 28	....	.....	....	.....
1886	3 35	1 81	3 50	1 80	4 65	1 41	.63	2 38	2 80	5 34	1 35	.84	29 36	....	.....	....	.....
1887	2 39	4 62	2 45	.83	2 72	1 49	4 45	3 31	6 31	1 39	.77	3 22	33 95	....	.....	....	.....
1888	1 13	1 48	3 71	1 50	6 10	3 18	6 38	1 71	1 85	2 02	2 77	2 26	34 69	....	.....	....	.....
1889	1 72	.79	.15	3 32	4 56	4 89	4 24	.22	2 62	1 25	.98	1 5	26 28	....	.....	....	.....
1890	1 90	.58	1 86	2 09	4 48	12 19	1 79	4 97	4 05	6 82	2 21	.71	44 05	....	.....	....	.....
1891	1 25	.86	2 55	2 00	2 70	1 92	4 55	4 11	.64	2 16	2 55	2 09	27 38	....	.....	....	.....
1892	1 44	1 18	1 11	2 70	8 58	8 87	4 39	2 44	2 06	.93	1 43	1 96	38 09	....	.....	....	.....
1893	1 18	1 32	2 44	3 58	2 57	5 82	1 92	1 23	2 50	2 08	1 80	1 54	27 98	....	.....	....	.....
1894	1 08	.81	3 84	3 46	1 55	8 03	.13	3 42	3 35	2 11	2 03	.97	25 78	..	.....	....	.....
1895	.98	.43	.99	.50	2 82	1 27	2 43	1 46	2 50	1 10	1 53	2 47	18 57	....	.....	....	.....
1896	.42	.84	.53	5 65	4 84	1 91	7 55	1 91	4 11	1 98	1 48	.67	31 59	....	.....	....	.....
1897	2 95	1 07	2 56	5 86	.....	.....	..	1 17	2 11	1 12	1 04	2 63	..	....	.....	....	.....
1898	2 56	.97	2 42	2 40	3 46	.....	1 71	5 08	3 59	3 25	1 42	.35	..	....	.....	....	.....
1899	.49	.97	.37	3 81	6 19	4 24	2 48	1 75	.56	1 11	1 66	4 28	27 82	....	.....	....	.....
1900	.73	1 76	2 49	3 23	2 75	1 26	6 49	2 97	3 47	5 00	1 30	.30	31 75	..	....	....	.....
1901	1 36	.63	3 38	1 24	1 56	3 56	.59	.97	3 29	1 97	1 84	1 27	20 66	....	.....	....	.....
1902	.88	.92	1 72	.95	5 97	9 78	7 80	2 99	4 85	1 39	2 50	2 46	41 94	....	.....	....	.....
Averages	1 54	1 60	2 39	2 69	3 91	4 49	4 16	3 55	3 72	2 72	2 14	2 21	35 12		.....	..	.....

OLIN—MEAN TEMPERATURE.

1898	....	....	37 1	46 0	58 0	70 0	74 0	70 0	64 0	47 0	31 0	19 0	....	....	.....	....	.....
1899	19 5	14 1	26 1	49 4	59 9	70 6	72 4	74 5	61 4	55 4	42 2	22 4	47 4	....	.....	....	.....
1900	29 7	16 0	40 .	50 6	61 8 .	....	....	....	....	....	34 0	28 0	....	....	.....	....	.....
1901	20 4	13 2	32 7	41 2	59 8	72 8	81 2	70 9	62 4	52 8	33 8	23 2	47 7	..	.....	..	.....
1902	20 7	13 8	38 4	46 2	64 7	64 8	72 6	68 0	58 2	52 4	43 0	21 2	47 0	..	...	..	.....
Averages	22 6	14 3	33 0	46 7	61 0	69 6	74 8	70 8	61 5	51 1	36 9	22 8	47 2		.....		.....

OLIN—PRECIPITATION.

1898	....	....	2 88	2 32	4 70	1 90	1 5	6 47	3 35	4 47	1 24	.16	....	....	.....	....	.....
1899	.39	1 47	95	2 83	7 58	.47	3 34	1 88	.96	.89	.92	2 24	28 82	....	.....	....	.....
1900	.81	1 56	3 14	3 27	3 08	....	.	....	.....	....	1 13	.20	....	....	.....	....	.....
1901	2 34	1 34	3 41	1 20	1 69	5 09	1 08	.64	2 85	1 44	1 00	1 82	23 90	....	.....	....	.....
1902	.80	.94	1 89	1 30	5 59	6 63	8 47	5 34	6 55	2 88	1 72	2 87	44 78	....	.....	....	.....
Averages	1 08	1 33	2 45	2 18	4 53	3 52	3 60	3 58	3 38	2 42	1 20	1 46	30 73	..	..	..	..

JONES COUNTY—CONTINUED.

JONES COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL, MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons	May.	June.	July.	August.	Total.
1890	40	11	28	30	50	2.0	4.48	12.10	1 79	4 97	23.53
1891	42	14	40	36	170	1.5	2.70	1.92	4.55	4.11	13.28
1892	23	20	29	26	68	1.5	9.58	8.87	4.39	2.44	25.28
1893	45	14	29	31	80	1.6	2.57	5.82	1.92	1.23	11.54
1894	21	16	37	32	57	1.1	1.55	3.03	.13	3.42	8.13
1895	17	15	42	29	80	1.0	2.82	1 27	2.43	1.46	7.98
1896	50	12	30	30	108	1.7	5.44	1.91	7.55	1.91	16.81
1897	34	14	35	26	30	1.6	3.47	4.10	2.10	1.17	10.84
1898	30	16	38	33	120	1.9	3.46	1.90	1.51	6.47	13.34
1899	45	20	36	32	120	1.5	6.19	4.24	2.48	1.75	14.66
1900	43	14	35	33	76	1.6	2.75	1.26	6.49	2.97	13 47
1901	26	15	32	29	45	1.5	1.56	3.56	.59	.97	6.68
1902	40	12	33	32	115	1 8	5.81	9.78	7.80	3.31	26.70
Averages.	35	15	31	30	86	1 5	..	..	....	....	15.20

JACKSON COUNTY.

Area, 619 square miles; area in farms, 394,420 acres; number of farms, 2,637; value of farms (census of 1900), $11,908,350; value of farm buildings, $3,087,650; value of live stock, $3,104,633; value of the year's products, not fed to stock, $2,801,911; acreage in cereal crops, 129,180 acres. The following tables contain meteorological records compiled at Maquoketa. Elevation of the station, 688 feet.

MAQUOKETA—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1881	18.3	25.9	37.2	49 2	76.6	74.7	82 7	82.6	75.8	60.0	40.0	38 2	.....				
1890	24.9	30.1	29.8	52.3	55.1	73 2	74.3	68 4	57.3	49 5	38.1	27.7	48 4				
1892	14.6	29.1	3..9	45.3	55.8	68 5	73 4	70 4	61.0	....	31.8	18 9	....				
1893	7.2	16.0	31 8	45.8	57.4	.....	75.0	69.3	62.3	47.7	33 3	23.6	.....				
1897	18.9	27.(	35.0	49 0	60.0	69.0	76 0	69.0	68 0	56.0	36.0	22.0	48 8				
1898	23.0	23 6	38.8	48 1	59.3	70 2	72 6	69.6	61.1	53.0	35 7	21.6	48 3				
1899	21.9	16.4	31.8	50.1	60.4	70 4	72.3	72.6	61 6	56.2	44.5	25.4	48.6	96	Sept	-26	Feb.
1900	25 7	17.4	30.1	51.4	61 2	67.6	71 2	76.3	64 6	59.2	36.6	.....	.....	95	Aug.	...	.....
1901	25 6	14.2	35 4	50.1	59.8	71.8	80.6	72 2	63.6	54 6	37.0	23.6	49.0	108	July	-15	Dec.
1902	21 4	16.1	39.1	47.8	65.5	65.0	72.8	68.6	59.6	53 3	44.2	19.6	48.8	92	July	-29	Jan.
															1901		1899
Averages.	20 1	21.6	34.0	48.9	61.1	70.0	75.1	71.9	63 8	54.4	40 8	25.1	48.5	108	July	-26	Feb.

MAQUOKETA—PRECIPITATION (INCHES).

1881	.92	3.13	1.81	.92	4.55	6.35	4.84	2 98	4.87	5.44	2 07	4.67	41.65				
1890	3.19	1.33	1.90	1.70	3.03	10 98	1.17	5.42	2.44	4 54	2.28	.52	38.50				
1891																	
1892	.67	1 71	2.54	5.93	9.38	9.62	6.48	2 27	1 08	....	1 48	2 29	43.70				
1893	.84	1 72	3.17	4.30	1.57	....	2.07	1.62	3.22	.78	1 21	1.10	21 83				
1897	2.65	1.15	2.81	3.24	1.40	2.54	2.12	.93	2 11	.29	1 06	1.01	20.87				
1898	2.01	1.52	2.93	2.20	3 64	2.20	2.45	4.84	2.99	3.74	.94	.25	30.21				
1899	.24	.78	.65	1.36	6 74	5.82	2.77	2.89	1.10	1 59	1.26	1.82	27.0				
1900	.83	1.10	2.34	1.90	7.06	2 20	8 04	4.43	4 62	4.64	1.57	....	38 73				
1901	1.15	1.25	3 03	1.04	1.91	3.11	2.15	.76	3.27	1.62	.51	1.54	21.34				
1102	.78	1.31	2.23	1.69	5.73	8 67	8.80	3.57	6.39	2 37	1 17	2.35	46.0				
Averages.	1.32	1.50	2.29	2.53	4.52	5 72	4.09	2 83	3.21	2.94	1.45	1.61	33.14				

JACKSON COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	28	15	23	21	45	2 0	3.03	10.98	1.17	5.42	20.60
1891	44	14	37	27	125	1.8	.....	.....	.....	.....	.....
1892	28	14	29	22	42	1.8	9.38	9.62	6.48	2.27	27.70
1893	35	13	27	25	35	1.5	1.77	4.10	2.07	1.62	9.56
1894	24	16	35	25	65	1.5	.....	.....	.....	.....	.....
1895	30	14	29	20	55	.7	.....	.....	.....	.....	.....
1896	40	16	35	18	142	1.7	.....	.....	.....	.....	.....
1897	32	15	32	30	45	1.2	1.40	2.54	2.12	.93	6.99
1898	36	16	35	25	78	1.5	3.64	2.20	2 45	4.34	12.63
1899	41	15	30	22	102	1.5	6.74	5.82	2 77	2 89	18.82
1900	42	15	30	33	82	1.6	7 06	2 20	8.04	4.43	21.73
1901	25	15	26	30	38	1.4	1.91	3.11	2.15	.76	9 93
1902	36	15	28	30	60	1.8	5.73	8.67	8.80	3 57	26.77
Averages.	33	15	30	25	70	1.5	.....	.....	.....	.....	17.12

CLINTON COUNTY.

Area, 680 square miles; area in farms, 423,251 acres, number of farms, 2,786; value of farms (census of 1900), $19,623,080; value of farm buildings, $4,285,110; value of live stock, $3,959,715; value of the year's farm products not fed to stock, $3,782,638; acreage in cereal crops, 174,110 acres. This county has had the benefit of meteorological records covering the period of about forty years, Dr. P. J. Farnsworth serving as observer at Clinton from 1860 to 1871, and Dr. Luke Roberts from 1879 to the present date. The observations have been made with unusual care, and the data compiled are of great value to the locality and the state. Altitude of Clinton, 593 feet.

CLINTON—TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1860	....	....	28.9						59 7	49.8	32 6	18.2	....	....	.....	....	.....
1861	17.3	24.6	33.7	53 1	55.2	68.3	69.0	71.2	59.6	49.1	37.2	30 5	47.1	....	.....	....	.....
1862	18.9	17.7	31.3	40.0	58 4	65.2	72.0	71.4	63 3	50.0	33 3	29.8	46.30	....	.....	....	.....
1863	....	....	32 5	....	60 4	66.3	71 6	71.8	61.6	44.5	37.2	27.5	....	....	.....	....	.....
1864	18.8	....	33.8	46 5	62 3	69 9	74.2	71.3	64 1	47.9	35 2	17 8	....	....	.....	....	.....
1865	18.0	28.8	33.2	47 9	61.2	72.0	69.7	72.2	73.6	51.4	39.6	21.8	49.1	....	.....	....	.....
1866	19.8	19.8	31.0	51.5	58.9	67.6	77.0	67.3	57.5	51 9	40.0	25 4	47 2	....	.....	....	.....
1867	17.9	28.0	26.2	44 4	51.6	72 3	74.2	74.8	64 2	55 5	....	20.8	....	....	.....	....	.....
1868	15.0	22.9	41.8	42.7	59.8	70.2	82.9	71 1	60.5	51.0	40.2	22 1	48.4	....	.....	....	.....
1869	29 8	26 9	23.2	45.1	57 6	65.9	69.9	71.6	61.8	40 4	30.7	24.0	46.0	....	.....	....	.....
1870	21.5	22.9	30.4	50.8	61.8	70 0	76.8	71.4	67.2	59 9	36.4	24.9	48.8	....	.....	....	.....
1871	24.1	27.1	41.3	49.6	64 2	71.5	....	....	....	....	....	....	....	....	.....	....	.....
1879	8.8	19.4	32 3	43.8	58.4	66.3	73 2	68 6	56.0	53.9	35.4	21 0	44.8	....	.....	....	.....
1880	33.7	26 9	32 3	45.6	63.9	69.5	71.6	72 0	61.1	46.6	25.3	17.0	47.1	....	.....	....	.....
1881	10.5	18.2	29 5	43.4	68.2	68.5	77.2	75 2	67.3	53 5	34.4	32.0	48.2	....	.....	....	.....
1882	22 4	33.6	36 3	48.8	53.5	67.4	68.7	70.6	61 6	53.8	37.2	21.3	47.9	....	.....	....	.....
1883	8.0	13 5	29 0	49 0	55.3	67.6	73.0	67 9	58.0	47.1	36 4	23.4	43.4	....	.....	....	.....
1884	21.2	21.4	31.2	47.6	60 0	69.6	70 4	67.8	67.2	52.8	33.6	18.6	46.8	....	.....	....	.....
1885	9.1	8.4	29.2	45 8	57.9	68.4	73.5	66.5	60.4	45 6	30.4	23.4	43.7	....	.....	....	.....
1886	13.3	22.2	32.1	51.3	61.3	70.0	75.3	73.3	63 9	52 4	33.0	16.1	47.0	....	.....	....	.....
1887	12.3	23.1	32.4	50 9	66 6	72 6	76 5	70.1	62 2	44.5	34.3	22.7	47.4	....	.....	....	.....
1888	8 4	18.6	28.6	43 5	55.3	70.2	74 5	69.4	58.0	46.4	37.5	29.4	45.0	....	.....	....	.....
1889	24.4	18.8	39 2	50.4	59.9	67.3	73.2	69 8	61.0	46.1	35.1	33.2	48.6	....	.....	....	.....
1890	26 0	29.6	28.5	51.8	57.6	74.4	75 6	68.6	58.8	49.8	38.4	28.1	49.0	....	.....	....	.....
1891	25.0	25.2	28.1	51.4	58.7	70.4	68.8	68.8	66 3	49.7	31.2	32.7	43 1	....	.....	....	.....
1892	15.9	29.9	32.7	46.7	55.6	68 8	73.2	73.5	63.9	53.5	32 1	.....	.....	96	Jly Ag.	....	.....
1893	8.3	16.7	34.4	47.5	57.6	71.8	76.3	70.5	64.4	52 7	34.3	23.9	46.5	96	Ag Sep	-20	Jan.
1894	23.4	20.8	42.6	52 7	61.5	74.3	75 4	73.6	65 4	52.0	33.2	31.2	50.5	100	Jly Ag.	-28	Jan.
1895	14 0	13.0	34.0	53.0	62 0	73 0	74.0	74.0	69.0	46.0	35.0	28.0	47.9	99	July	-21	Feb.
1896	25.2	25.4	32.3	57.3	69.0	71.3	74.4	72.8	60.1	48.2	35.1	30.6	50.2	97	Jly Ag.	-12	Feb.
1897	20.0	23.0	35.0	50.0	60.0	71.0	77.0	71.0	63.0	57.0	34.0	22.0	47.7	100	June.	-21	Jan.
1898	25.0	25.0	40 0	48.0	61.0	72.0	75.0	72.0	66.0	50.0	33.0	22 0	49.1	99	July ..	-8	Feb. Dec.
1899	21 2	15.1	29.0	51 8	61 4	71.5	73.3	73 9	62.3	56.2	43.1	24.2	48 6	98	Sept ..	-28	Feb.
1900	27.0	17.1	22.9	50.8	63 0	70.0	73 3	77.6	65.5	53.2	35.0	28.5	49.7	98	July ..	-10	Feb.
1901	24 4	14 8	34.7	49.4	61 0	73.3	80 6	73.4	63.2	53 6	33.9	22.4	48.7	106	July ..	-12	Feb. Dec.
1902	22.3	18.8	39.7	48.5	65.6	63.3	74.2	69.5	59.6	53.4	44 6	22.8	48.6	95	July ..	-15	Jan.
Avgs.	19.2	22 0	32.8	49.6	60.9	69.9	74 0	71.2	63.1	50.4	35.5	25.1	47.6	106	1901 July	-28	Jan. '94 Feb. '99

CLINTON COUNTY—CONTINUED.

CLINTON—PRECIPITATION.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.					
1866	2.80	4.10	4.75	2.80	2.65	4.80	6.30	7.75	..	3.10	.50	3.50	....	..	.....	..	.....	
1867	2.50	1.00	6.00	1.75	7.00	4.50	2.00	4.25	1.85	.95	..	1.50	....	..	.....	..	.....	
1868	.75	1.00	3.50	6.75	10.05	6.00	3.00	1.00	6.00	1.20	4.45	1.35	52.85	..	.....	..	.....	
1869	1.65	5.31	1.65	4.71	4.60	5.80	6.45	8.15	4.00	1.30	2.15	2.70	48.95	....	.....	..	.....	
1870	4.50	6.30	4.25	.50	3.25	4.75	3.00	3.20	2.65	2.30	.70	.50	58.18	....	.....	..	.....	
1871	1.35	1.20	4.50	4.75	.75	4.25	....	....	....	....	....	....	....	....	.....	..	.....	
1876	.80	1.55	3.20	3.25	....	....	....	....	....	....	....	....	....	....	.....	..	.....	
1878	.50	2.40	4.70	3.70	5.85	5.30	1.70	4.25	1.95	5.60	1.30	2.15	37.72	....	.....	..	.....	
1879	1.35	1.80	1.71	1.98	4.97	4.58	8.05	2.40	.82	1.54	4.25	1.25	43.86	....	.....	..	.....	
1880	2.05	1.40	1.90	4.33	4.30	4.80	2.50	4.44	6.57	1.01	1.17	.78	39.96	....	.....	..	.....	
1881	1.80	4.90	4.13	2.40	2.12	8.18	2.25	1.58	4.01	5.55	2.22	2.44	41.16	....	.....	..	.....	
1882	.45	1.15	4.15	7.40	4.16	9.05	5.51	2.61	1.34	2.60	1.40	2.15	42.05	....	.....	..	.....	
1883	1.25	4.60	.70	2.30	7.10	5.55	4.20	.52	1.68	1.70	4.17	1.58	48.68	....	.....	..	.....	
1884	.74	2.10	2.74	2.01	5.20	4.55	5.08	2.44	7.89	4.16	1.02	3.82	43.04	....	.....	..	.....	
1885	1.50	2.32	.19	3.80	2.53	2.54	4.92	10.02	3.42	2.54	.74	3.73	38.21	....	.....	..	.....	
1886	3.15	1.01	4.45	1.93	4.23	4.25	5.70	1.82	3.85	4.29	1.00	1.04	39.74	....	.....	..	.....	
1887	3.52	4.20	.82	1.21	2.72	2.45	2.05	3.81	4.44	2.73	1.41	3.32	33.01	....	.....	..	.....	
1888	1.50	1.00	3.45	1.48	6.46	2.4	1.67	2.02	.35	1.97	4.19	3.05	45.76	....	.....	..	.....	
1889	2.45	1.07	1.13	2.01	3.53	1.94	7.21	1.06	3.44	1.36	.69	1.68	30.83	....	.....	..	.....	
1890	2.20	1.73	2.97	2.72	4.45	6.56	.40	3.12	1.97	3.74	1.45	.82	42.82	....	.....	..	.....	
1891	3.84	1.42	2.89	2.83	3.75	3.11	4.14	3.89	.68	1.46	2.81	2.64	33.35	....	.....	..	.....	
1892	1.31	1.76	1.81	4.43	8.41	3.39	4.49	1.81	1.20	.63	2.58	....	....	....	.....	..	.....	
1893	2.01	1.68	2.75	5.48	3.80	3.22	2.26	1.10	4.25	.98	1.77	1.29	33.3	....	.....	..	.....	
1894	2.62	1.91	2.80	1.36	4.77	2.54	.39	2.24	5.2	1.84	1.62	.53	27.95	....	.....	..	.....	
1895	1.80	0.67	1.08	.28	5.79	4.68	1.69	1.87	3.40	1.04	2.75	2.2	30.38	....	.....	..	.....	
1896	1.10	1.92	.95	4.53	4.90	3.10	7.13	2.36	4.39	1.68	.72	.82	33.37	....	.....	..	.....	
1897	3.25	1.61	3.75	5.38	.98	3.68	1.69	.54	2.00	.37	2.00	1.40	23.77	....	.....	..	.....	
1898	3.60	2.37	4.73	3.53	4.53	8.02	1.89	7.85	2.80	4.97	1.42	.42	46.15	....	.....	..	.....	
1899	.27	1.45	1.89	2.25	8.38	3.01	3.54	3.91	.76	1.48	1.05	2.32	30.33	....	.....	..	.....	
1900	1.31	2.78	3.24	2.24	4.77	1.70	8.32	5.32	4.6	2.73	1.80	.26	39.88	....	.....	..	.....	
1901	1.35	1.40	3.86	.80	1.72	3.47	4.26	.48	2.52	.81	.62	.86	22.05	....	.....	..	.....	
1902	.63	1.18	2.19	1.45	6.04	9.90	7.79	4.08	3.79	3.15	2.51	2.09	44.80	....	.....	..	.....	
Avgs.	1.85	2.11	3.02	2.93	4.60	4.48	4.09	3.05	3.10	2.41	1.90	1.81	35.55	..	.....	..	.....	

CLINTON COUNTY CROPS.

YEAR.	AVERAGE PER ACRE						RAINFALL MAY 1st to SEPT. 1st.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Totals.
1890	43	13	31	29	82	2 0	4.43	6 59	.40	3 12	14.45
1891	44	14	44	23	100	1 5	3 75	3.11	4.14	3.89	14.89
1892	32	15	24	30	33	2.0	8.41	9.39	4.49	1.81	24.10
1893	40	10	40	34	43	1.7	3.80	3 22	2.26	1.20	10.48
1894	15	15	30	20	80	1.5	4 77	2 54	.39	2.24	9 94
1895	32	15	31	26	50	.8	5 79	4.68	4.69	1.87	17.03
1896	47	11	37	28	92	1.8	4.90	3.10	7.13	2.36	17.49
1897	35	20	26	20	45	1.8	.94	3.68	1.69	.54	6.89
1898	33	15	32	27	90	1 8	4.53	8.02	1.89	7.87	22.01
1899	37	15	30	25	120	1.8	8.38	3 01	3 54	3.91	18.84
1900	42	15	30	31	80	1.5	4.77	1.70	6.32	5 32	18.11
1901	28	11	27	27	37	1.2	1.72	3.47	4.26	.48	9.63
1902	33	10	22	20	75	1.5	6.04	9.90	7.79	4.08	27.81
Averages	34	14	31	26	70	1 6					16.28

SCOTT COUNTY.

Area, 447 square miles; area in farms, 278,945 acres; number of farms, 2,347; value of farms (census of 1900), $14,987,980; value of farm buildings, $3,973,940; value of live stock, $2,489,635; value of the year's farm products not fed to stock, $2,961,750; acreage in cereal crops, 140,450 acres. The following tables of temperature and precipitation were compiled at the United States Weather Bureau station at Davenport. Altitude of the station, 529 feet.

DAVENPORT—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l	Highest.	Month	Lowest.	Month
1871	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
1872	12.6	27 1	22.3	51.2	61.7	72 5	75 5	71 2	64.8	51.1	32.1	18.2	48.7	93	July	..	.....
1873	17.1	23.4	30.5	46.9	59 1	71.7	73.2	78 1	62.3	48 3	33 5	29.6	49 0	95	Aug	-20	Jan.
1874	24 7	25 9	34.3	41.2	64.3	72.6	77.5	74.3	65.1	2 2	34.3	27 9	49.6	98	July	-10	Jan.
1875	19.4	19.1	30.1	45.7	60.5	68.4	73.1	69 3	61 7	48.6	33.4	4 5	45.4	92	July	-22	Jan.
1876	20.9	30 1	32 1	50 6	62.1	69 0	75.4	74.6	62 5	49 2	35.2	15 4	48.8	100	July	-17	Dec.
1877	16.8	26 3	28.7	49.4	61.6	69.1	75.0	72 5	7 1	51.5	37 1	1 42	5 50 8	97	July	-11	Jan.
1878	30.1	26 7	48.2	54.7	67.5	68 0	78.0	74.1	65 1	51 8	42 3	20.3	52 2	95	July	-7	Dec.
1879	18.4	25.5	39.5	50.5	64 8	69.5	76.9	71.7	60.5	55 0	39 9	24 8	50 0	94	July	-19	Jan.
1880	27.6	32.9	37 0	49.7	67 2	72 2	74 5	74 5	62 8	50 7	30 7	21 8	51 0	94	July	-14	Dec.
1881	13.8	19.9	28.8	44.6	60.6	69.7	77 0	77.2	69 8	56 5	39.7	38 2	50 4	100	Aug	-21	Jan.
1882	24.9	30 3	40.3	51.3	65 6	68.6	76.5	72 2	64 4	57 7	42 2	28 2	54 1	89	July	-15	Dec.
1883	15 5	24 4	34.7	51 7	67.0	68.3	73 7	69.8	60 9	50 3	41.7	31 1	48 3	92	June	-3	Jan.
1884	18.8	26 9	36.4	50.1	61 2	70.3	71 8	70 0	69 5	47.2	40.3	25 1	49 8	96	Sept	-27	Jan.
1885	16.9	17.8	31 3	49.4	67.8	68 2	75 5	68.0	63 0	48.2	38.1	25.6	46.5	97	July	-18	Jan.
1886	13.3	23.1	33 0	52.0	62.4	70 2	76 3	74.4	65 5	55.7	35.1	17 5	48 2	95	July	-22	Dec.
1887	13 2	23 8	34.8	52 3	67.1	73.0	78.0	72 2	64 4	47.5	35.3	24.1	48.9	96	July	-29	Jan.
1888	9.7	20 8	30.1	49.5	65 2	69.6	76.2	71.3	0 8	49 0	40 1	32 0	47 1	99	July	-24	Jan.
1889	24.4	20 0	41.0	50 8	60.0	67 0	73 8	72.1	2 8	49.0	36 0	30.6	49.9	92	July	-12	Feb.
1890	20.0	31.4	30.0	52.6	65 4	74 4	75.2	0 2	63.8	52 1	42.0	30 4	50 5	98	June	-7	Jan.
1891	27.8	26 4	28.8	51.8	68 3	70.6	69.2	70.0	69 7	53 1	32.4	34.8	49.4	94	Aug	-10	Nov
1892	24.6	31.0	34 0	47 2	59 0	70 0	74 0	75.0	65 6	55.6	33.0	30 4	48.0	94	July	-12	Jan.
1893	9.2	17.4	34.0	47 0	68 0	72 0	77.0	72 0	66 6	54.7	36 0	24.0	47.3	98	Sept	-15	Jan.
1894	24.0	22 0	43.0	53.0	61 0	75 0	77.0	75 0	67 0	51 0	34.0	32 0	51 4	100	July	-21	Jan.
1895	15.0	15 0	35.0	53 0	63 0	73.0	73.0	75.0	69 0	47.0	36 0	29.0	48.6	9	July	-20	Feb.
1896	26.6	26 7	33.0	57 1	68 4	70.7	74.6	73.1	60 6	49 8	35.8	32 8	50 8	98	Aug	- x	Jan.
1897	21.0	28.0	45.0	49.0	69.0	70.0	77.0	71.0	72.0	56.0	38.0	24 0	50 3	99	July	-19	Jan.
1898	26.3	27.6	40.6	49.4	61.2	72.8	75.8	73.0	68.1	50.0	34.6	23.2	50 1	97	July	- 6	Feb & Dec
1899	24.0	16 4	29.0	52.3	62 5	72 4	75.2	75.6	64 4	59.2	41.4	25.8	50 3	99	Sept	-23	Feb.
1900	28.2	18.0	30.8	52 6	64 0	70.4	74.8	70.8	69 0	61.8	37.0	2 4	51 2	97	Aug	- 8	Jan.
1901	20.6	15.7	35.8	50.5	61.3	74 2	83.0	74.2	65 4	55.4	36.8	22.8	50 2	100	July	-13	Dec.
1902	24.0	17.4	40.2	49.5	65.0	96.3	75.0	70.4	61 0	55.8	46.5	24.2	49.6	92	July	-13	Jan.
Averages	21 5	24.4	34 8	50 2	61 2	70 8	75.3	72 7	64.9	54 0	37.4	27 3	49.4	100	July	-27	1884 Jan.

SCOTT COUNTY—CONTINUED

DAVENPORT—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1871	....	....	....	....	....	3.08	2.30	4.83	3.03	1.95	3.33	1.64	....
1872	.13	.16	1.82	5.06	1.49	3.78	5.80	8.01	5.30	.61	1.85	.69	36.44
1873	3.56	.77	1.40	3.16	6.37	2.16	2.67	5.1	1.40	1.48	.62	3.84	28.08
1874	1.34	.74	1.34	2.64	3.45	5.37	3.10	3.08	7.80	1.90	2.45	.5	36.70
1875	.38	1.06	.88	2.30	2.01	4.01	9.36	7.74	4.06	1.03	.67	3.07	31.99
1876	1.67	1.63	4.55	5.39	3.50	4.25	4.84	2.25	5.50	1.54	2.54	.30	46.82
1877	1.41	.07	1.91	1.28	2.82	5.80	3.42	4.21	1.45	4.88	2.53	2.32	35.10
1878	.34	1.60	2.21	3.86	5.14	4.36	2.19	5.07	1.82	4.21	.90	.97	31.23
1879	.79	1.06	1.80	1.51	5.83	4.57	5.86	1.33	.43	.92	4.70	1.02	33.89
1880	3.13	1.22	2.88	4.56	5.69	7.2	4.3	5.39	4.87	.94	1.24	1.15	42.74
1881	1.34	4.1	4.34	1.11	1.34	7.94	.9	.81	5.39	6.85	2.10	1.7	35.28
1882	.90	.92	2.98	4.15	5.49	8.43	4.47	2.2	1.39	4.75	1.49	1.78	39.60
1883	1.10	4.42	7.03	3.35	5.46	4.38	3.66	1.02	7.45	1.43	4.58	.99	34.59
1884	.75	.9	3.52	7.3	7.9	3.67	4.5	3.84	4.29	.17	1.49	3.68	38.11
1885	2.10	1.29	.17	2.47	1.06	2.06	1.89	2.65	4.19	2.71	1.20	1.96	34.35
1886	2.22	1.52	3.08	1.84	3.53	.49	.43	2.67	2.43	1.47	.74	.53	23.13
1887	1.46	.87	.27	1.17	1.70	1.46	3.06	3.23	5.45	3.41	1.13	3.29	31.23
1888	1.54	1.17	2.70	1.57	3.23	3.86	7.31	2.79	1.38	2.81	3.51	2.59	40.46
1889	.95	1.41	1.74	4.84	1.34	5.54	8.25	1.13	3.27	.29	2.17	1.60	37.81
1890	2.49	1.10	2.34	.86	4.33	4.51	.85	1.66	2.34	3.63	1.37	.62	30.16
1891	2.38	.95	1.68	3.3	2.74	3.56	4.29	5.51	1.5	1.37	3.54	1.64	31.45
1892	1.60	1.38	3.06	5.41	8.84	10.79	4.16	1.53	2.69	.85	2.01	2.73	44.15
1893	1.14	1.69	2.25	4.5	2.67	3.82	1.75	1.14	3.36	.80	2.56	1.67	27.3
1894	.33	1.48	1.88	1.37	1.93	2.16	.44	2.0	3.02	1.62	1.24	.61	18.52
1895	1.27	.3	1.57	.32	2.22	1.22	5.16	4.79	.3	.81	2.50	2.54	27.14
1896	.82	1.45	.84	3.41	4.03	2.28	5.68	3.12	3.98	1.67	.98	.65	28.68
1897	3.58	1.57	2.82	3.69	1.91	1.87	3.21	.64	1.52	.36	1.64	1.53	23.91
1898	2.68	1.86	4.85	3.01	6.73	3.53	1.85	4.96	3.14	3.38	1.87	.5	38.95
1899	.31	1.91	1.04	2.94	7.35	4.02	2.84	4.47	.82	1.46	.90	2.68	31.64
1900	1.27	2.45	2.82	2.1	4.68	1.01	3.49	4.90	3.06	2.00	1.48	.21	30.17
1901	1.10	1.59	2.57	.88	1.37	3.02	1.48	.46	2.29	.45	.79	1.33	17.33
1902	.60	.96	1.76	1.4	4.57	7.35	6.38	7.25	3.29	2.81	1.95	1.88	40.31
Average	1.64	1.59	2.24	2.71	4.34	4.14	3.64	3.61	3.06	2.42	1.89	1.63	32.92

SCOTT COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	36	10	18	16	46	1.0	4 63	4.51	.85	1.66	11.35
1891	44	16	37	30	157	2.0	2 74	3 53	3.29	5.54	15.18
1892	30	12	23	16	45	1.7	8 84	1 79	4 16	1.53	25.32
1893	34	13	24	19	72	1.6	2.67	3.82	1.75	1.12	9.36
1894	20	12	26	15	56	0 8	1.93	2 16	.44	2 02	6.55
1895	30	21	44	34	95	1.2	2.28	1.22	5 16	4.79	13.45
1896	48	14	29	24	102	1 5	4.03	2.28	5 68	3 12	15.11
1897	33	15	30	25	89	1.5	1.91	1 37	3.21	.68	7.17
1898	30	13	26	24	90	1.7	6.73	3.53	1.85	4.96	17.07
1899	36	12	30	25	91	1.4	7 35	4.02	2 84	4 47	18.68
1900	42	14	30	24	65	1 5	4.68	1.01	3.49	4.90	14.08
1901	28	15	25	24	70	1.2	1.37	3.02	1.48	.46	6 33
1902	34	15	30	25	100	1.5	4.57	7.55	6 38	7.25	25.75
Averages	34	14	32	23	82	1.4	.....	.....	.....	.....	14.25

MUSCATINE COUNTY.

Area, 435 square miles; area in farms, 264,121 acres; number of farms, 1,976, value of farms (census of 1900), $11,342,880; value of farm buildings, $2,604,270; value of live stock, 2,197,576; value of farm products of the year not fed to stock, 2,416,388; acreage in cereal crops, 103,730 acres. At the city of Muscatine weather records have been compiled by public spirited citizens, the foremost of whom was the late Prof. Theodore S. Parvin, who began observations as early as 1839 and continued until 1860. After his removal to Iowa City the service was maintained by the Rev. John Ufford and the late John P. Walton. A station of the State Weather and Crop service was established at Wilton Junction in October, 1894. The records are included in the following tables.

*MUSCATINE MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1839	32 2	31 8	40.5	62.7	68.9	70 6	75.7	73.1	61 1	60 7	35.1	21.9	53 0	....	....	....	....
1840	19.5	28 2	38.3	52.9	63 1	72.4	73.9	72.1	63 1	52.6	41.9	29 6	50.6	....	....	....	....
1841	20 9	26 1	37 1	51.0	58.1	71 1	70 4	65.5	58.5	55 0	38 2	28.8	48 4	....	....	....	....
1842	26.3	28.1	45.8	53.3	57.9	65.6	68.4	68.7	64.5	55.5	39 2	21.6	48.8	....	....	....	....
1843	25.0	13 4	15 5	47.7	58.2	67.8	70 4	70.6	64 0	42 2	34.1	31.9	45 1	....	....	....	....
1844	22.7	30 3	38.3	60 8	65.9	65 8	74.9	70 0	61.4	46 1	36.1	25.3	49.0	....	....	....	....
1845	30.0	24.9	40 4	55.1	55.5	64 3	76 0	70.8	62.9	48 5	39 3	18.2	48 7	....	....	....	....
1846	31 2	24 2	40.6	52.7	64 1	66 1	73.0	72.0	65.9	43 0	39 1	28.9	50.1	....	....	....	....
1847	12.3	25.3	29 4	49.1	55.8	92 5	69 5	5 3	59.8	47.8	33 5	25.5	44.6	....	....	....	....
1848	28.0	28.4	35.2	45.1	62.0	64 3	64 0	66.7	56.3	43.9	30 8	19.1	45 3	....	....	....	....
1849	14.3	18.1	37.	6 44.8	54 8	67.6	66 5	65.3	61.7	49.0	42.9	18.4	45 0	....	....	....	....
1850	24.4	28.9	32 7	41 2	53.3	70 2	74.2	72.2	59.8	44.2	37.6	19.8	46.5	....	....	....	....
1851	24.0	27.7	38 2	43.5	58 2	64 6	71.6	69 1	68.3	50.4	34.5	21.4	47.6	....	....	....	....
1852	19.6	29.0	36 2	42 2	60.0	66 8	72 4	69 0	59 8	53.2	30.0	2.4	46.7	....	....	....	....
1853	27. 1	23 4	32 3	47.8	55 7	71.2	68.8	71. 1	62 2	45.5	34 7	26 7	47.7	....	....	....	....
1854	16 2	28 5	39.8	51. 1	60.0	69.0	76.2	73.0	68.2	44 4	36 8	27 8	49.3	....	....	....	....
1855	24.8	15.6	40.3	54 0	60.4	67.0	73 0	70.4	67 9	47.2	37. 8	21.7	47.5	....	....	....	....
1856	7.5	15.0	25 8	49 5	61 4	71.8	73.5	65 4	59.0	52.4	32 8	15.6	44.1	....	....	....	....
1857	6.2	28 8	29.9	38 3	53.9	65.1	71. 2	70.9	63.8	4 .9	31.2	31.4	44 9	....	....	....	....
1858	30 0	16.0	38.7	46 1	54.3	70.6	78.8	79.9	66.9	52 0	32 6	25 5	49 3	....	....	....	....
1859	24.1	25.8	40. 1	43 3	62.1	69 0	72 3	68.2	60.3	47.5	39 6	15 1	47.3	....	....	....	....
1860	21.3	24.6	42.7	49.6	64.3	69.3	71.7	68.8	64.2	61 3	35.7	17.5	48.6	....	....	....	....
1861	16.0	27. 1	35.6	52.7	58.0	72.0	73.5	75 4	65 2	54.5	39 4	32.5	50.2	....	....	....	....
1862	15 8	16.3	34.5	47.0	61.8	67.0	76 8	75 2	68 8	54.7	38.8	33.7	49 1	....	....	....	....
1863	20.3	27 6	31. 8	51 3	64.0	69.0	71. 4	73.6	2.4	45.4	40 3	24 8	49.2	....	....	....	....
1864	17.4	26.7	33.2	44.7	56 9	71.3	75.8	70.6	64 0	46 6	39.4	19 6	46 9	....	....	....	....
1865	18.4	29 6	33.7	44. 1	57. 1	72.2	79.2	70 2	70.8	50.4	38 5	20.7	47.9	....	....	....	....
1866	19.3	17.6	26.7	52.3	59 3	67 5	76.8	68.7	57 9	51 2	37.4	24 2	46 6	....	....	....	....
1867	16 0	25.5	36.7	47.4	53 7	72.4	73 1	73 4	62 5	51.9	39.8	25.7	47 3	....	....	....	....
1868	13.3	21. 1	41.3	43.6	60 4	70.8	82.1	66.1	57 0	48.8	38 0	21.3	47 0	....	....	....	....
1869	26.3	29 8	46.2	46.2	59.7	64.4	70.4	73.8	60.9	42.5	32 6	25.8	48.9	....	....	....	....
1870	21.4	25.3	30.6	52.7	61 3	71.5	73.0	70.2	66 5	52 2	39 9	23.8	49.3	....	....	....	....
1871	20.6	29.4	40 1	51. 1	64 5	68.8	71. 5	72 8	60.3	52 9	39 2	4 17.6	48 5	....	....	....	....
1872	20 5	27 0	26.5	49.3	60.8	69 5	73.3	73 0	60.8	48.3	29.1	14.5	46.0	....	....	....	....
1873	18.3	19.5	33.9	45.6	54.6	71.2	72 1	73.5	56.6	45.8	31 8	29 9	46 1	....	....	....	....
1874	20.7	26.6	33.2	39 5	62.0	73.1	75.5	74.8	64.2	51 1	34.3	25 3	48.4	....	....	....	....
1875	8 5	9.7	30 9	45.3	60 3	67 6	71.0	67.3	59.7	46 5	30 4	32 4	44 1	....	....	....	....
1876	28 4	24.1	30. 4	49.0	60 4	67 2	73.4	69 7	61.3	47.2	32.8	13 9	46.8	....	....	....	....
1877	15.3	22 7	37 1	48 0	64.8	66.7	72.6	70.1	64 3	50.6	34 6	40.2	48 9	....	....	....	....
1878	27.6	33 5	40. 3	54.9	57.0	69.5	75 0	74 8	63.9	50 5	39.7	18.3	50.9	....	....	....	....

*Formerly Bloomington.

MUSCATINE COUNTY—CONTINUED.

MUSCATINE—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1879	17	7	23.4	46.4	58.8	61.0	68	72	70.7	58	38	30	48.2				
1880	25	1	30.6	45.1	58.1	71.1	75	72	60.6	48	27	4	48.6	49.0			
1881	11	1	20.1	48.1	62.7	66.6	69.1	65	62.5	54	35	1	45.0	48.6			
1882	23.6	36.	44	41	2	19.5	55.0	69.1	69	69	66	32	7	38.8	38.7	20.1	49.8
1883	9.7	19	31.	45	5.3	30	2	67	72	69	68	3	35	47.	7	38	25	5	15	5	
1884	10	4	21.	1	42	1	46.9	67	8	69	7	69	8	69	9	67	3	55	8	35	8	19	3	45.9				
1885	11	1	10.	4	31.	0	17.	6	60.	9	68.	2	76	5	68.	8	65	0	47.	6	37.	1	19.	6	45.	8			
1886	14	2	21.	2	42	1	55.	3	61.	2	69.	2	77	2	75.	4	66.	4	65.	6	53.	7	40.	6	47.	9			
1887	12.	5	23.	4	34.	4	56.	8	65.	0	71.	8	78.	4	71.	8	66.	4	47.	7	36.	4	24	2	47.	2			
1888	9.	6	20.	9	30.	6	56.	8	65.	0	63.	2	74.	2	70.	7	59.	2	48.	5	38.	5	31	2	46.	0			
1889	25.	8	21.	4	40.	2	54.	5	70.	6	69.	9	75.	0	70.	0	62.	0	49.	1	39.	7	29.	6	49.	6			
1890	26.	7	31.	7	29.	9	52.	2	58.	8	73.	8	75.	7	68.	9	58.	7	50.	6	40.	8	29.	1	49.	7			
1891	24.	5	25.	9	29.	0			58.	6	72.	4	67.	8	58.	5	46.	0	51.	6			33.	8					
Means	20.	2	24.	7	35.	0	46.	9	59.	8	68.	1	73.	0	70.	5	62.	4	50.	3	35.	1	24.	4	47.	5			

MUSCATINE—PRECIPITATION.

1846	2.	80	4.	50	2.	10	5.	40	3.	40	4.	20	1.	30		50	5.	50	1.	30	1.	80	1.	75	34.	50						
1847		70	1.	11	2.	94	3.	30	3.	50	4.	60	1.	20	3.	30	2.	10	1.	21	3.	45	1.	00	28.	50						
1848	1.	20	1.	67	2.	31		70	3.	40	2.	50	5.	70	9.	10	3.	00	4.	30	1.	85	3.	85	36.	02						
1849	3.	15	1.	03	2.	51	4.	70	4.	70	12.	20	1.	10	12.	20	5.	00	4.	80	0.	60		85	59.	16						
1850	4.	62		80	2.	08	3.	32	3.	70	3.	50	5.	00	13.	10	3.	80	2.	70	3.	50	2.	87	49.	08						
1851		55	5.	34	3.	63	3.	60	12.	60	14.	20	8.	60	14.	00	5.	50	1.	40	3.	65	2.	95	74.	50						
1852	2.	52	1.	00	8.	00	5.	30	6.	50	2.	20	3.	70	2.	80	8.	30	7.	60	5.	76	5.	11	59.	39						
1853		40		90		90	11.	80	4.	60	6.	40	6.	60		70	6.	20		20	4.	90		32	44.	12						
1854		40		80	1.	20	1.	76	6.	21		66	2.	22	3.	51	1.	13	4.	22		19		51	28.	69						
1855	3.	25		71	1.	87	2.	55	1.	91	4.	75	2.	45	3.	51	1.	84	2.	81	2.	23	3.	32	31.	13						
1856	1.	22	5.	54		61	3.	44	4.	39	2.	68	2.	74	1.	36	2.	45	5.	21	4.	35	7.	5	41.	39						
1857		61	5.	80	3.	34	1.	90	2.	75		80	4.	67	6.	60	1.	48	1.	95	2.	92	1.	53	34.	85						
1858	1.	60	3.	80	2.	20	5.	87	8.	40	6.	67	7.	30	4.	12	6.	10	4.	95	4.	54	2.	90	58.	45						
1859		44	3.	89	5.	01	3.	74	7.	49	5.	82	2.	01	1.	70	1.	80		85	1.	33	1.	00	5.	98						
1860	1.	17		43		55	1.	67	1.	42	3.	09	4.	63	2.	30	2.	76	1.	60	2.	09	4.	62	25.	10						
1861	1.	50	2.	87	4.	50	3.	55	3.	00	1.	72	2.	45	2.	80	9.	30	7.	20	2.	00	2.	10	44.	25						
1862	4.	00	2.	50	9.	30	7.	00	2.	65	6.	74	3.	45	7.	25	4.	50	2.	85	1.	32	1.	70	53.	16						
1863	1.	70	1.	50	2.	49	1.	52	1.	89		91		25	4.	15	2.	41	3.	54	1.	44	5.	72	26.	83						
1864	1.	65		25	2.	59	3.	43	3.	39	5.	75	3.	25	2.	31	3.	20	3.	1	2.	59	1.	85	32.	71						
1865		40	2.	90	2.	76	6.	62	1.	45	3.	09	4.	50	4.	25	4.	23	3.	53		20		62	34.	21						
1866	3.	38		58	1.	94	3.	91	1.	18	2.	82	5.	18	3.	91	4.	71	1.	94	1.	04	2.	85	32.	86						
1867		75	3.	62	1.	9	2.	34	5.	77	4.	70	3.	24	1.	65	3.	44	1.	0	2.	85		95	32.	24						
1868		30		95	5.	55	7.	43	7.	07	2.	50	4.	59	2.	85	5.	18		94	2.	71		84	40.	91						
1869	1.	62	1.	63	1.	73	2.	64	4.	47	9.	15		55	5.	35	1.	95	1.	5	2.	47	2.	41	43.	36						
1870	2.	04		18	3.	37		38	1.	80		93	1.	05	4.	46	4.	30	3.	95		87		93	24.	61						
1871	2.	15	2.	09	1.	88	1.	95	1.	93	6.	71	3.	28	6.	12	1.	07	3.	73	2.	50	2.	90	35.	11						
1872		06		30	2.	55	3.	92	7.	57	5.	17	2.	97	5.	84	4.	15		84	1.	20		74	35.	41						
1873	8.	49		5	1.	90	1.	45	4.	31	1.	91	2.	61					1.	90	1.	44	1.	18	3.	49	28.	43						
1874	4.	72	2.	88	2.	39	2.	95	1.	51	3.	70	2.	26	3.	54	6.	58		90	2.	40		88	34.	75						
1875		65	1.	50	1.	99		90	2.	05	4.	97	6.	72	2.	56	9.	3	1.	27		63	4.	87	37.	55						
1876	3.	23	2.	85	3.	54	4.	00	7.	38	4.	45	8.	15	5.	72	6.	50	1.	84	3.	48	1.	40	53.	57						
1877	1.	58	2.	00	4.	28	3.	57	2.	25	7.	44	4.	82	4.	49	1.	25	6.	03	3.	00	3.	01	44.	78						
1878		40	1.	56	2.	87	2.	36	7.	49	4.	09	3.	57	7.	43	2.	81	4.	35		77	1.	60	39.	30						
1879	1.	20	1.	07	2.	18	1.	81	4.	54	3.	78	3.	40	4.	50	2.	37	2.	8	4.	65	1.	42	33.	83						
1880	3.	02	1.	63	3.	62	3.	02	3.	25	7.	22	3.	84	4.	48	3.	17		25		97	1.	31	35.	78						
1881	1.	34	3.	49	2.	53	2.	11	2.	43	0.	38	3.	77	1.	30	6.	59	7.	08	2.	83	1.	75	45.	06						
1882		84	1.	10	2.	93	4.	00	8.	99	8.	25	4.	55	1.	75		38	4.	29	7.	15	2.	02	49.	67						
1883	1.	69	1.	67		75	5.	00	6.	19	4.	77	4.	31	1.	45	1.	19	6.	23	3.	45	1.	45	41.	12						
1884	1.	05	1.	40	4.	28	2.	68	5.	57	4.	03	3.	63	5.	77	5.	23	0.	4	1.	57	4.	42	45.	49						
1885	2.	3	2.	21		25	4.	67	4.	18	4.	81	5.	03	7.	38	2.	88	2.	80		83	2.	32	39.	14						
1886	4.	21	1.	43	4.	16	2.	62	5.	05				32	2.	62	3.	05	4.	70		95		71								
1887	1.	88	4.	12	1.	14	1.	26	2.	26	2.	10	2.	90	2.	40	3.	40	2.	24		98	3.	53	28.	30						
1888	1.	49		70	3.	10			6.	78	3.	82	3.	39	7.	24	2.	00	1.	50	4.	4	2.	84								
1889	1.	43	1.	38		65	4.	28	4.	17	5.	68	6.	60	1.	15	3.	95	1.	04	1.	65	1.	40	33.	47						
1890	1.	90	1.	70	3.	29	1.	12	3.	61	6.	68	1.	88	2.	35	2.	52	4.	24	1.	38	1.	20	31.	87						
1891	1.	75	2.	19	3.	50			2.	51	4.	87	4	29	5.	20	1.	85	1.	49			2.	51								
Means	1.	81	2.	08	2.	79	3.	41	4.	38	4.	86	3.	91	4.	38	3.	72	3.	04	2.	30	2.	28	39.	22						

MUSCATINE COUNTY—CONTINUED.

WILTON JUNCTION—TEMPERATURE.

YAER.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1894										52	32	8	30.	9			
1895	15	14	34		53	62	73	73		73	67	45	36.	2	28	47.	8
1896	26	25.	6	32.	1	56	5	67.	4	69.	8	74	71.	2	00.	6	47.	7	34.	2	31.	2	49.	8
1897	19	28	31		48	59	71	76		69	69	56	36	21		48.	8
1898	24	26	39		48	60	72	75		72	65	50	34	22		48.	8
1899	22.	4	15.	2	30.	1	51.	2		72.	6	74.	1	74.	4	63.	3	56.	8	44.	5	24.	9		
1900	27.	9	17.	8	39.	2	51.	8	63.	3	69		73.	9	79.	3	65		59	7	37.	6	28.	5	50.	3
1901	25.	1	15.	4	35.	6	50		60.	9	73.	9	82.	2	73.	4	63.	6	53.	7	35.	8	22.	5	48.	3
1902	20.	9	17		40		48.	8	64.	2	67.	2	75.	2	70.	8	61		54.	4	44.	8	22.	1	49	
Av'ges.	22.	8	19.	8	34.	3	50.	9	62.	4	71		75.	4	72.	9	64.	3	52.	8	37.	4	25.	6	49.	1

YAER.	Highest.	Month	Lowest.	Month
1894				
1895	100	July	-22	Feb.
1896	98	July	-13	Feb
1897	100	July	-20	Jan.
1898	98	July	-12	Feb.
1899	98	Sept	-24	Feb.
1900	98	Aug	-9	Feb.
1901	103	July	-14	Dec.
1902	96	July	-21	Jan
	1901		1899	
	108	July.	-24	Feb.

WILTON JUNCTION—PRECIPITATION (INCHES).

1894													1.	76	1.	26		70												
1895		87		20	1.	49		69	3.	01	1.	66	9.	10	2.	93	3.	08	1.	26	2.	48	2.	28	29.	00				
1896		75	1.	13	1.	3	5.	11	4.	94	2.	76	7.	67	3.	66	4.	04	2.	17	1.	66		73	55.	47				
1897	3.	18		95	3.	60	4.	35	2.	43	2.	17	3.	19	2.	58	3.	91		28	2.	00	1.	63	30.	28				
1898	3.	07	1.	31	3.	58	3.	38	4.	51	3.	47	2.	98	6.	19	2.	72	3.	36	1.	76		70	37.	03				
1899		T	1.	71	1.	59	3.	45	8.	62	4.	19	3.	24	2.	72	1.	01	1.	64	1.	82	2.	58	32.	54				
1900	1.	65	2.	89	4.	10	2.	23	4.	59	1.	68	3.	97	7.	40	4.	12	2.	60	1.	65		35	37.	39				
1901		78	2.	06	3.	21	1.	56	1.	63	2.	04	3.	03		67	2.	56	1.	18		91	2.	14	22.	34				
1902		81		96	2.	07	2.	14	4.	85	8.	33	8.	46	7.	60	3.	98	4.	34	3.	24	2.	03	49.	41				
Av'ages	1.	38	1.	40	2.	71	2.	87	4.	32	3.	28	5.	27	4.	21	3.	18	2.	07	1.	80	1.	45	30.	80				

MUSCATINE COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1860	30	8	21	15	30	1.4	3.61	6.68	1.88	2.35	14.52
1891	47	14	41	30	113	2.0	2.81	4.87	3.29	5 20	15.87
1892	25	13	22	14	30	1.7					
1843	33	19	26	19	27	1.5					
1894	17	16	28	20	31	1.2					
1895	44	28	36	28	120	0.9	3.01	1.66	9 10	2.93	16.70
1896	48	13	27	20	150	1.5	4.94	2.76	7.67	3.66	19 03
1897	34	14	32	28	48	1 3	2.43	2.17	3 19	2.58	10.37
1898	30	12	29	23	98	2 0	4.51	3 47	2.98	6.19	17.15
1899	40	17	41	30	70	1.4	8.62	4.19	3.24	2.72	18.77
1900	40	15	33	26	79	1.6	4.59	1 68	3.97	7.40	17.64
1901	25	10	26	21	40	1.4	1.63	2.04	3.60	67	7.94
1902	42	18	35	30	70	2.0	4.85	8.33	8.46	7 60	29.24
Averages..	35	15	30	23	69	1.5					16.72

CEDAR COUNTY.

Area, 576 square miles; area in farms, 348,056 acres; number of farms, 2,291; value of farms (census of 1900), $16,824,370; value of farm buildings, $3,627,460; value of live stock, $3,658,147; value of the year's farm products not fed to stock, $3,261,015; acreage in cereal crops, 170,210 acres. Meteorological records compiled at Mechanicsville are included in the following tables. A meteorological station has been established at Tipton:

MECHANICSVILLE—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1892	0	5	31	45	54	68	71	71	60	53	31	18	45.6	....	....	..	.....
1893	8	15	40	44	55	69	75	68	63	50	33	21	45 1	....	....	....	.....
1894	21	18	40	51	60	72	75	73	64	52	31	31	49.0	....	....	....	.....
1895	13	14	32	52	60	70	72	73	67	45	34	26	46.5	....	....	....	.....
1896	24	25	31	54	66	69	72	71	59	47	32	30	48.4	..	.... ..	..	.....
Averages.	15 2	20 2	34.8	49 2	59	69.6	3	71 2	62 6	49.6	32 2	25 2	46.9	....		..	.....

MECHANICSVILLE—PRECIPITATION (INCHES).

1892	1.98	1.32	3.06	4.08	8.97	9.81	4 64	2.93	.98	.72	72	2.50	42 69	...	....	....	.....
1893	1.18	1 32	2.44	3.58	2.57	5.82	1.92	1.23	2.50	2.08	1.89	1.54	27.98	....	....	....	.....
1894	1.45	1.47	3.51	1.92	3.07	2.68	1.05	2.41	5.16	.63	.18	.94	24 49		....		.....
1895	1.70	.42	1.15	.48	2.93	1 63	3.34	1.47	2.95	1.18	2.30	2.26	21.70	....	....	....	.....
1896	.72	1.14	.60	4.93	3.98	2.09	7.22	2.35	3.18	2.13	2 15	1.57	37.04	...	... ..	....	.....
Averages	1 40	1.13	2.15	2.99	4 30	4.40	3.52	2.08	2.95	1.34	1 62	1.76	30.79		...		.....

CEDAR COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.
1890	36	10	26	23	42	1.5
1891	45	14	36	29	156	2.0
1892	25	10	25	17	43	1.8
1893	36	13	24	20	85	1.4
1894	22	15	34	20	47	1.2
1895	40	14	32	21	82	.8
1896	50	8	27	24	92	1.6
1897	35	12	36	20	76	1.5
1898	35	16	33	24	78	1.6
1899	44	11	35	28	85	1.7
1900	41	11	33	25	65	1.2
1901	31	19	36	25	55	1.4
1902	40	14	27	26	52	2.0
Averages	38	13	31	23	78	1.5

JOHNSON COUNTY.

Area, 578 square miles; area in farms, 385,770 acres; number of farms, 2,712; value of farms (census of 1900), $15,328,830; value of farm buildings, $3,789,670; value of live stock, $3,693,848; value of the year's products not fed to stock, $3,217,733; acreage in cereal crops, 161,840 acres. Meteorological records contained in the following tables were compiled at the state university at Iowa City, under the supervision of Professors T. S. Parvin, G. Hinrichs and A. A. Veblen. Elevation of the station, 685 feet.

IOWA CITY—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April	May	June.	July.	Aug	Sept.	Oct.	Nov	Dec.	Ann'l	Highest.	Month	Lowest.	Month
1856	...	...		...	62.2	70.6		67 4									
1857						68.2	76.7										
1858	31.6	17.6	40.4	47.9	5 3.3	72.0	74 4	72.9	63.9	51.0	31.2	23.7	48.6				
1860	21 3	26.6	42.7	49 6	64.3	69.3	71 7	68 8	54.3	61.3	35.7	17.6	48.7				
1861	13 9	27.1	34.0	47.6	58.7	68.3	69.0	70.1	62.6	50 1	37.0	30.0	47.1				
1862	13.5	13.2	29.6	42.9	59.4	71.8	78 4	69.3	63.4	48.6	35.2	29.3	45 8				
1863	26.0	23.4	31.9	47.3	58.7	62.5	71.5	70.4	61.2	40 0	53.8	27.0	46.1				
1864	15.9	27.4	32.6	46.1	62.2	70.6	76.0	73.0	66.9	47.8	35.8	19.3	48 6				
1865	20 5	11.5	44 3	48.1	61.4	74 9	69.3	72.4	72.6	53 9	42 6	21.0	50.2				
1866	20.7	19.6	41.3	51.2	59.2	67.9	77.1	68.8	57.1	53.1	40.2	23.6	47.6				
1867	17.9	26.3	25.7	47.1	51.9	70.5	73.3	74 7	66.8	54.5	31.6	24.2	47.0				
1868	13.4	35.3	42.7	44.7	61.7	70.8	80.8	69.1	58.8	49.8	38.0	21.7	48.1				
1869	26.0	27.0	30.4	47.1	60.0	66.0	70 9	74.4	63.2	42.7	32.1	25.5	47.1				
1870	22.1	24.9	30 8	53.5	65.5	71.8	78 3	70.9	67.8	51.2	39.3	24.4	50 2				
1871	22.1	26.2	42.3	48.1	65.9	70.5	71.3	71.8	70.1	52.8	39.0	15.6	47.9				
1872	16.9	23.2	28.3	47.8	58.6	70.5	74.0	73.0	62.9	48.1	37.3	32.6	45 3				
1873	10.4	16.4	31.5	44.2	56.2	73.5	73.5	74.8	61.1	44.9	31.4	25.1	44.4				
1874	20 5	20.3	31.4	39.2	62.6	70 9	76.1	73.3	63.2	51.6	33.2	21.5	46.9				
1876	24.7	27.0	28 3	47.4	60.4	67.4	73 8	72 7	61.6	47 1	32.0	13.3	47.3				
1877	14.6	33.2	26.2	48.2	60 3	67.4	73.0	70.0	64.6	50.8	34.4	29.8	48.5				
1878	27.0	34.3	46 6	53.1	56.1	66 9	76.7	72.5	62.8	49.2	39.4	18.4	50.2				
1879	15.7	23.1	37.2	49.4	63.4	69.0	75.6	70.7	59.1	58.5	38 6	31.3	48.5				
1880	35.3	30.5	45.7	48.6	66.8	71 8	74 6	73.9	61.3	48.4	36.0	17.5	49.2				
1881	11 1	18.1	28.6	43.6	67.9	68.8	76.7	76.0	67.5	53.3	33.7	32.9	48.2				
1882	22.7	33.4	35.8	49.1	53.6	67.2	69.6	71.4	63.0	54.6	37.5	21.5	48.3				
1883	7.0	16.8	30 4	50 2	55.8	67.9	72.6	69.1	59.1	47.5	36 2	24.6	45.0				
1884	12.3	24.7	32.2	47.8	59.4	69.0	71 5	68 6	67.8	53.9	35.0	18.0	46 4				
1885	9.2	9.3	30.2	46.1	57 3	68.4	75.2	67.6	62.8	46.8	36.6	24.6	45.3				
1886	11.7	21.8	32.2	52.4	62.3	70.0	77.0	75.2	64.8	54.6	33.4	16.2	46.8				
1887	10.9	22.2	33.8	51.1	65.9	72.5	77.4	71.7	63.4	46.8	36.0	23.0	47.8				
1888	8.4	20.5	29.6	50.4	55.3	69.6	76.1	71.0	60.3	48.4	38.6	30.8	46.6				
1889	24.6	19.1	37.4	49.4	60.0	68.1	73.8	69.6	61.3	47.8	36.9	40.9	49.1				
1890	23.9	32.1	30.3	49.0	53.8	67.6	75.1	66.0	58.8	50.8	41.8	33.1	48.8				
1891	28.6	26.7	28.3	51.7	58.6	71.6	69 2	68 4	60.3	50.4	38.4	32.9	48.7				
1892	15.7	30.2	33 5	46.9	55 7	68.8	72.5	72.5	64.2	54.4	33 6	19.5	47.3	96	July . .	-22	Jan.
1893	2.9	11.4	26 7	40.5	54.4	69.4	72.3	67.8	62.6	49	31	16 7	42	97	Aug . .	-26	Feb.
1894	24.6	22.5	43.8	52 6	60.6	74	73.6	71.9	66.1	51.2	34	31.5	50.8	100	July . .	-30	Jan.
1895	14	16	38	51	62	73	74	74	69	46	36	27	48 6	100	July . .	-23	Feb.
1896	25 7	27	33.6	57.1	67.8	72.8	75	72.2	59.6	48.6	33 8	33 2	50.4	98	July . .	-11	Jan.
1897	18	26	35	49	58	69	77	70	71	58	37	19	48.9	100	July . . / Sept.	-20	Jan.
1898	25	25	39	48	61	72	75	72	67	49	34	21	49.1	99	July . .	-12	Feb.
1899	22	14.5	28.6	51.4	62	72	73 6	75.2	62.1	58 1	45	23.8	49	101	Sept . .	-26	Feb.
1900	27.1	17	30 5	53.2	64.1	70 4	74 2	78.6	66.2	60 8	36.1	27.6	50.5	99	Aug . .	-12	Feb.
1901	24 4	14.8	34.7	49.4	61	73.3	80 6	73.4	61.2	53 6	33.9	22 4	48.7	106	July . .	-12	Dec.
1902	21.1	16.7	39.4	49.5	66.3	66.6	74.5	70.3	61	55 2	44.8	22 2	49	95	May . .	-23	Jan.
Av'ge	19.1	22 9	33. 6	46 3	60 3	69.3	74.2	71.6	63.4	51.1	35.5	24.1	47.8	106	1901 July . .	-30	1894 Jan.

JOHNSON COUNTY—CONTINUED.

IOWA CITY—PRECIPITATION.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1857						2.50	1.10	5.08			4.10	.5	
1858	2.28	.81	1.82	4.55	8.17	4.55	8.74	2.52	2.61	3.39	2.70	1.31	43.24
1861	1.90	3.75	2.46	4.40	2.95	.40	2.70	4.07	9.92	9.36	2.33	2.87	47.51
1862	2.44	.38	3.01	5.30	3.65	6.07	.40	7.30	6.16	2.49	3.14	2.25	45.42
1863	2.30	..	2.35	.55	4.56	.21	.80	5.44	1.44	1.10	4.11	2.56	
1864	.62	.46	5.54	1.17	3.62	5.70	4.85	7.60	2.02	4.55	4.82	2.05	46.23
1865	.38	3.74	3.60	9.37	2.72	6.80	6.80	1.35	3.65	6.35	.25	.38	45.19
1866	4.76	.76	1.38	2.92	1.50	4.86	4.55	6.75	.42	1.67	1.41	3.54	44.56
1867	1.58	4.76	1.10	.95	10.60	3.91	6.24	4.43	4.62	2.06	1.07	1.34	44.30
1868	.25	2.21		4.70	7.38	.92	6.15	4.67	5.17	.33	4.49	.81	
1869	1.36	2.62	.43	3.20	4.60	7.42	7.42	11.43	3.09	2.67	4.48	2.99	50.89
1870	3.80	.27	3.11	.25	2.10	1.30	1.85	5.85	6.67	8.16	.96	.35	30.05
1871	1.51	3.10	5.30		2.82	9.16	5.56	5.23			4.00	2.65	
1872	.03	.24	2.10	4.38	7.55	7.39	5.85	9.85	6.29	.80	1.41	.90	47.58
1873	3.25	.30	2.55		5.90	4.44	3.34	.65	3.17	3.11	1.42	5.19	
1874	3.31	1.13	.10	2.65	1.63	6.32	2.62	9.16	5.30	.53	4.20	1.34	39.76
1875	.79	1.13	1.22	2.18	1.13	6.32	6.82	1.56	6.87	1.27	.40	3.10	
1876	2.81	2.35	2.80	2.90	3.13	5.86	7.56	4.80	7.03	1.22	2.45	.68	43.28
1877	1.30	.03	5.29	4.16	2.77	7.05	2.18	8.64	1.70	4.34	2.77	2.25	43.94
1878	.20	1.35	3.23	.86	5.45	6.44	3.50	6.96	3.25	3.89	.95	.91	38.96
1879	.90	1.11	1.11	1.64	2.96	4.44	3.70	4.05	1.72	1.02	5.19	1.26	28.47
1880	1.82	.81	3.17	4.32	1.93	4.49	3.65	4.81	4.98	.53	1.63	.69	34.23
1881	1.33	2.75	2.06	1.42	1.77	12.55	4.78	.98	6.51	6.60	3.20	1.97	45.69
1882	.54	1.10	2.13	4.49	7.19	9.51	2.97	2.91	1.58	4.75	1.54	2.15	40.12
1883	1.04	2.72	.97	2.86	5.66	4.72	7.45	1.19	2.04	4.53	3.28	.91	37.31
1886	3.74	.71	2.41	1.32	4.16	.87	.10	1.30	2.80	5.40	1.07	.63	24.48
1888	.93	1.22	3.20	1.48	6.70	1.93	4.84	4.98	3.01	1.50	4.17	2.39	36.05
1889	2.19	1.10	.50	1.82	3.28	3.85	4.41	1.46	3.13	.79	1.34	1.13	27.03
1890	2.75	.75	1.80	1.83	2.20	7.09		2.29	1.44	2.11	1.56	.31	
1891	1.49	1.30	4.41	1.11	4.46	2.80	3.01	3.45	2.33	1.63	2.93	2.72	31.64
1892	1.46	1.28	3.15	4.30	9.23	8.29	6.20	2.56	1.18	1.02	1.38	2.84	42.78
1893	.52	1.85	2.29	4.45	3.48	2.70	3.24	.95	1.44	.89	1.37	1.50	24.70
1894	2.00	1.64	2.08	2.72	3.09	2.40	.90	2.40	4.96	2.30	1.80	.98	27.22
1895	2.37	.64	1.25	1.68	4.28	1.10	10.10	1.77	3.41	1.38	1.78	2.81	32.50
1896	.70	1.51	.92	5.14	4.10	1.86	7.04	2.44	1.82	2.74	1.10	.55	29.98
1897	3.76	1.80	2.07	4.99	3.11	2.38	3.83	1.85	3.54	.34	1.98	2.48	31.13
1898	4.62	1.15	3.02	2.89	4.80	3.26	2.27	2.85	2.54	4.58	1.10	.58	33.41
1899	.57	1.82	1.43	3.23	9.49	4.50	3.78	2.39	.99	1.66	1.15	1.66	32.90
1900	.78	2.26	3.32	3.31	4.31	2.18	5.25	6.27	4.35	3.61	1.43	.75	37.71
1901	1.35	1.40	3.86	.80	1.72	3.17	4.26	.48	2.52	.81	.82	.88	22.07
1902	1.26	.85	1.49	1.91	3.75	7.46	6.89	10.91	5.87	3.12	2.25	2.21	47.80
Ave'age	1.74	1.51	2.48	3.14	4.34	4.63	4.50	4.26	3.83	2.54	2.32	1.66	36.95

JOHNSON COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total inches.
1880	33	15	30	24	47	1.5	2.20	7.99	2.11	2.29	14.49
1881	42	15	41	30	143	1.8	4.46	2.80	3.01	3.45	13.72
1882	29	14	28	21	84	2.0	9.23	8.29	6.20	2.50	26.22
1883	37	13	24	30	46	1.5	3.48	2.79	3.24	.95	10.46
1884	20	18	39	30	61	1.2	3.09	2.40	.90	2.40	8.79
1885	50	16	40	22	144	.8	4.26	1.10	10.10	1.77	17.23
1886	52	17	24	22	128	1.7	4.10	1.86	7.04	2.44	15.44
1887	31	7	23	15	47	1.4	3.11	2.38	3.83	1.85	11.17
1888	34	16	31	22	93	1.8	4.80	3.26	2.27	2.85	13.18
1889	42	14	38	32	120	1.5	9.49	4.50	3.78	2.39	20.16
1900	42	18	36	28	77	1.7	4.31	2.18	5.25	6.27	18.01
1901	25	20	30	26	28	1.8	1.72	3.17	4.26	.48	9.63
1902	40	17	30	27	115	1.8	3.75	7.46	6.89	10.91	29.01
Averages.	36	15	32	25	81	1.6					15.98

IOWA COUNTY.

Area, 576 square miles; area in farms, 368,799 acres; number of farms, 2,454; value of farms (census of 1900), $13,740,820; value of farm buildings, $2,828,300; value of live stock, $3,463,023; value of farm products of the year not fed to stock, $2,937,937. acreage in cereal crops, 146,510 acres. Since 1876 weather records have been compiled at Amana, as shown by the following tables. Elevation of station, 721 feet.

AMANA—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1876	22	24	26	47	60	67	77	75	62	44	29	8	45.0	92	May.	-20	Dec.
1879	11	20	35	48	62	68	77	70	57	55	34	16	46.0	97	July.	-22	Jan.
1880	30	26	33	48	66	71	72	71	58	45	23	13	46.5	94	July.	-23	Dec.
1881	5	15	26	41	66	68	76	74	64	51	31	29	45.4	102	Aug.	-24	Jan.
1882	18	29	33	47	53	67	68	69	59	51	34	18	45.6	92	July.	-19	Dec.
1883	2	13	27	48	54	66	71	66	55	45	32	19	41.6	95	June.	-32	Jan.
1884	8	17	29	46	58	68	70	67	65	51	33	15	43.8	91	June.	-32	Jan.
1885	5	8	28	46	57	68	74	68	60	44	32	21	42.5	98	July.	-29	Jan.
1886	8	20	31	50	62	69	76	73	62	50	30	13	45.3	102	July.	-24	Dec.
1887	8	20	31	49	65	72	75	69	62	43	31	20	45.4	..			
1888	4	17	28	47	55	70	76	70	58	47	35	27	44.8	96	..		
1889	20	17	37	50	60	67	73	70	61	47	34	38	47.7	94	July	-14	Feb.
1890	21	29	29	51	57	73	75	68	59	49	39	24	48.2	100	July.	-18	Jan.
1891	25	23	27	51	57	69	68	68	66	50	31	32	47.2	94	Aug.	-10	Feb.
1892	14	29	32	46	55	69	73	71	63	53	32	17	46.1	93	June. July.	-21	Jan.
1893	8	16	32	46	56	71	75	69	63	52	33	21	45.2	96	July	-19	Jan.
1894	20	19	41	52	60	74	76	74	65	52	32	30	49.6	104	July.	-29	Jan.
1895	13	15	34	51	62	72	73	73	58	44	34	25	46.2	100	July.	-19	Jan.
1896	24	25	31	46	57	70	73	71	58	47	32	31	48.2	98	July.	-10	Jan.
1897	17	25	33	48	58	69	76	69	63	53	34	18	47.7	100	July.	-20	Jan.
1898	23	23	38	48	60	73	74	72	66	48	33	19	48.1	96	July.	-15	Feb.
1899	20.3	14	27	50.2	61.4	71.6	73.9	72.9	57	44.7	24	18.4	97	Sept.	-25	Feb.
1900	20.9	16.8	30.8	52.2	63.8	69.5	73.6	77.5	65.1	50	35	27.8	49.8	99	July. Aug	-10	Jan.
1901	24.3	15.1	33.4	50.3	60.8	73.2	82.0	72.8	63.8	54.4	35.1	20.6	49.1	104	July.	-18	Feb.
1902	22.0	16.4	33.2	48.7	60.4	65.8	73.9	69.0	59.7	53.7	41.2	22.0	48.3	92	July.	-21	Jan.
Means.	15.8	20.0	31.4	48.7	60.0	69.7	74.0	70.8	62.7	49.6	31.2	22.0	46.5	104	July.	1894 1901 1883 1884 -32	Jan.

IOWA COUNTY—CONTINUED.

AMANA—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.				
1876	1.95	2.34	3.27	2.63	2.93	4.80	10.27	2.62	5.14	.88	2.40	.26	43.5	....	....	....	.....
1877	1.18	.13	3.29	3.56	4.08	3.85	1.14	9.51	2.92	1.98	1.94	2.19	40.77	.....	.....	....	.....
1878	.19	.76	3.38	2.93	5.57	9.27	2.93	5.73	3.05	6.52	.79	.65	40.71	....	....	....	.....
1879	.48	1.04	.99	1.22	4.63	4.46	1.99	3.05	4.21	1.70	4.68	1.08	28.81	....	.....	....	.....
1880	1.30	.89	1.89	1.91	2.94	2.55	4.05	4.57	6.28	1.02	1.93	1.31	31.06	....	....	....	.....
1881	1.17	3.77	2.16	1.98	2.10	8.54	6.10	1.50	6.50	5.21	3.52	1.40	43.11	....	....	....	.....
1882	.45	1.16	2.70	6.38	8.25	7.19	1.88	2.89	3.18	4.20	1.50	2.30	42.08	....	....	....	.....
1883	1.51	2.56	.10	3.07	4.40	5.25	4.07	1.11	1.29	4.02	1.90	1.40	31.55	....	....	....	.....
1884	.95	1.31	1.94	1.76	3.18	5.22	6.45	2.50	4.31	1.33	1.34	3.30	34.65	....	....	....	.....
1885	1.82	.81	.10	3.79	3.81	5.45	5.83	6.51	2.69	3.20	.62	2.40	37.23	....	....	....	.....
1886	3.88	.74	2.42	1.46	1.79	.38	.17	1.85	2.16	4.90	1.08	.69	22.95	....	....	....	.....
1887	2.13	3.01	1.74	1.90	.78	2.09	4.05	1.05	5.15	2.95	1.18	3.06	28.85	....	....	....	.....
1888	1.93	.87	3.92	1.40	7.55	1.74	4.58	3.67	1.38	1.30	3.30	1.76	32.35	....	....	....	.....
1889	1.48	.47	.68	3.56	4.40	5.07	3.05	1.19	4.35	1.12	.84	.86	27.75	....	....	....	.....
1890	2.11	.97	1.39	1.50	2.60	6.36	.68	3.83	1.22	4.62	1.80	.47	27.71	....	....	....	.....
1891	1.94	1.26	3.25	1.51	4.85	4.80	2.66	5.29	2.22	2.01	2.86	1.58	34.16	....	....	....	.....
1892	3.20	1.39	2.64	4.43	7.38	2.67	5.84	2.39	1.88	1.15	1.93	1.90	42.43	....	....	....	.....
1893	.55	1.85	4.52	4.68	2.29	4.24	2.70	3.02	2.63	2.02	1.73	1.22	28.99	....	....	....	.....
1894	1.13	1.56	2.92	2.55	3.47	1.73	.98	1.98	4.05	2.27	1.64	1.34	25.62	....	....	....	.....
1895	1.26	.20	.58	1.17	4.41	.98	6.40	2.34	3.71	1.07	1.64	3.52	25.40	....	....	....	.....
1896	.52	.72	.57	3.26	7.55	2.05	10.20	3.52	2.32	2.95	1.50	.45	37.70	....	....	....	.....
1897	2.47	.57	1.48	7.17	3.56	2.27	4.28	.93	3.25	.83	.88	1.72	29.63	....	.....	....	.....
1898	2.96	1.11	2.26	3.24	4.14	2.34	2.66	2.61	4.14	3.56	1.08	.44	30.77	....	.....	....	.....
1899	.36	.71	.63	3.04	7.92	3.56	5.78	2.69	.62	.98	1.62	1.64	29.85	....	.....	....	.....
1900	.72	1.61	2.46	3.57	4.18	3.77	5.40	5.35	4.39	3.79	1.03	.44	37.27	....	.....	....	.....
1901	1.50	1.69	3.48	1.69	1.83	4.36	1.35	.98	1.71	1.48	.93	1.59	22.50	....	.....	....	.....
1902	.88	1.10	1.45	1.83	5.30	6.80	6.17	9.41	6.36	3.71	1.74	1.96	46.81	....	.....	....	.....
Averages	1.44	1.21	2.00	2.88	4.46	4.49	4.29	3.58	3.39	2.74	1.75	1.49	33.48	....	....	....	.....

IOWA COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL, MAY 1st to SEPT. 1st.				
	Corn, bushels.	Wheat, bushels	Oats, bushels	Barley, bushels.	Potatoes, bushels.	Hay, tons	May.	June.	July	August.	Total
1890	24	12	28	20	35	2.0	2.99	6.38	.68	3.83	13.87
1891	45	24	55	18	125	1.8	4.83	4.80	2.66	5.50	17.49
1892	31	13	26	20	70	1.5	7.38	9.07	5.34	3.99	25.98
1893	36	15	26	22	37	1.9	2.29	4.28	2.70	3.02	12.29
1894	16	13	23	18	56	1.5	3.47	1.73	.98	1.98	8.16
1895	36	17	33	24	74	.6	4.41	.98	6.46	2.34	14.19
1896	50	17	27	30	140	2.3	7.55	2.05	10.20	3.52	22.32
1897	30	15	25	30	54	1.8	3.56	2.27	4.28	.93	11.04
1898	37	16	30	30	95	2.0	4.14	2.53	2.66	2.61	11.95
1899	32	16	35	25	75	1.5	7.92	3.56	5.78	2.69	19.95
1900	42	16	32	25	72	1.8	4.18	3.75	5.40	5.35	18.77
1901	23	20	32	25	35	2.0	1.83	4.36	1.35	.98	8.52
1902	30	15	26	25	68	2.0	5.30	6.86	6.17	9.41	27.74
Averages	33	16	29	24	72	1.7	....	....	.....	.....	16.26

SOUTHEAST DISTRICT.

This district includes ten counties, viz: Louisa, Washington, Keokuk, Wapello, Jefferson, Henry, Des Moines, Lee, Van Buren, Davis.

The mean annual temperature of the district is 50.6°; average annual precipitation, 33.65 inches; average rainfall May 1st to September 1st, 15.78 inches; average yield of corn for past 13 years, 33 bushels per acre.

LOUISA COUNTY.

Area, 396 square miles; area in farms, 237,972 acres; number of farms, 1,619; value of farms (census of 1900), $8,812,240; value of farm buildings, $1,770,530; value of live stock, $1,891,864; value of the year's products not fed to stock, $1,871,756; acreage in cereal crops, 104,600 acres. Meteorological stations have been established at Wapello and Columbus Junction, the records of which are tabulated below. Elevation of Wapello, 588 feet; Columbus Junction, 595 feet.

WAPELLO—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1888	....	....	....	....	....	....	75.1	72.5	67.0	52.9	38.2	25.9	....	....	.....	....	.....
1889	26.0	16.9	30.8	52.4	63.8	72.8	75.0	75.4	63.9	58.8	49.0	28.1	51.1	100	July / Sept.	-22	Feb.
1900	29.4	18.0	41.5	53.6	65.1	71.9	77.8	82.1	68.2	53.6	38.6	31.4	52.3	103	Aug.	- 6	Feb / Jan
1901	28.5	19.1	36.9	52.0	63.3	75.8	85.6	75.9	64.9	55.6	38.7	24.5	51.7	111	July	- 9	Dec.
1902	25.0	18.6	41.0	51.8	65.5	65.6	73.5	69.0	61.6	54.5	45.8	25.1	49.7	90	Aug.	-12	Jan.
Averages.	27.0	20.8	35.0	51.9	64.4	71.5	77.4	74.9	65.0	50.2	42.0	27.0	50.9	111	1901 July.	-22	Feb.

WAPELLO—PRECIPITATION (INCHES).

1888	....	....	....	....	....	....	1.20	7.48	1.76	3.13	1.28	.53	....	....	.....	....	.....
1889	.00	1.24	2.20	1.64	4.64	1.51	1.78	3.39	1.21	1.07	1.06	2.48	22.34	....	.....	....	.....
1900	1.40	2.79	3.13	2.20	3.89	.84	2.81	5.69	4.51	1.05	1.42	35	30.98	....	.....	....	.....
1901	1.11	.88	2.40	1.52	2.88	1.46	1.50	.18	2.44	.56	1.10	1.35	17.03	....	.....	....	.....
1902	.31	.90	2.39	3.51	3.27	7.87	8.11	9.55	4.65	4.39	2.44	1.99	49.48	....	.....	....	.....
Averages.	.71	1.46	2.52	2.24	3.59	2.92	3.09	5.25	2.92	2.22	1.46	1.84	29.05	....	.....	....	.....

COLUMBUS JUNCTION—TEMPERATURE.

1900	....	....	....	....	....	....	....	....	....	61.2	37.4	28.4	....	....	.....	....	.....
1901	27.6	17.4	37.0	52.4	63.0	75.6	84.8	75.0	66.7	55.0	34.4	22.0	51.1	....	.....	....	.....
1902	24.4	19.3	40.0	51.0	66.6	61.4	72.2	69.5	60.7	55.9	45.5	22.8	....	....	.....	....	.....

COLUMBUS JUNCTION—PRECIPITATION.

1900	....	....	....	....	....	....	....	....	....	2.89	1.15	.12	....	....	.....	....	.....
1901	.92	1.24	3.00	1.69	1.95	1.05	1.82	1.75	2.54	1.34	.80	1.90	20.05	....	.....	....	.....
1902	.46	.92	2.05	2.32	4.81	7.77	10.90	15.47	4.00	4.77	3.16	2.16	58.80	....	.....	....	.....

LOUISA COUNTY—CONTINUED.

LOUISA COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.				
	Corn, bushels	Wheat, bushels.	Oats, bushels.	Potatoes, bushels.	Hay, tons.
1890	28	18	28	39	1.4
1891	48	20	44	135	1.8
1892	33	15	32	50	1.5
1893	35	13	26	42	1.4
1894	17	15	29	56	1.0
1895	38	20	26	75	.8
1896	45	16	20	88	1.5
1897	27	15	25	55	1.8
1898	31	16	30	90	1.5
1899	34	13	30	97	1.4
1900	37	18	35	80	1.8
1901	25	18	30	38	1.2
1902	35	17	32	90	1.7
Averages	33	16	29	72	1.4

WASHINGTON COUNTY.

Area, 576 square miles; area in farms 344,695 acres; number of farms, 2,511; value of farms (census of 1900), $14,662;740; value of farm buildings, $2,932,430; value of live stock, $3,348,190; value of the year's farm products not fed to stock, $2,995,344; acreage in cereal crops, 143,260 acres. The following tables contain climatic data compiled at Washington; elevation, 769 feet.

WASHINGTON—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1892	18.0	33.0	35.0	50.0	59.0	75.0	79.0	75.0	67.0	56.0	35.0	22.0	50.4	....	.....	....	.....
1893	12.0	21.0	37.0	50.0	60.0	76.0	82.0	74.0	68.0	55.0	37.0	26.0	49.7	....	.....	....	.....
1894	23.0	23.0	42.0	54.0	60.0	74.0	77.0	74.0	66.0	53.0	33.0	31.0	50.8	....	.....	....	.....
1895	15.0	16.0	35.0	53.0	62 0	72.0	72.0	74 0	69.0	47.0	36.0	27.0	48.2	....	.....	....	.....
1896	25.0	26.0	32.0	57.0	68.0	70.0	73.0	72.0	60.0	52.0	34.0	....	.....	....	.....	....	.....
1897	....	27.0	14 0	48.0	59.0	70.0	76.0	70.0	71.0	58.0	36.0	18.0	.....	....	.....	....	.....
1898	24.0	21.0	38.0	48.0	59.0	71.4	73.9	73.0	66.0	48 0	23.0	20.0	48.3	....	.....	....	.....
1899	21.6	14.6	27.4	49.8	60.7	70.6	71.6	74.1	61.4	57.8	45.0	24.0	48 2	....	.....	....	.....
1900	26.4	16.3	30.1	52.4	62.8	69.2	73.2	78.2	64.6	59.6	35.0	27.2	49.6	98	Aug.	-11	Jan Feb
1901	24.4	12 5	36 2	50.4	60.7	73.2	82.0	73.3	64.2	54.6	34.9	....	.....	....	.....	....	.....
1902	22.6	....	....	47.3	64.4	64 0	72.5	68.7	58.7	53.7	41.0	21.0	.....	....	.....	....	.....
Averages	21.2	21.4	34.6	50.9	61.4	73.2	75.6	73.2	65.0	54.0	35.6	24.0	49.1	....	.....	....	.....

WASHINGTON—PRECIPITATION (INCHES).

1890	2.23	1.27	1.74	.28	2.22	5.44	.75	2.65	2 05	2.45	1.52	.18	22.78	....	.....	....	.....
1891	2.32	.86	3.45	.89	1.65	5.81	4.46	2.87	.40	1.19	3.07	1.93	28.30	....	.....	....	.....
1892	1.15	1.45	3.40	3.79	9.12	5.51	3.10	1.27	1.59	1.28	1 85	1 85	35.36	....	.....	....	.....
1893	.89	.80	2.70	4.21	1.74	3.83	2.27	1.65	4.24	1.15	.90	1.14	25 02	....	.....	....	.....
1894	1.10	1.25	2.97	1.95	2.54	.57	1.14	1.89	3.15	1.56	1.45	.72	28.29	....	.....	....	.....
1895	1.25	1.21	1.11	1.26	3 18	1.65	4.59	3.06	2.40	.67	1.54	2.61	24.47	....	.....	....	.....
1896	.74	.72	.83	4.12	5.84	2.23	7.56	3.79	2.94	2.70	.78	1 10	33.35	....	.....	....	.....
1897	3.51	.82	1.42	5.13	.93	1.39	6.23	1.43	1.33	.12	1 01	1 53	24.85	....	.....	....	.....
1898	3.17	1.10	2.67	2.83	4.59	2.79	1.67	4.45	2.46	3.73	1.05	.38	30.89	....	.....	....	.....
1899	.16	1 21	1.28	2.81	5 27	2.00	2.82	2 61	.90	.60	.74	2.09	22.49	....	.....	....	.....
1900	.74	2.03	3.48	2.50	2.80	1.52	2.65	7.22	4.76	4.12	1.12	.30	33.24	....	.....	....	.....
1901	1.04	1.80	1 67	1.66	2.06	1.61	.97	.24	1.74	1.32	.77	1.68	16.56	....	.....	....	.....
1902	.49	1.01	1.57	2.66	2.58	7.68	7.80	12.34	3.13	5.29	2.35	2.47	49.37	....	.....	....	.....
Averages	1.45	1.16	2.17	2.62	3.43	3.24	3.54	3.49	2.62	2.13	1.39	1.47	29.92	....	.....	....	.....

WASHINGTON COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	21	15	29	19	41	1.0	2.22	5.44	.75	2.65	11.06
1891	48	16	42	23	147	1.7	1.65	5.81	4.46	2.87	14.79
1892	29	15	22	19	30	1.5	9.12	5.51	3.10	1.27	19.00
1893	40	16	26	20	52	1.6	1.74	3.83	2.27	1.65	9.49
1894	19	21	30	19	42	1.2	2.54	.57	1.14	1.89	6.14
1895	45	20	40	22	91	.8	3.18	1.65	4.59	3.06	12.48
1896	45	17	28	24	75	1.8	5.84	2.23	7.56	3.79	19.42
1897	30	16	24	20	54	1.5	.93	1.39	6.23	1.43	9.98
1898	33	15	31	21	74	1.7	4.59	2.79	1.67	4.45	13.50
1899	40	12	30	30	88	1.3	5.27	2.00	2.82	2.61	12.70
1900	39	14	31	20	62	1.5	2.80	1.52	2.65	7.22	14.19
1901	24	16	26	25	20	1.2	2.06	1.61	.57	.24	4.88
1902	40	16	40	32	87	1.8	2.58	7.68	7.80	12.34	30.40
Averages	34	16	30	23	66	1.4	....	....	....	....	18.69

KEOKUK COUNTY.

Area, 576 square miles; area in farms, 361,554 acres; number of farms, 2,927; value of farms (census of 1900), $18,560,100; value of farm buildings, $2,724,690; value of live stock, $3,340,935; value of products of the year not fed to stock, $2,983,449; acreage in cereal crops, 151,150 acres. The following tables contain weather records compiled at Sigourney; elevation, 790 feet.

SIGOURNEY—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1896	....	27.6	32.4	57.0	68 4	....	....	74.0	60.7	49.4	32.9	32 6	....	....	....	....	....
1897	18	26	35	50	60	73	78	71	73	60	37	20	50.0	103	June	-19	Jan.
1898	25	26	40	....	64	74	76	73	68	48	34	20	50.1	102	July	-12	Dec.
1899	22.0	14.3	26.1	49.6	62.1	73.8	75.1	75.2	61.0	58 9	47.0	27 8	49.4	103	Sept	-27	Feb
1900	28.8	18.0	32.7	54.4	65.5	71.5	76 0	79 9	67.0	61.1	36.2	28.8	51.7	99	Aug	-10	Feb
1901	26.8	19.0	37.0	52 8	62.7	76.0	85 4	75.8	66.0	55.8	38.2	22.1	54 4	113	July	-16	Dec.
1902	24.2	19.0	41.5	50.2	66.6	66.6	75.0	70.4	60,4	54,9	45.4	23 6	49.8	97	May July	-18	Jan.
Averages	24.1	21.4	35.9	52.2	64.2	72.3	77.6	74.2	65 1	55.4	38.8	39 2	50.4	1901 113	July	-27	Feb.

SIGOURNEY—PRECIPITATION (INCHES).

1896	....	1.49	.76	5.16	4.39	....	....	4.07	1.90	2 34	1.39	.10	....	....	....	....	....
1897	2.16	1.09	1.33	4.46	1.94	2.96	4 08	2.12	1 68	.64	1.37	2.61	26.44	....	....	....	....
1898	2.86	1.06	1.85	....	2.64	3 53	3 86	3.09	2.89	4.67	1 58	.59	....	....	....	....	....
1899	.25	1.03	1.41	2.76	7.79	1.99	2.70	4.86	1.92	2.81	1.10	....	....	....	....	....	....
1900	.32	1.98	3 40	8.83	4.62	2.68	5.01	4 02	6.71	3.81	1.96	.56	38.98	....	....	....	....
1901	1.32	1.91	3.41	1.53	2.24	2.39	1.37	.48	2.02	2.29	.81	1.88	21.71	....	....	....	....
1902	.55	.90	.96	3.83	4.21	8.61	11.03	7.52	3.73	4.59	2.44	2.25	50.69	....	....	....	....
Averages	1.24	1.35	1.89	3.60	3.98	3.69	4.67	3.78	2.97	3.02	1.50	1.41	36 73	....	....	....	....

KEOKUK COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.							RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Rye, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	25	10	30	15	22	32	1.0					
1891	45	20	50	14	38	190	1.7					
1892	28	15	31	18	30	58	1.5					
1893	37	17	24	15	29	58	1.6					
1894	21	12	29	18	30	40	1 0					
1895	40	15	45	20	28	75	1 1					
1896	40	15	26	21	24	191	1.7	4.39	....	....	4.07	....
1897	29	12	26	14	28	56	1.5	1.94	2.96	4.04	2.12	11.06
1898	35	15	30	16	25	77	1.8	2.64	3.53	3.86	3.09	13.12
1899	38	12	35	20	25	85	1.4	7.79	1.99	2.70	4.86	17.34
1900	42	14	33	15	25	78	1.5	4.62	2.68	5.01	4.02	16.33
1901	23	16	22	16	20	20	1 8	2.24	2.39	1.37	.48	6.48
1902	40	16	25	20	22	102	1.8	4.21	8 61	11.03	7.53	31.38
Averages.	35	15	31	17	26	75	1.5	....	....	....	....	15.95

WAPELLO COUNTY.

Area, 432 square miles; area in farms, 262,459 acres; number of farms, 2,311; value of farms (census of 1900), $9,282,280; value of farm buildings, $1,965,530; value of live stock, $2,141,102; value of of the year's products not fed to stock, $1,817,884; area in cereal crops, 82,380 acres. The following meteorological tables were compiled at Ottumwa; elevation, 649 feet.

OTTUMWA—TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mch.	April.	May.	June	July.	Aug.	Sept.	Oct	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1894	21	25	45	54	62	76	77	76	68	55	35	34	52.7	..	....	..	....
1895	18	19	38	55	63	72	74	75	70	49	38	20	50	....	....	....	....
1896	27	25	34	59	68	71	75	74	60	51	35	34	51.5	....	....	....	....
1897	21	28	38	50	61	72	78	71	74	60	39	2.	51	....	....	....	....
1898	26	25	39	50	61	74	74	73	68	50	35	21	49.6	...	....	....	....
1899	25.3	16.4	30.4	50.2	62.2	73	75	76.2	65.6	60.5	47.9	27.8	50.9	102	Sept...	-23	Feb.
1900	29 8	21.4	34.4	55.4	66.6	73.4	76.7	82	67.5	61.3	38.1	30 4	53.1	97	Aug. .	- 6	Jan.
1901	29.4	21	38	51	63		86	75.8	67	57	38.6	24.8	.....	108	July.	-14	Dec.
1902	25.9	20.2	41.6	50.9	67.4	67.6	75.8	71.7	59.8	57.2	46.5	25.6	50.8	92	July.	-12	Jan.
Averages	24.8	22.9	37 6	52.8	63.8	72.4	76.8	75	66.6	55.7	39.2	27.4	51.2	108	1901 July..	-23	1899 Jan.

OTTUMWA—PRECIPITATION.

1894	2.10	.80	2.36	2 06	2.86	2.78	.11	1.32	5.75	3.33	1.65	.66	25.78	....	....	....	....
1895	1.59	.22	.56	3.05	5.54	2.95	5.16	3.48	2.36	.90	1.94	3.95	31.70	....	....	....	....
1896	1.15	2.40	3.07	5 46	7.52	1.01	9.91	5.33	4.89	3.80	2.11	1.43	48.08	....	....	....	....
1897	3.52	1 60	2 59	5.60	.63	5.81	2.53	.77	.81	.78	1.11	1.92	27.67	....	....	....	....
1898	4.14	.65	1.90	2.65	7.80	5 45	3.52	5.84	2.08	3 84	1.38	1.00	40.10	....	....	....	....
1899	.25	.52	.82	2 19	7.95	3.01	4.73	2.52	1.38	1.35	1.95	1.57	28.24	....	....	....	....
1900	.50	.76	1 20	2.38	6.20	3.60	3.35	6.05	6.15	5.75	2.12	.47	38 63	....	....	....	....
1901	.40	1.69	3.40	1.29	.95	2.04	1.98	1.36	4.15	1.35	.68	.68	19.97	....	....	....	....
1902	.60	1.50	1.22	3.08	3.90	8 42	7.32	6.42	10.41	4.80	2.25	.67	50.59	....	....	....	....
Averages.	1.59	1.24	1 91	3.08	4.82	3.79	4.29	3.68	4.82	2.88	1.68	1.37	34 52	....	....	....	....

ELDON—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1898	....	....	....	50. 0	62.0	74. 0	76.0	75. 0	69. 0	51. 0	32. 0	19. 0	....	....	....	....	....
1899	22. 0	14. 6	31. 2	51 8	63. 9	74. 0	75. 8	77. 0	65 5	60. 2	40 3	26. 9	....	....	....	....	....
1900	30. 0	19. 0	33. 8	54. 8	65. 2	71. 6	75. 7	78. 0	68. 0	61. 6	37 2	29. 4	....	....	....	....	....
1901	27 6	18. 2	37. 7	50. 8	62. 2	75. 2	85. 1	75. 9	66. 4	56. 2	37. 0	22. 4	....	....	....	....	....
1902	24. 4	18. 4	40 8	50. 0	67. 0	66. 7	75. 0	71. 1	60 6	55. 9	45. 7	23. 6	49. 9	....	....	....	....

ELDON—PRECIPITATION (INCHES).

1898	....	....	....	2. 83	5. 49	4. 76	2. 18	5. 36	5. 07	3. 97	. 87	. 81	....	....	....	....	....
1899	.10	.78	2. 21	2. 11	8. 09	2. 85	3 62	2. 75	1. 25	. 86	. 72	2. 52	28. 01	....	....	....	....
1900	. 57	2. 78	1. 58	2. 61	5. 74	5 98	2. 17	5. 16	3 81	4. 28	2 09	. 46	37. 48	....	....	....	....
1901	. 98	. 68	2. 82	1. 49	. 99	3 15	1. 24	. 60	2. 72	1. 41	. 75	1. 78	18. 01	....	....	....	....
1902	. 65	. 72	1. 24	2. 94	1 97	6. 72	5. 68	7. 18	5 25	4 38	2. 10	1. 45	40. 23	....	....	....	....

WAPELLO COUNTY—CONTINUED.

WAPELLO COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons	May.	June.	July.	August.	Total.
1890	21	14	27	16	47	1.0					
1891	43	18	39	18	105	1.8					
1892	27	18	19	12	21	1.5					
1893	36	14	26	15	48	1.5					
1894	16	16	24	17	44	0.8	2 86	2.78	.11	1.32	7.07
1895	43	18	42	19	97	1.1	5.54	2.95	5.16	3.48	17.13
1896	45	15	31	16	119	1.4	7.52	1.01	9.91	5.33	23.77
1897	27	12	23	13	55	1.5	.63	5.81	2.53	.77	9.74
1898	32	18	33	17	70	2.0	7.80	4.45	3.52	5.84	21.21
1899	30	10	30	10	80	1.5	7.95	3.01	4.73	2.52	18.21
1900	38	12	30	12	60	1.2	6 20	3.70	3.35	6.05	19.10
1901	25	14	22	13	30	1.3	.95	2.04	1.98	1.36	6.33
1902	35	18	29	16	90	1.8	3.90	8.42	7.32	6.42	26.09
Averages.	32	15	27	14	66	1 4					16.50

JEFFERSON COUNTY.

Area, 432 square miles; area in farms, 268,189 acres; number of farms, 2,206; value of farms (census of 1900), $9,042,520; value of farm buildings, $2,247,510; value of live stock, $2,247,468; value of the year's products not fed to stock, $1,818,659; acreage in cereal crops, 104,970 acres. The following meteorological tables contain data compiled at Fairfield; also records of observations made by C. Houghton, in the years 1876 to 1888, inclusive, at Brookville, nine miles northwest of Fairfield. Elevation of Fairfield, 780 feet.

BROOKVILLE—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.					
1876	....	1.35	3.25	3.91	3.90	4 26	5.04	4.65	10.56	1.87	1.61	....	....	....	....	....	....	....
1877	.75	....	3 51	3.61	3.06	12.14	3.27	4.36	1.82	3.16	2.02	2.78	45.48	....	....	....	....	....
1878	....	1.90	3.45	3.05	5.22	3.97	2.46	8.21	2.90	3.38	1.74	1.04	37 32	....	....	....	....	....
1879	1.15	.60	.49	1.68	4.47	4.83	.60	1.45	2.74	.94	4.96	.77	24.68	....	....	....	....	....
8880	3.19	1.44	2.13	3 87	1.80	2 02	2.95	5.01	2 66	1.00	1.39	.90	28.36	....	....	....	....	....
1881	.48	2.14	1.72	3 28	1.60	13 17	1.17	1.25	5.23	6.48	1.64	1.62	39 78	....	....	....	....	....
1882	.60	.58	1 81	3.42	5.04	7 25	2.21	1.08	.73	4.11	1.86	2.25	31 28	....	....	....	....	....
1883	1.26	3.25	1.36	3.08	4.88	6 08	3.32	35	.54	2.93	2 71	.28	30.09	....	....	....	....	....
1884	.40	.90	2.55	1 42	3.64	1.89	3 18	3 45	3 22	5.68	1.16	2 31	29.80	....	....	....	....	....
1885	2.39	.25	....	2.45	1.51	2.66	5.56	4.55	2.22	3.21	.53	.80	26.13	....	....	....	....	....
1886	1.51	.10	1.68	1.62	2 93	.50	....	1.42	2.90	2.45	.15	....	....	....	....	....	....	....
1887	2.40	3.32	.87	1.76	1.42	2.19	3.04	1.90	2.40	1.78	1.01	2.97	25 06	....	....	....	....	....
1888	.95	.55	3.04	1.57	9.38	3.72	3.87	6.33	1.09	1.32	2.75	2.04	36 61	....	....	....	....	....
Averages.	1.26	1.26	1.99	3.06	3.83	4.97	2.82	3.39	3.00	2.95	1.77	1.62	32.24	....	....	....	....	....

FAIRFIELD—TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1894	23.1	22.8	....	....	....	74.7	76.6		66.0	53 2	35.8	31.6	....	....	....	....	....
1895	16 0	18.0	36.0	52.0	61.0	72.0	72.0	73.0	68.0	47.0	36.0	27.0	48.2	....	....	....	....
1896	26 0	27.0	32.8	57.6	66.1	69.6	71.9	70.9	59.2	46.8	33.6	34.0	49.6	....	....	....	....
1897	20 0	27.0	35.0	48.0	59 0	70.0	76.0	70.0	72.0	59.8	38.0	21.0	49.6	....	....	....	....
1898	26.4	26.5	39.8	48.6	60.2	71.8	74 0	73.2	67.0	49.8	35.4	23.4	49.7	....	....	....	....
1899	25 2	17.0	30 0	52 7	61.4	71.5	78 4	74.0	64.1	50.9	47.3	26.0	50.3	....	....	....	....
1900	29.0	19.2	....	54.0	64.0	69.9	74 2	78.7	66.4	....	....	....	....	....	....	....	....
1901	24.8	18.9	39.8	....	66 2	66.0	75.4	70.9	60.9	55 4	44.4	....	....	....	....	....	....
Mean.	23.7	22.0	35.5	48.8	62.6	70.6	74.2	72.9	65.4	53.0	38.8	23.2	49.1	....	....	....	....

JEFFERSON COUNTY—CONTINUED

FAIRFIELD—PRECIPITATION (INCHES).

YEAR	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l
1876	.80	1.35	3.18	3.81	4.67	3.58	4.90	4.05	10.56	1.87	1.61		42.52
1877	.75		3.51	8.60	3.06	12.14	3.25	4.36	1.82	3.16	2.62	2.78	46.25
1878		1.90	3.45	3.05	5.19	3.98	2.46	8.29	2.10	3.38	1.74	1.04	36.58
1879	1.15	.59	.46	1.08	4.17	4.85	.60	1.45	2.74	.94	4.36	.77	24.67
1880	3.19	1.44	2.13	3.87	1.80	2.62	2.36	5.01	2.66	1.00	1.38	.90	28.38
1881	.48	2.14	1.72	3.28	1.60	10.17	1.17	1.25	5.26	6.48	1.64	1.62	36.78
1882	.60	.58	1.81	3.42	5.91	7.95	2.21	1.08	.23	4.11	1.39	2.25	31.38
1883	1.26	3.25	1.36	3.08	4.88	6.68	3.92	.35	.54	2.02	2.71	.33	30.09
1884	.46	.80	2.55	1.42	3.64	1.82	3.18	3.45	3.25	5.58	1.66	2.31	29.70
1885	2.32	.95		2.45	1.51	2.95	3.56	4.55	2.22	3.21	.53	.80	26.13
1886	1.46	.46	2.18	1.62	3.93	.50		1.23	2.10	2.45	.15	1.24	18.20
1887	1.13	3.62	.87	1.70	1.42	9.19	3.04	1.90	2.46	1.78	1.01	2.57	23.79
1888	.95	.35	3.04	1.57	3.99	3.72	3.85	6.39	3.17	3.07	1.67	1.24	38.54
1889	1.13	1.25	.70	2.95	3.90	7.95	2.00	1.06	6.13	3.07	1.62	.35	38.16
1890	1.13	.80	1.76	.33	1.26	3.48	.10	3.62	.26	2.91	1.35		16.40
1891	1.13	1.25	4.38	2.18	2.52	3.86	3.91	8.36	.51	.76	3.54	1.93	
1892	3.13		2.74	7.04	12.01	4.27	6.41	1.24	.85	1.00	1.95		
1894	1.57	1.38				2.14	.05		7.36	2.31	1.66	.64	
1895	1.08	.62	1.30	2.38	4.19	2.82	4.00	3.39	2.60	.38	1.58	3.30	28.30
1896	.63	2.15	.85	4.60	7.42	1.08	5.43	7.48	5.36	2.66	.74	.74	39.11
1897	3.08	1.20	2.66	4.11	.58	5.88	3.62	1.42	1.08	.19	1.22	1.12	26.17
1898	3.52	.85	2.82	3.22	6.21	5.54	2.84	3.53	3.61	1.13	1.66	.75	38.68
1899	.23	1.08	1.64	3.19	6.43	1.94	2.22	3.06	1.69	.62	1.60	1.88	
1900	.83	3.28		.79	5.31	3.03	4.35	3.64	4.54				
1902	.55	.74	1.43		2.45	9.34	11.40	9.54	4.13	4.71	2.11		
Av'ges	1.36	1.38	2.03	3.17	4.30	4.55	3.34	3.77	3.17	2.68	1.68	1.38	32.81

JEFFERSON COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.							RAINFALL MAY 1 TO SEPTEMBER 1.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Rye, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	25	18	31	13	18	47	2.0	1 26	2.48	.10	3 62	7.46
1891	42	18	38	15	20	144	1.8	2.52	3.87	3.91	8.36	18.66
1892	29	13	19	10	12	31	1.8	12 01	4.27	6 41	1.94	24.63
1893	35	11	27	13	23	57	1.5					
1894	19	13	26	16	11	47	1.0		2 14	.07		
1895	43	17	39	16	32	111	1.3	4.19	2.82	4 60	3.39	15 00
1896	45	16	35	16	20	82	1.8	7 42	1.08	5 43	7.48	21.41
1897	31	9	23	13	15	47	1.4	.58	5.88	3 62	1.42	16.50
1898	34	12	25	12	21	66	1.8	6 21	5 54	2.84	3.52	18.11
1899	33	10	32	16	21	110	1.4	6 43	1.94	2 22	2.66	13.25
1900	28	13	32	14	28	70	1.3	5.31	3.03	4.35	3.64	16.33
1901	28	18	30	19	25	45	1.2					
1902	40	15	30	15	31	120	1.8	5.45	9.34	11.40	9.54	32.73
Av'ages	34	14	30	15	20	75	1.5					18.40

HENRY COUNTY

Area, 432 square miles; area in farms, 271,588 acres; number of farms, 2,252; value of farms (census of 1900), $10,728,740; value of farm buildings, $2,506,750; value of live stock, $2,373,828; value of farm products of the year not fed to stock, $2,096,719; acreage in cereal crops, 100,750. The following tables contain weather records compiled at the state hospital for the insane at Mt. Pleasant.

MT. PLEASANT—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest	Month	Lowest	Month
1879	15 5	26	43.3	49.6	65.2	71.3	72 1	75.5	60.9	58 2	36.1	21	49.6				
1880	30.1	29.9	35.3	50.5	9.2	73.7	76.7	76.4	62.6	48.5	25.9	18	49.6				
1881	11 2	19.6	30	45 1	0	72.2	79.2	79	71	50 2	36.6	44.6	50.4				
1882	23.1	5.1	38.4	52.8	56.1	71.6	72 4	79.1	64	54.8	37.4	23 4	50.7				
1883	13 4	24.6	38.7	49 2	58.2	69	74 8	70.4	59.9	48.1	38.2	36.1	48.5				
1884	7 2	21 4	31.4	47	59 2	68.3	71 2	67.8	66.4	54	34 3	18.2	45.5				
1885	9	11.8	29.8	46.8	52.7	67.9		68.8	62 8	45.7	36.3	24					
1886	11	22	33 6	51.6	62.2	69 7	76 1	74 2	64 1	52 6	39 3	14.6	47.6				
1887	11	23.6	33.7	51.4	5	71 7	77.6	71.4	62.8	45.8	24 9	22.6	47.6				
1888						72	75	71.2	61.2	49.7	38.8						
1889	26	20	41.9	50 6	60 7	69 7	75.4	72	61	47	33.6	37.3	49.6				
1890	25 7	29.1	28.4	52 8	58.4	74.9	75 6	68.9	61.5	49.6	42	34.3	50.1				
1891	28.6	26.5	30 2	54.6	61	72.8	71	69.6	68 4	49.6	33.3	35.9	50.1				
Averages.	18	3.8	34.5	51	61.4	71 1	75.3	72.4	63 6	50.6	34 7	25.8	49				

*Averages from thermometer readings at 8 A. M., 2 P. M., and 8 P. M.

MEANS OF MAXIMUM AND MINIMUM TEMPERATURES.

1894	22.8	25.3	45.6	52.2	61.9	77.8	75 1	72.4	65.8	54	35.8	34.7	51.9	-95	July		
1895	17	15	37	56	63	76	77	77	70	50	38	30	50.3	-94	July		
1896	28.1	28.5	34 5	58.7	69.6	73 2		74.8	61 8	51.4	37.5	35.1		-94	Aug	-7	Jan / F'y
1897	21	30	36	51	62	73	79	72	72	60	39	24	51.6	-94	June / Aug	-17	Jan.
1898	28	28	42	51	63	75	76	75	70	52	37	26	52	-93	Aug	-7	Dec.
1899	25.8			51.8	62 8	74 1	75.6	75 2	65	58.3	45.0	24 6		101	Sept	-22	Feb.
1900	20	16 4	29 9	51.8	63.6	68.6	75.4	78 7	67.2	60.7	37 4	30 6	50 5	-97	Aug	-12	Jan.
1901	28	19	37	50.2	61 3	73.4	82	72 2	64 6	53.8	35.4	21 1	49.8	-109	July	-17	Dec.
1902	22 7	17.8	39 2	49.9	64 6	65 4	75.8	70	60 5	53.8	43	22.4	48.8	-95	July	-17	Jan.
Averages	24.4	22 5	37.6	52.5	63.5	72 9	77	74.1	66 2	54.9	38.8	27.6	51				

MT. PLEASANT—PRECIPITATION.

1894	1.49	.50	2.34	3.31	3.80	1.64	.26	.66	5.47	1.77	1.62	.64	23.50				
1895	.25	.21	1 74	1.90	4.21	3 12	4.58	3.77	1.33	.37	2.46	3.86	28.80				
1896	.77	1.76	1.52	5.93	6.55	1.97	6.11	3.99	4.59	2.81	.89	1.35	38.28				
1897	3 52	1.37	2.34	3.59	1.80	7.10	4 60	.95	.78	.22	1.64	1.27	29.18				
1898	2.73	.77	5.60	4.02	5.50	5.87	2.49	6 36	4.42	4.12	1.50	.37	43.75				
1899	.03	.78	1.86	2.27	7.30	2.02	1.07	2.93	1.55	.62	2.11	1.89	24.38				
1900	1.23	2 64	1.30	1.20	4.80	3.19	1 94	3.25	4.58	3.40	1.54	.17	29.24				
1901	80	.48	2.33	1.08	1.37	2.01	2.01	48	2.64	.79	.72	23	16.74				
1902	.19	.87	1.93	3.29	3.70	10 96	8.70	10.06	4.88	4.65	1.82	1.08	52.13				
Averages	1.23	1.04	2.33	3.05	4 34	4.21	3.74	3.91	3.36	2.08	1.59	1.21	30 77				

HENRY COUNTY—CONTINUED.

HENRY COUNTY CROPS.

YEAR	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST				
	Corn, bushels.	Wheat, bushels	Oats, bushels	Rye, bushels.	Potatoes, bushels	Hay, tons	May.	June.	July.	August.	Total.
1890	30	16	34	15	85	1.5					
1891	31	20	44	18	103	1.5					
1892	23	15	23	14	33	0.9					
1893	32	12	28	15	78	1.5					
1894	20	15	30	19	44	1.0	3.80	1.64	.26	.06	6.36
1895	31	19	40	22	105	1.5	4.21	3.12	5.58	3.77	16.68
1896	42	14	25	16	81	1.8	6.15	1.97	6.11	3.39	18.62
1897	29	13	25	14	89	1.0	1.80	7.10	4.90	.05	14.45
1898	39	16	30	16	91	1.0	5.50	3.87	2.49	6.36	20.22
1899	35	17	33	15	80	1.0	7.80	2.62	1.67	2.03	13.32
1900	40	12	34	15	90	1.3	4.40	3.19	1.24	3.25	13.18
1901	36	18	34	18	100	1.3	1.57	2.01	2.91	.48	6.77
1902	40	20	25	14	105	2.0	3.70	10.16	8.70	10.06	33.42
Averages..	36	16	31	16	78	1.6					15.80

DES MOINES COUNTY.

Area, 400 square miles; area in farms, 250,572; number of farms, 2,189; value of farms (census of 1900), $9,875,800; value of farm buildings, $2,475,230; value of live stock, $1,939,403; value of the year's products not fed to stock, $1,976,447; acreage in cereal crops, 99,640 acres. The following tables contain climatic data compiled in Burlington; elevation, 533 feet.

BURLINGTON—MEAN TEMPERATURE (DEGREES).

YEAR	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1887	....	....	....	....	....	....	75	74	....	60	40	24	....	....	....	....	....
1888	28	30	42	51	63	....	....	....	....	52	36	....	....	....	....	....	....
1889	21.6	16.4	....	53.7	63.7	74.8	76.0	76.8	65.6	61.6	47.8	30.8	....	....	....	....	....
1900	33.2	24.2	34.8	55.4	65.5	71.3	75.7	....	....	....	39.8	31.2	....	....	....	....	....
1901	29.6	21.0	39.0	52.8	63.3	75.4	83.6	76.4	67.6	58.0	39.2	24.5	52.5	....	....	....	....
1902	24.7	21.6	42.1	51.4	67.4	67.8	75.8	71.6	62.6	50.4	47.6	25.8	51.2	....	....	....	....

BURLINGTON—PRECIPITATION (INCHES).

1898	1.86	1.25	6.13	2.79	5.32	....	....	....	....	....	....	....	....	....	....	....	....
1899	1.71	1.74	3.83	3.45	6.16	1.71	2.69	3.56	2.37	2.32	.93	1.76	32.25	....	....	....	....
1900	1.68	4.27	2.23	4.78	3.80	....	2.87	....	....	....	2.88	.54	....	....	....	....	....
1901	1.81	1.99	4.39	1.86	2.10	4.05	2.15	.39	1.26	1.08	.77	.91	23.24	....	....	....	....
1902	.80	1.16	2.52	4.21	5.17	11.05	7.27	10.62	2.77	3.79	2.37	2.13	51.55	....	....	....	....

DES MOINES COUNTY CROPS.

YEARS.	AVERAGE PER ACRE.					
	Corn, bushels.	Wheat, bushels	Oats, bushels	Rye, bushels.	Potatoes, bushels.	Hay, tons.
1890	27	15	30	18	61	1.0
1891	40	19	38	17	87	2.0
1892	29	15	24	14	50	1.5
1893	32	12	28	16	77	1.6
1894	21	18	32	14	58	1.2
1895	40	18	32	19	69	.7
1896	45	19	27	18	113	1.4
1897	33	11	30	12	50	1.5
1898	35	16	30	13	80	1.9
1899	30	12	25	15	95	1.2
1900	37	15	35	16	85	1.2
1901	32	16	32	20	50	1.0
1902	36	20	31	20	100	1.5
Averages	33	16	31	16	74	1.4

LEE COUNTY.

Area, 490 square miles; area in farms, 302,800 acres; number of farms, 2,549; value of farms (census of 1900), $9,539,660; value of farm buildings, $2,441,890; value of live stock, $1,986,872; value of the year's products not fed to stock, $1,867,520; acreage in cereal crops, 95,500. The following tables contain climatic data compiled at the United States Weather Bureau station at Keokuk since August, 1871; also weather records made by D. McCready and his daughter, Miss L A. McCready, at their farm residence near Fort Madison, covering the period from 1848 to 1902. At this station the observations of temperature were taken at following hours: From 1848 to 1852 at sunrise, noon and sunset; 1854 to 1870 at 6 A. M., noon and 7 P. M; 1871 to 1898 at 7 A. M., 2 P. M. and 9 P. M. These records are of great value for reference and comparison. Altitude of Keokuk station, 619 feet.

FORT MADISON—MEAN TEMPERATURE—1848-1898.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1848	....	.....	44.9	53.4	68.2	72.0	72 3	73.2	61.2	55.2	37.1	24 7	.....	....	.....	....	.....
1849	16.5	21.6	41.2	4-.9	59.4	73.5	73 9	71.6	67 1	52.3	47.4	22.2	49.7	....	.....	....	.....
1850	29.0	31.2	37.2	44.9	58.0	72 9	77 4	75 5	63.3	54.3	43 2	24.7	51.0	....	.....	....	.....
1851	29 8	33.7	43.3	48.0	61.4	68.6	75.9	72 0	71.3	54.3	36.9	21.0	51.6	....	.....	....	.....
1852	23.0	33.1	40.9	46.5	62.3	69.2	75 9	73 0	65.1	57.5	33.5	27.7	50 6	....	.....	....	.....
1854	21.2	33.0	42.7	56.2	66.0	76.3	85 8	81 6	72.7	58 4	39.2	30.4	55.3	....	.....	....	.....
1855	27 0	21.2	33.9	57 4	64 7	72.2	.9 8	73 5	70 4	49 7	41 3	24.0	51.1	....	.....	....	.....
1856	16.4	19.8	29.9	54.6	64.4	77.3	77.4	70 2	62.8	55 2	34.6	20.0	48.5	....	.....	....	.....
1857	10.4	31.4	31.3	38.8	56.9	70.5	78 7	72.8	66 7	60 3	32 6	33 5	47.8	....	.....	....	.....
1858	34.5	18.4	41.9	50.0	57.9	74 2	76 2	74.0	65.5	52.7	33.9	28.4	50.6	....	.....	....	.....
1859	26.5	28.9	42.4	46 1	64.8	68.8	77.3	73.7	63.6	49.5	41.6	17.5	50 0	....	.....	....	.....
1860	25.5	30.0	45 1	.3 1	69.3	71.8	75 7	73.3	63 2	54.3	36.5	21.6	51.6	....	.....	....	.....
1861	21.9	30.6	37.5	52.5	59.6	73.9	74.5	75 7	65 7	53.7	39.5	32.0	51.4	....	.....	....	.....
1862	18 8	19.5	35.8	47.6	62.9	69 6	77.3	75.4	67.4	53 0	36.7	33 7	49.8	....	.....	....	.....
1863	31.0	28.5	37.1	51.8	64 6	70.8	75 3	74 6	63.2	44.2	39 2	28 9	50.8	....	.....	....	.....
1864	19.6	31.6	35.0	47 4	64.7	74 1	78 5	74 3	66.8	49.1	37.4	21.6	50.0	....	.....	....	.....
1865	22.0	31.6	36 9	49 0	63.6	75.2	71.9	73.2	72.9	54 1	42.1	22.6	51.3	....	.....	....	.....
1866	23 0	23.6	33.2	54.1	60.5	71 8	80 2	71.0	59 6	53.1	40 1	26.5	49.7	....	.....	....	.....
1867	18.4	29 7	27.8	8.9	53.8	74.8	77 4	77.0	67.0	54.6	43 8	27.1	50.0	....	.....	....	.....
1868	17.2	26.7	45.4	45 5	62.1	72.9	84.3	70.3	60.1	51.1	40 2	22.8	49.9	....	.....	....	.....
1869	31.4	29.4	32.6	48.3	61.0	69 5	74.3	5.0	63.8	43.5	35.2	28.6	49.4	....	.....	....	.....
1870	25.7	29.6	33.3	53.7	67.0	76.0	82.0	72.0	67 4	54.2	42.7	27 2	52.6	....	.....	....	.....
1871	27.1	30.2	43.7	56.2	65.9	75 4	76.6	76 0	63.0	56.1	34.0	32.2	52.2	....	.....	....	.....
1872	23 8	29.1	34.0	....	....	75 6	78 9	77.2	66.5	53.8	32.4	18.6	....	....	.....	....	.....
1873	16.6	24.3	37.4	48.0	60.2	79.6	77.6	79 5	63.7	48.7	36.2	....	....	....	.....	....	.....
1874	24 6	26.9	35.7	....	64.8	76 4	80 2	76.2	66.8	54.4	38 5	29.0	....	....	.....	....	.....
1875	13.5	15.1	32.4	47.2	63.1	72.5	76.5	72 6	64.0	49.7	34 0	35.6	47.9	....	.....	....	.....
1876	31 5	33 0	33.2	53 1	64.5	71 2	77.4	77.3	64 4	50.5	35.1	16.7	50.7	....	.....	....	.....
1877	19.6	26.2	0.7	50.3	2.8	71 9	76 6	74 1	67.6	54.6	36 1	42.3	51.9	....	.....	....	.....
1878	20 3	36.0	49 8	57 6	60.5	70.4	81.4	77.0	67 2	53.6	42.3	19 2	53.7	....	.....	....	.....
1879	18.0	27.1	40.4	52.1	67 5	72.8	80 2	75.9	63.4	61.0	39.9	25 4	52.0	....	.....	....	.....
1880	38.9	31 8	38.7	62.8	70.8	75.6	77.4	78.4	64.3	52.4	30.0	20.9	52.7	....	.....	....	.....
1881	15.2	23.0	31.9	45.8	71.4	72 7	79 4	79 4	71.6	55 7	37.3	35.9	51.6	....	.....	....	.....
1882	26.3	38.0	40.6	53.6	57.2	71.2	72.4	73.2	64.4	56.2	41.3	24.9	51.6	....	.....	....	.....
1883	11.0	21.8	34 0	55.4	68.8	69 8	75 8	1.3	62.0	50.1	40 1	29 0	48.1	....	.....	....	.....
1884	15.0	24 5	35.4	51.2	62.0	71.6	75.0	72 6	70.6	53 3	38.5	22.0	49.6	....	.....	....	.....
1885	13.0	14.0	33.0	49.8	61.2	71.3	78.5	71 0	65.8	48 7	39.2	27.3	47.7	....	.....	....	.....
1886	14.5	25.8	37.2	56.4	65.2	72 9	81 2	78.6	67.4	55.3	38.5	18.7	50.8	....	.....	....	.....
1887	15 4	26.8	37.4	55 2	68.2	75.8	82.1	5.2	66 1	48 4	42.5	25 8	51.6	....	.....	....	.....
1888	11.6	21.9	32 7	53.7	59.7	73.1	78.8	72.4	61.3	49.9	40.0	33.4	49.0	....	.....	....	.....
1889	27.7	23.8	42.6	54.9	63.4	75.7	78.0	75.6	63.8	49 6	36 5	41.6	52.8	....	.....	....	.....
1890	28.9	32.4	32.2	53 7	61 0	77.5	79.2	72.0	62.6	5.. 7	42.4	32.2	52.2	....	.....	....	.....
18 1	30.6	29.6	34.4	55.9	68 2	73.6	73.6	74.6	78.9	56.2	36.9	39.1	53.5	....	.....	....	.....
1892	23.0	5.9	38.8	51 5	59.9	75 0	77 2	72.2	69.0	53.8	38.5	28.0	52.3	....	.....	....	.....
1893	16.9	25.0	39.8	52.8	62.6	75.6	79.5	74 3	69.2	57.4	38	29.0	51.7	....	.....	....	.....
1894	28.6	27 8	46.6	56.0	66.4	78.5	80.9	78.4	69.5	56.1	37.6	34.5	55 0	....	.....	....	.....
1895	22.0	22 0	40.0	58.0	66.0	77.9	77 0	75.0	71.0	50 0	40.0	2 0	52 5	....	.....	....	.....
1896	30.7	31.6	34.8	61.6	71.8	73.2	77.0	75.6	62.8	52.8	39 6	36.8	54.4	....	.....	....	.....
1897	2 .0	33.0	42.0	53 0	64.0	73.0	79.0	73.0	75.0	62.0	42.0	26.0	54 0	....	.....	....	.....
1898	30 2	31.6	44.6	53.2	.....	76.1	78.1	75.6	70 2	52.1	39.3	27.1	....	....	.....	....	.....
Means	22.8	27.8	37.7	51.7	63 2	73.4	77.7	74.5	66.3	53.1	38.4	27.4	51.2	....	.....	....	.....

LEE COUNTY—CONTINUED.

FORT MADISON—PRECIPITATION—1848-1902.

YEAR.	Jan.	Feb.	Mar	April.	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1848	....	....	3.15	.45	4.02	5.90	4.75	14.40	4.50	4 40	1.75	2.55	.....
1849	1 20	2.75	7 90	5.47	2 90	3.32	.75	10.90	7.80	3.30	7.15	.70	54.14
1850	2.93	91	.85	5.20	4.70	4.90	6 55	9.15	6.95	2.55	3.43	2.24	50.36
1851	.63	1.70	1.66	3.45	0 80	8.60	5.95	2.95	1.90	2.70	3.02	1.96	46.32
1852	1.92	.15	8.15	3 85	6.75	4.97	2 60	3.10	6.55	6 40	6.40	1.80	52.22
1854	2.90	10.80	3 10	2.47	5 67	2.65	.77	1.04	8.17	4.40	1.84	4.95	46.26
1855	....	....	1.02	4.85	8.05	5.10	6 90	4.35	3.25	2.50	4.85	....	.....
1856	2.50	1 52	4.30	4.36	3.85	.59	5 97	1.56	3.20	5 10	4.20	6.71	48 86
1857	.75	5.35	2.61	1.13	1.51	1.83	1 48	5.84	2.03	1.81	1.95	1.25	27.54
1858	1.72	2.28	1 84	6.85	8.10	6.36	5.90	1 59	3 11	5.93	4.64	2 78	51.10
1859	2.63	1.75	4 56	2.36	6.61	6.84	4.29	1 84	3.98	.80	1.40	.39	37.46
1860	3.80	2 05	.53	.68	1.75	6 80	3.68	2.46	5 26	.98	1.64	3.10	32.23
1861	1.10	2.10	2 64	4.91	2.41	3 88	1.89	2.10	4 25	2.84	1.05	2 84	31.01
1862	2.54	.72	2.22	5 45	2 35	4.87	4 81	3.72	5.30	1 54	2.40	1.61	37.56
1863	2.30	3.66	.91	.78	1 35	1.08	4.71	5 57	3.99	3.52	65	3.55	30.07
1864	1.21	.41	2.62	5.31	2.43	2.01	3.83	2 31	.57	3.47	2.28	2.72	31.17
1865	.27	3.62	3.78	6 35	1.22	6 61	9.98	2.03	6.03	2 73	.28	1 11	44 56
1866	4.28	3 05	2.42	3.82	3.16	2 48	6 76	2.63	7.32	2 51	.84	2.58	41.85
1867	.90	3.08	3 37	3.25	5.88	4.11	2 59	2.44	1 78	1.30	1 72	1.15	31.52
1868	51	.40	5.94	7.57	9 94	2.13	4.85	3.34	2.05	1.88	4.02	1.84	44.42
1869	1 21	2.45	1.68	3 46	4.73	4.61	7 05	5 91	2 76	2.00	3.31	2.39	41 56
1870	2.89	.80	4.47	.91	1.53	1.12	1 60	6.50	4.52	4.68	1 00	72	30.24
1871	5.37	2 57	2 10	2.41	2 51	3.44	4.07	7.45	.50	4.36	3.20	1.20	40.27
1872	.29	.74	3.26	.....	.....	2 82	1.59	.06	1.98	2.40	2.80	1.80	.....
1873	.50	....	3.74	4 60	3.48	1.20	3.25	1.70	2.07	2.05	1 20	....	.....
1874	2.10	1.18	52	....	1 50	2.60	3.31	.85	6.75	.88	1.54	80	.....
1875	....	1.10	2.20	1.39	3.58	3.89	6.31	1 5.	5.54	2 23	.45	2.58	.....
1876	2.92	1.00	4 62	3.26	3.81	3.23	5.47	2 22	7.06	1.80	1.82	.10	36.81
1877	1.15	.05	3.34	2.37	3.20	11.56	6.07	2 27	2 74	5 00	1.05	1.40	40.10
1878	5.00	1.35	2 28	1.41	3.85	7 08	2 66	4.40	1.70	2.18	.58	1.50	33.94
1879	80	65	62	1.12	4 27	4.44	1.85	1.74	1 30	.60	2.75	1 28	22.37
1880	2.65	1.60	2.10	4.08	4.75	2.14	2.50	4.60	1.85	1.70	1.20	1.20	0.62
1881	90	2.08	3.50	1 60	.40	10.50	3.61	1.88	2.98	6.96	2.53	1 40	38.34
1882	1.00	.8	2 47	3 30	10 50	8.65	3 81	4.55	1.70	3.80	1.05	2.35	43.48
1883	1.75	3.50	1.05	3.10	7.10	8.55	7.90	1.78	.90	3.96	2.55	1.10	48 19
1884	.70	1.50	5.35	2.10	4.95	4.23	1.81	6.84	3.92	5 60	1.90	3.10	42 00
1885	2.20	1.50	....	3 27	1 53	4.93	1.91	3.50	4.18	3.15	.53	1.80	28.45
1886	2.72	1.25	.70	1.40	4.80	.85	.30	6.60	3 45	3.40	.85	.95	27.97
1887	1 45	5.0.	.75	.60	4.80	1.50	1.20	2.80	3.75	2.19	93	3 16	28.14
1888	1.50	2.50	2.45	2.12	5.54	3.17	5.81	4.98	1.30	.83	1.43	2.18	33.90
1889	1.64	1.50	.42	2.89	5.61	4.49	4.31	1.12	5 17	1.94	2.52	1 21	33 82
1890	2 49	1.83	3.67	1.39	3 14	6 38	2.30	2 37	2 07	4 13	1.84	2.50	34 11
1891	.86	1 35	2 25	2.59	1.86	5.72	3.25	5.20	1.10	1.76	2 9.	1.78	30.12
1892	2.17	1.80	2.75	4.90	8.90	4.12	4.01	1 57	3.26	.85	2.69	2.11	38.68
1893	1.66	1.39	3 98	4.88	4 85	2.13	2 5.	.....	4.88	.85	2.20	1.51	.....
1894	2 15	.52	.90	1 98	2 79	3.19	.88	.55	4.94	1 71	2 09	1 12	22.32
1895	.74	.47	1.20	3.22	2.23	3.79	5.51	3.15	3.97	.47	2.62	5 74	32.11
1896	1.25	1.56	1.52	3.57	6.29	2.48	7.62	2.60	7.48	1.51	.83	1.00	37.66
1897	6.16	1 70	2 98	4.18	1.94	4.28	5.91	1.18	.12	.26	2 24	3 12	34 97
1898	3.78	2.05	6.21	4.25	7.82	3.00	2.63	5.12	8.45	4.27	1.95	1.47	51.00
1899	55	1.80	3.47	3 95	12 24	3 59	3 68	4.11	3.72	1.94	1.10	1.91	42.06
1900	2.00	4 50	72	2 13	3.93	2.88	3.15	3.82	3.97	4.19	3.08	.85	35 72
1901	1.30	1.04	3.75	2 51	3.11	4 91	2.19	.05	2.20	1 09	.70	1.42	24.36
1902	1.10	1.52	2.57	3.48	4 37	9.05	7.91	7.19	2 29	3.51	2.69	3 20	48.88
Averages	1.89	1.96	2.98	3.29	4.86	4 84	4.11	3.66	3.79	2.75	2.16	2.00	37.79

LEE COUNTY—CONTINUED.

KEOKUK—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1871	....	....	....	....	....	....	....	75.6	68 3	57.0	35. 4	25 2	....	....	.....	....	.....
1872	24.9	31.0	34. 4	54.0	64.4	75. 2	78. 4	77. 2	68.0	54. 9	83. 9	19. 9	51. 4	96	{July. Aug.	-22	Dec.
1873	17. 5	25 5	38. 6	47. 7	61. 3	77. 8	76 2	78. 3	64. 1	49. 4	37. 4	32. 2	50 5	102	Aug ..	-16	Jan.
1874	27 7	29. 2	98 0	44. 0	66 7	75 5	80. 4	76. 7	67. 0	55. 4	39. 7	31. 3	52. 6	100	July ..	- 8	Jan.
1875	16 3	18. 4	33. 8	48. 9	61 8	71 0	75 6	70. 3	63. 8	50 6	35. 1	36. 5	48. 5	97	July ..	-20	Jan.
1876	34. 8	34 2	34. 6	52. 6	63. 5	69 7	76. 4	75 8	64. 4	51. 8	36 2	18. 8	51. 0	96	Aug ..	-10	Dec.
1877	22. 0	38. 3	32. 6	50. 7	62. 1	71. 4	76. 9	74. 3	69. 8	55. 3	38 9	42. 9	52. 9	96	July ..	- 9	Jan.
1878	34 9	38. 2	50 4	57 5	60. 2	70 6	81. 5	77. 7	67. 3	54. 3	44 0	23. 0	55. 0	99	July ..	-13	Dec.
1879	21 6	29. 8	42. 6	52. 2	66. 8	72. 1	80. 7	75. 0	62 9	61 6	42. 7	26 9	52. 9	98	July ..	-20	Jan.
1880	41. 3	36. 3	40. 0	53. 8	68. 8	73. 9	77. 5	77. 5	65 4	52 2	31. 5	24. 1	53. 5	100	Aug ..	-18	Dec.
1881	18. 8	24 9	33. 7	46. 8	69. 8	72. 7	79. 0	79. 2	72. 4	57. 0	39. 6	37. 6	52. 6	100	Aug ..	-15	Jan.
1882	28. 1	39. 5	41. 7	53 7	56. 8	71. 1	72. 4	73. 4	66. 1	58. 6	42 3	27. 7	52. 6	92	June..	-10	Dec.
1883	15. 5	24. 9	35. 3	54. 0	59 8	69. 7	76. 0	71. 2	62. 7	51 5	42. 8	31. 8	49. 6	96	July ..	-13	Jan.
1884	18. 7	27. 5	37. 3	50. 6	62. 3	71. 5	74. 9	72. 0	71. 1	58. 5	40. 6	23. 0	50. 7	93	July ..	-13	Dec.
1885	16. 2	16. 5	34 7	49. 7	60. 6	70. 1	78. 5	70. 0	64. 6	49 4	40. 6	28. 7	48. 3	99	July ..	-14	{Jan F'b
1886	14. 6	26 9	36. 5	53 0	64. 1	70. 7	77. 5	77. 1	68. 2	57. 6	38. 5	21. 2	50. 5	99	Aug ..	-19	Jan.
1887	19. 1	29. 5	38. 9	53. 6	66. 5	72. 8	79. 1	74. 1	65. 9	50. 0	40. 5	27. 8	51. 4	100	{July. Aug.	-18	Jan.
1888	13. 6	25 7	34. 2	53. 2	58 0	70. 3	77. 1	72. 1	62. 8	51. 4	41. 8	34. 0	49. 5	96	Jan....	-28	Jan.
1889	28. 2	24. 6	43. 0	53. 9	61. 8	68 3	75. 2	73. 2	64. 0	50. 8	37. 6	42. 7	51. 9	93	Aug ..	- 8	Feb.
1890	29. 4	32. 8	32. 6	54. 7	60. 0	76. 2	78. 0	71. 2	62. 7	54. 1	44. 2	38. 8	52. 5	104	July ..	- 6	Mar.
1891	31. 6	29. 2	31. 1	54. 0	60. 5	71 5	70. 6	71. 1	70. 8	54. 5	35. 6	37. 9	51 5	95	Aug ..	- 6	Feb.
1892	19. 6	33. 0	36. 2	49. 2	58. 1	73. 0	74. 6	74 8	67. 2	57. 2	36. 4	25 9	50. 4	95	Aug ..	-16	Jan.
1893	14. 3	21 3	36. 6	49. 9	59. 8	73. 0	78. 0	72. 0	69. 5	57. 0	38 0	29. 0	49. 9	97	Sept ..	-12	{Jan F'b
1894	28. 0	26. 0	46. 0	54. 0	63. 0	76. 0	78 0	77. 0	68 0	56. 0	37. 0	35. 0	53. 7	102	July ..	-16	Jan.
1895	20. 0	19. 0	38 0	55. 0	64. 0	73. 0	74. 0	76 0	71. 0	50 0	39. 0	31. 0	50. 8	96	July ..	-22	Feb.
1896	28. 9	30. 3	36. 0	60. 0	70 0	71 8	76. 0	74. 9	62. 5	52. 0	38. 2	36. 0	53. 0	98	Aug ..	-8	Feb.
1897	23 0	31. 0	39. 0	51. 0	61. 0	73. 0	78. 0	72. 0	74. 0	62. 0	41. 0	25. 0	52. 5	98	June..	-16	Jan.
1898	30. 0	30. 8	43 0	51. 8	64. 0	75. 6	77. 1	75. 7	70. 6	52. 0	38. 4	26 0	53. 0	97	{July. Aug..	- 4	{F'b Dec
1899	27 8	19. 6	32. 7	53. 3	64. 0	74. 0	76 0	77. 0	65. 2	61. 0	48. 8	28. 4	52 3	99	Sept ..	-21	Feb.
1900	31. 9	22. 7	34. 1	54. 6	65. 5	71. 9	76. 4	82 2	68. 6	62. 4	39. 8	31. 4	53 5	98	Aug ..	- 4	Jan.
1901	30. 6	21. 9	33 6	51. 6	68. 0	76 2	85 1	77. 2	67 4	58. 2	39. 2	25. 2	52. 8	108	July ..	-12	Dec.
1902	27. 4	21. 0	42 2	51 5	67. 7	68. 4	76. 6	72. 2	62. 4	58. 0	48. 2	27. 0	51. 9	96	Aug ..	-10	Jan.
Average.	24. 4	27. 7	37 6	52. 3	63. 1	69. 3	77 1	75. 7	66. 7	55. 1	39. 5	30. 6	51. 7	108	1901 July ..	-23	1898 Jan.

KEOKUK—PRECIPITATION (INCHES).

1871	....	....	....	....	....	....	....	.04	1.86	.84	5. 22	2 89	1. 46	....	.....	....	.....
1872	.07	.39	2. 88	3 86	3. 70	5. 81	6. 77	1. 97	2 26	.42	.74	.50	29. 37	....	.....	....	.....
1873	3. 40	.58	.51	5. 65	3. 42	1. 21	7. 73	.54	3 37	4 69	1. 43	8. 56	41. 04	....	.....	....	.....
1874	3. 92	.88	1. 14	2 40	1. 65	4. 01	4. 61	3. 87	7. 92	1 94	2. 17	1. 26	35. 77	..	.....	....	.....
1875	.61	1 84	1. 67	.89	6. 70	8. 33	12. 70	3. 83	4. 62	2. 71	59	3. 93	48. 42	....	.....	....	.....
1876	3. 68	1. 45	3. 45	3. 99	5. 28	6. 73	6 79	4. 03	11. 08	2. 12	2 82	.28	51. 65	..	.....	....	.....
1877	.84	15	3. 76	4 22	5. 55	7 82	7. 06	2. 52	3. 61	7. 11	3. 05	2. 90	48. 50	..	.....	....	.....
1878	.17	2. 95	3. 78	2. 31	3. 47	3 93	2. 37	5. 27	1. 36	2. 31	1. 93	1 95	31. 80	....	.....	....	.....
1879	.50	.53	1. 71	1 56	2. 27	2. 63	1. 98	4. 57	1. 12	.28	3. 91	1. 45	22. 51	....	.....	....	.....
1880	3. 91	1. 94	1 83	4. 79	5. 92	3. 06	2. 25	3. 81	3. 21	2. 02	1. 13	.67	34. 54	....	.....	..	.....
1881	.50	2. 58	2. 42	3. 12	1. 35	8. 70	3. 08	.80	4. 10	8. 01	2. 59	1. 70	39. 01	....	.....	..	.....
1882	1. 07	1. 54	3. 30	3 22	7. 11	9. 45	4. 53	3 02	1. 52	2. 71	2. 25	1. 75	41. 54	....	.....	...	.....
1883	1. 24	0. 13	1. 07	2 97	4. 87	5. 88	3. 15	1. 32	1. 76	6. 95	2. 09	1. 2-	38. 63	..	.....	...	.....
1884	.85	1. 88	3. 37	1. 31	3 16	4. 03	2. 30	2. 74	4. 25	3. 35	1 73	3. 91	32. 88	....	.....	..	.....
1885	2. 44	1. 14	.17	3. 3-	2. 59	6. 97	2. 29	5. 98	3. 77	3. 59	.88	1. 96	35. 11	....	.....	....	.....
1886	2. 08	1 40	2 25	1. 52	4. 49	2. 86	.65	5. 90	3. 95	2. 38	1. 15	1. 03	29 66	....	.....	....	.....
1887	1. 48	5. 19	.76	1. 84	2 54	1. 55	1. 57	2. 38	3. 13	1. 98	1. 18	2. 78	26. 33	....	.....	....	.....
1888	1 57	2. 17	3. 45	1. 85	5. 06	5. 42	6. 09	2 07	2 18	1. 63	2. 83	1. 61	35. 79	....	.....	..	.....
1889	1. 89	.90	1. 04	3. 60	5. 72	2. 97	6. 78	.95	5. 14	2. 88	1. 80	1. 08	34. 75	..	.....	..	.....
1890	1. 81	1. 09	2. 43	1. 79	3 34	3. 41	2 49	1. 77	4. 46	2. 44	1. 87	.03	26. 93	..	.....	..	.....
1891	2. 59	1. 32	2. 27	5. 08	2. 56	3. 66	2. 77	6. 10	.49	1. 49	3. 60	1. 33	33. 24	....	.....	....	.....
1892	1. 96	1. 61	2. 91	6. 51	6. 24	2 65	6. 18	1. 07	3. 21	.71	3. 16	1 50	37 45	....	.....	....	.....
1893	.92	1. 76	2 66	5. 41	4. 26	2. 37	2. 60	1. 16	3. 18	.33	2. 29	.90	27. 94	....	.....	....	.....
1894	2. 24	1. 46	2. 52	2. 75	3. 06	2. 85	.37	51	4 86	1. 28	2. 24	1 06	25. 20	....	.....	....	.....
1895	1. 44	.18	1 05	3 38	3. 15	2. 61	5. 46	2. 28	2. 67	.37	2. 58	2. 24	29. 42	....	.....	....	.....
1896	.85	1. 23	.88	2. 35	4. 40	2. 18	8. 01	3. 90	9 41	1. 71	1. 01	.81	36. 77	....	.....	....	.....
1897	4. 90	96	4. 16	3. 54	1. 86	5. 43	6. 75	.65	.64	.24	2. 18	1. 84	33. 15	....	.....	....	.....
1898	4. 13	1. 18	5. 98	4. 80	6. 70	4. 77	3. 06	6 92	8. 07	3. 99	1. 52	1. 38	52. 48	....	.....	..	.....
1899	.49	1. 65	2. 66	3 28	11. 47	2 78	5. 39	4. 01	4. 32	2. 06	1. 19	1. 67	40 97	....	.....	..	.....
1900	2 46	3. 24	1. 43	2. 10	4. 56	1. 06	2. 20	4. 21	5 02	5. 36	1. 72	.25	33. 61	....	.....	..	.....
1901	1. 41	.75	2. 59	2 29	1. 95	6. 34	2. 02	.15	2. 14	.93	.80	1. 17	22. 54	....	.....	....	.....
1902	.44	1. 02	2. 24	3. 13	3. 63	7. 59	4. 87	6. 98	1. 82	2. 38	2. 60	2. 21	38. 86	....	.....	....	.....
Averag's	1. 80	1. 65	2. 33	3. 19	4. 27	4. 49	4. 21	3. 04	3. 73	2. 67	3. 00	1. 76	35. 35	....	.....		.....

LEE COUNTY—CONTINUED.

LEE COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Rye, bushels.	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST TO SEPT. 1ST. May.	June.	July.	August.	Totals
1890	30	12	23	14	34	2.0	3.34	3.41	2 49	1.77	11 01
1891	32	15	33	16	99	1.5	2.56	3.66	2.77	6.10	15.09
1892	25	15	19	12	31	1.0	6 34	2.65	6.18	1.07	16.24
1893	32	12	28	12	50	1.3	4.36	2.37	2.60	1.16	10.49
1894	16	17	29	13	43	0.9	3.06	2.85	.37	.51	6.79
1895	37	16	37	16	72	1.3	3.15	2.61	5.46	2.28	13.50
1896	32	15	31	13	82	1.3	4.40	2.18	8 01	3 90	16.49
1897	27	10	17	9	55	1.4	1 86	5.43	6 75	.65	14.69
1898	29	12	18	11	73	1.6	6.70	4.77	3.06	6.92	21.45
1899	25	6	24	11	63	1.4	11.47	2.48	4.01	4 32	22 58
1900	35	13	30	12	90	1.2	4.56	1.06	2.20	4.21	13.03
1901	25	13	23	10	47	0.9	1.95	6 34	2 02	.15	10 46
1902	43	16	42	17	130	1.8	3.63	7.59	4.87	6.98	23.02
Averages.	30	14	27	13	63	1.4	....	.....	.....	.....	14.98

VAN BUREN COUNTY.

Area, 502 square miles; area in farms, 300,110 acres; number of farms, 2,242; value of farms (census of 1900), $8,079,130; value of farm buildings, $2,052,030; value of live stock, $2,262,911; value of the year's products not fed to stock, $1,856,524; acreage in cereal crops, 72,960. Records of voluntary meteorological stations at Keosauqua and Bonaparte are tabulated below. Elevation of Keosauqua, 644 feet.

KEOSAUQUA—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1892	20.0	33.0	36 0	49.0	58.0	73.0	75.0	74 0	68.0	56.0	36 0	24.0	50 3	....	.....	....	.....
1893	14.0	22 0	37.0	50.0	59.0	73.0	78.0	72.0	68.0	57 0	38.0	27.0	49.7	..	.....	..	.....
1894	26 0	26.0	46 0	54.0	63.0	76 0	78.0	76.0	68.0	56 0	37.0	35.0	53 8	....	.....	....	.....
1895	18.0	18.0	39.0	54.0	63.0	72.0	74.0	75.0	71.0	51.0	38.0	29.0	50.02	....	.....	....	.....
1896	28.0	29.0	35.0	59.0	69.0	72.0	76.0	74.0	62 0	51.0	35.0	....	.....	....	.....	....	.....
1897	23.0	30 4	38.0	52.0	60.0	73 0	78.0	73 0	74 0	60 0	40 0	23.0	52 0	....	.....	....	.....
1898	28.0	28.0	41.0	....	63 0	74.0	76.0	75.0	68.0	51.0	36.0	25.0	.....	....	.....	....	.....
1899	26.0	17.8	31.2	51.6	63 9	73.8	76.1	75.6	65.8	60.7	48.2	27.2	51.5	100	Sept ..	-22	Feb.
1900	30.0	20 8	33.8	54.0	65.7	72.1	72.0	81.4	68.2	62.0	38.4	30 8	52.8	97	Aug...	-6	Jan.
1901	....	21.8	38.8	52.6	63 2	76.3	85 8	76.6	67.3	57.0	39.2	23.8	.....	110	July ..	-14	Dec.
1902	25.5	19.2	41.7	51.2	67.8	68 2	76.0	71.6	61.7	56.0	46.4	24.8	50.8	97	June..	-15	Jan. Feb.
Averages.	23.8	24.1	38.0	52.8	63.2	73.0	76.8	74.9	67.4	56.1	39.3	27.0	51.3	110	1901. July	-22	1899. Feb.

KEOSAUQUA—PRECIPITATION (INCHES).

1892	1.40	1 89	3.26	7.18	7.36	4.32	5.55	2.32	2.33	.51	1.82	2.07	39.57	....	.....	....	.....
1893	.49	1.44	2.35	4.82	4.48	2.72	1.94	2.26	5.40	1.08	1.24	.80	29.02	....	.....	....	.....
1894	1.52	1.47	3 05	6 04	2.01	1.87	.77	.99	7.43	1.83	1.41	.65	29.04	....	.....	....	.....
1895	.16	.02	.76	2.28	5.05	2.15	5.31	4 29	3.27	T	1.14	3.02	27.45	....	.....	....	.....
1896	.30	.09	.16	3 17	7.52	1.93	5 64	3.43	9.04	2.56	.71	1.10	36.20	....	.....	....	.....
1897	.60	1 55	2.86	3.66	1 14	9.38	4.45	1.10	1.20	.11	1.80	1.90	29.75	....	.....	....	.....
1898	3.37	1.46	5.00	3.70	5.56	5.18	3.07	9.06	7 22	4.16	1 41	1.09	50.28	....	.....	....	.....
1899	.08	1 39	3.15	3.26	7 42	2 39	4 53	4 05	1 35	1.02	2.98	1.67	32 69	....	.....	....	.....
1900	.75	3.74	1 71	2.74	3.61	3 30	3.19	3 34	4.90	4.92	2.04	.58	34.82	....	.....	....	.....
1901	....	1.21	3.12	1.95	1.43	2.31	2.79	.41	2.94	.97	1.22	1.81	20 16	....	.....	....	.....
1902	.58	.77	1.85	3.27	2.14	9.13	6.43	7.10	4.16	3.70	3.22	2.21	44.56	....	.....	....	.....
Means	.92	1.42	2.48	3.82	4.34	4.06	5.97	3 49	4.48	1.90	1.63	1 54	34.07	....	.....	....	.....

BONAPARTE—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1891	....	....	....	....	64.0	75.0	75.0	75.0	74.0	57.2	36.0	38 0	....	....	.....	....	.....
1892	19.0	33.0	39.0	50.0	....	76.0	74	.....	66.0	56.0	36.0	25.	....	....	.....	-18	Jan..
1893	13.0	21.0	36.0	49.0	58.0	72.0	77.0	72.0	68.0	55.(	36.0	26.0	48.5	101	Aug...	-14	Jan..
1894	26.0	23.0	44.0	53 0	62.0	75.0	78.0	77.0	68.0	55.0	35.0	33.0	52.6	107	July ..	-18	Jan..
1895	18.0	18.0	37.0	54 0	62.0	72.0	74.0	76.0	71.0	49.0	37.0	29.0	49.8	101	Aug...	-20	Feb..
1896	27.0	28.0	35 0	59 0	6[illegible].0	71.0	76.0	74 0	61.0	51.0	36.0	34.0	51.7	100	July ..	- 8	Feb..
1897	22.0	29 0	37.0	50.0	60.0	72.0	78.0	72.0	74.0	61.0	38.0	21.0	51.2	102	Sept.	-16	Jan..
1898	26.0	26.0	40 0	49.0	61 0	72.0	75.0	78.0	68.0	50.0	36.0	24 0	50.1	97	July .	-11	Feb..
1899	25.0	16.4	30.4	51.0	62 4	72.2	75.4	76.0	65 4	59 4	47 0	26.7	50 6	103	Sept .	-23	Feb..
1900	29.8	19.5	33.8	53.7	64.1	7[illegible].0	75.0	80.8	6[illegible].2	61.8	38.0	30.4	52.0	100	Aug...	- 8	Feb..
1901	28.8	19.2	37.4	50.6	62 4	74.8	84 8	77.2	67.2	57 0	38.2	22.8	51 7	112	July ..	-15	Dec..
1902	24.9	18.6	40.6	50.4	66 8	66.[illegible]	75.0	70.6	6[illegible].2	55.9	45.5	24.4	50 1	94	July ..	-16	Jan..
Averages	23.6	2.9	37 2	51 8	62.9	72 4	76.4	74.9	67 7	55.7	38.2	27.8	50.8	1901 112	July .	1899 -23	Feb.

VAN BUREN COUNTY—CONTINUED.

BONAPARTE—PRECIPITATION.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.						
1891	....	....	....	....	2.78	3.55	4.64	5.18	.90	1.76	3.62	2 08	....	....	.....	....	.....	....	.....
1892	1.65	1.66	3.97	7.00	....	3 93	4.79	....	3.40	.76	2.71	1.89	....	....	.....	....	.....	....	.....
1893	.60	1.42	2 79	5.11	4.31	4.27	2 46	2.02	5.13	1.45	1.61	1.17	32.34	....	.....	....	.....	....	.....
1894	1.40	.40	2.51	2.83	2.61	1.82	.19	1.60	7.31	1.71	1.80	.52	24.70	....	.....	....	.....	....	.....
1895	1.30	.33	1.34	2.20	4.37	2.95	5 27	4.48	3 07	.23	2 19	4.10	31 83	....	.....	....	.....	....	.....
1896	1.38	1.34	.93	3.31	7.54	2 30	6.63	2.40	7.09	2.26	.72	1.10	37.00	....	.....	....	.....	....	.....
1897	4.42	.97	3.53	2.41	.60	6 43	2.83	1.02	.97	.24	1.50	1.97	26 89	....	.....	....	.....	....	.....
1898	3 33	1.00	5.08	3.71	6.11	9.01	3.15	10.55	7.80	4.09	1.21	.93	55.47	....	.....	....	.....	....	.....
1899	.05	1.12	3.08	2.44	8.35	1 65	2.28	2.84	1.11	1.20	2 55	.89	27.56	....	.....	....	.....	....	.....
1900	1.54	3 65	1.86	2.16	3.66	2 73	1.95	3.61	5 87	3 28	2 10	T	32.41	....	.....	....	.....	....	.....
1901	1.05	1.17	2.50	1.34	1.30	2.26	.94	.31	2.46	.90	82	1.30	16.35	....	.....	....	.....	....	.....
1902	.55	.55	1.84	4.15	2 69	9.94	8 06	8.12	3.51	4 01	3.18	1.47	48.07	....	.....	....	.....	....	.....
Average.	1.57	1.24	2.68	3 83	4.03	4.24	3.60	3.83	4.01	1.82	2.00	1 45	33.80	....	.....	....	.....	....	.....

VAN BUREN COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1st TO SEPT. 1st.				
	Corn, bushels.	Wheat, bushels	Oats, bushels.	Barley, bushels.	Potatoes, bushels	Hay, tons.	May.	June.	July.	August.	Total.
1890	25	16	26	14	30	1.0					
1891	41	18	35	16	188	1.8	2 78	3.55	4 64	5 18	16.10
1892	29	15	19	14	33	1 6	7.86	3.93	4.79	2 32	18 40
1893	35	12	29	14	65	1.6	4.31	4.27	2 46	2.02	13.06
1894	14	17	26	12	50	1.5	2.61	1.82	.19	1.60	6.22
1895	46	22	45	18	149	1.4	4 37	2 95	5.27	4.48	17.07
1896	40	15	26	11	82	1.4	6.54	2.30	6.63	2 40	18.87
1897	27	15	20	9	55	1.2	.60	6.43	2.83	1.02	10.88
1898	30	12	18	9	64	1.8	6.11	9.01	3.15	10 55	28.82
1899	27	10	24	11	80	1.5	8 35	1.65	2.28	2.84	15.12
1900	38	15	34	11	85	1.5	3.66	2.73	1.95	3.61	11.95
1901	23	14	25	12	28	1.3	1 30	2 26	94	.31	4.81
1902	43	18	40	20	150	1.5	2 69	9 94	8.06	8.12	28.81
Average	32	15	28	13	81	1.5	.....	.....	.....	.....	15.08

DAVIS COUNTY..

Area, 500 square miles; area in farms, 381,392 acres; number of farms, 2,553; value of farms (census of 1900), $7,762,460; value of farm buildings, $1,724,020; value of live stock, $2,260,854; value of the year's products not fed to stock, $1,799,835; acerage in cereal crops, 76,510 acres. Records of the voluntary meteorological station at Belknap are tabulated below. Elevation of the station, 856 feet.

BELKNAP—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1895	25	18	36	56	62	71	78	74	71	47	37	28	49.9	101	Sept...	...	.....
1896	25	29	34	60	66	71	78	73	62	54	39	35	51.7	99	July...	- 6	Jan.
1897	20	28	37	50	59	71	76	71	75	60	38	20	50.4	100	Aug ..	-17	Jan.
1898	26	26	41	50	61	73	75	74	68	50	35	23	50.0	96	July...	....	.....
1899	24.4	15.9	29.6	50.2	63.2	72.6	74	75.6	65	59.9	47.8	27	50.4	100	Sept. ..	-23	Feb.
1900	28.1	18.1	32.8	54.2	63.8	69.4	74 5	79.1	66	61.1	37.0	29.6	51.2	95	Aug ..	- 8	Feb.
1901	28.6	19.0	38.8	51.7	63	74.6	84.0	75 8	67	57.8	43 6	24	52.7	107	July...	....	.....
1902	....	17.7	41.0	49.1	65.0	65.6	73.2	69.4	59.2	55.1	45.0	....	.....	96	July ..	....	.....
Average..	25.3	21.5	36.3	52.6	62.9	71.0	75 5	74.0	66.7	55.6	40 3	26.2	50 6	107	1901 July...	-23	1899 Feb.

BELKNAP—PRECIPITATION (INCHES).

1895	1.05	.52	1.05	2.60	2.80	2.15	5.45	5.25	4.91	.15	1.70	3.26	30.79	....	.....	.....	.....
1896	.90	1 62	.91	3 55	5 91	1.19	8.15	5.06	5.62	3.00	1.56	.40	37.87	....	.....	.....	.....
1897	4.20	1.67	2.71	3.89	.45	5.10	3.55	2.70	.65	.63	.93	2.25	28.73	....	.....	.....	.....
1898	5.00	1.77	2.65	2.95	5.78	6.25	3.30	3 75	5.00	4.30	1 80	....	.....	....	.....	.....	.....
1899	.50	1.10	3.10	2.90	7.45	3.45	5 25	5.38	1 59	1.20	2.31	1.85	36.03	....	.....	.....	.....
1900	.80	3.09	1 54	2.65	5.94	3.15	2.84	4.54	3.85	2.87	2.78	1 06	35.11	....	.....	.....	.....
1901	1.23	2.00	2.73	1.73	.72	2.43	2.07	.33	2 40	93	.93	2.75	20.25	....	.....	.....	.....
1902	.60	69	1.59	3.58	2.63	8.90	6.68	6.17	5.17	4.35	2.65	2 35	.....	....	.....	.....	.....
Means ..	1.78	1.55	2.03	2.98	3.96	4.08	4.66	4.14	3.64	2.18	1.83	1.98	34.81	....	.....	.....	.....

DAVIS COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST TO SEPT. 1ST. May.	June.	July.	August.	Total.
1890	24	15	27	14	52	1.0					
1891	39	21	37	15	150	1.8					
1892	29	13	17	12	18	1.5					
1893	33	12	36	16	85	1.3					
1894	15	16	26	11	51	0.8					
1895	47	18	44	17	90	1.0	2.80	2.15	5.45	5.25	15.65
1896	41	15	20	15	108	1.6	5.91	1.19	8.15	5.06	20.31
1897	23	10	20	10	31	1.0	.45	5.10	3 55	2.70	15.80
1898	32	12	25	13	53	1.6	5.78	6.25	3.30	3.75	19.08
1899	29	8	25	8	92	1 2	7.45	3.45	5.25	5 33	21.48
1900	38	15	30	12	80	1.2	5.94	3.15	2 84	4.54	16.47
1901	19	16	22	12	20	0.8	.72	2.43	2 07	.33	5 55
1902	40	20	32	16	110	1.5	2.63	8 90	6.68	6.17	24.38
Means.	31	15	28	13	68	1.3					17.34

SOUTH CENTRAL DISTRICT.

This district includes thirteen counties, as follows: Mahaska, Marion, Warren, Madison, Adair, Union, Clarke, Lucas, Monroe, Appanoose, Wayne, Decatur and Ringgold. The mean annual temperature of the district is 49.2 degrees; average yearly precipitation, 32.53 inches; average rainfall May 1st to September 1st, 17.14 inches; average yield of corn per acre, 31.3 bushels.

MAHASKA COUNTY.

Area, 576 square miles; area in farms, 358,250 acres; number of farms, 3,202; value of farms (census of 1900), $14,835,900; value of farm buildings, $3,073,970; value of live stock, $3,330,208; value of the year's products not fed to stock, $3,090,997; acreage in cereal crops, 139,990 acres. Following tables contain climatic data compiled at Oskaloosa; elevation, 843 feet:

OSKALOOSA—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec	Ann'l.	Highest.	Month	Lowest.	Month
1883	....	....	....	....	57.2	67.2	....	70.4	60.8	48.1	37.2	25.8	.....	....	.....	....	.....
1884	13.5	18.3	33 0	46.0	58.2	67.8	....	67.6	65 1	53 4	35.5	17.0	.....	....	.....	....	.....
1885	10.4	11.4	30.9	35.2	56 9	66 9	72.9	67.6	61.0	46 6	37.0	24.1	43.9	....	.....	....	.....
1886	8.2	21.4	31 4	50 7	61.0	68.0	75 2	74.4	64 8	48.0	33.6	15.3	46.0	....	.....	....	.....
1887	10.2	22.3	34.1	52.4	64 8	73.6	80.0	74.5	65 0	47.3	35.3	22.0	48.5	....	.....	....	.....
1888	7.5	20.9	29 8	52 5	56 5	69.7	76.4	71.1	61.1	50.2	39.1	32.0	47.2	....	.....	....	.....
1889	24.8	21 6	42 8	53.0	62.6	69 0	74.6	73 6	62.6	48.7	34.8	39.5	50.6	....	.....	....	.....
1890	22.8	26.0	30.4	54 1	60.0	73 8	77 6	69.3	60.2	50.9	41.8	32.9	50 2	....	.....	....	.....
1891	30.2	24.0	29 9	52.5	60 3	70.1	69.6	70 6	68.0	51.8	35 6	35.8	49.6	....	.....	....	.....
1892	17.8	30.6	34.1	46.7	55.2	69.5	73 5	71.8	65.4	54 8	34.6	19.8	47.9	....	.....	....	.....
1893	10.5	18.7	34.0	47.1	57.1	70.6	75.5	70.6	65.8	58.5	35.9	23.9	46.9	....	.....	....	.....
1894	20.8	19.4	40.4	52 8	61.4	....	....			52.2	32.3	30 3	.....	....	.....	....	.....
1895	17.0	18.0	36.0	54 0	62.0	71.0	78 0	73.0	69.0	46.0	36.0	26 0	48.4	....	.....	....	.....
1896	25.0	28.0	33.0	53.0	66.0	69.0	78.0	71 0	59 0	51.0	34 0	35.0	50.1	....	.....	....	.....
1897	26.9	24.0	35.0	50.0	59 0	71.0	76.0	80.0	72.0	53.0	37.0	19.0	49.5	....	.....	....	.....
1898	24.6	25.4	39.0	48.0	60.0	72.0	74.0	73.0	67 0	49.0	34.0	21.0	48.9	....	.....	....	.....
1899	22.8	14.9	28 6	50.8	62.1	72.2	78.6	75.0	61 4	55.8	45 1	24.1	49.2	....	.....	....	.....
1900	24.5	16 4	32.0	53.4	63 6	67.2	78 4	78.5	65 7	59.8	35.0	28.1	49.8	....	.....	....	.....
1901	25.8	18 0	35.1	50.4	61.2	73.4	84 0	74.5	65.0	55.8	35.6	21.4	50.2	....	.....	....	.....
1902	28.6	18.4	38.6	48.0	62.6	65.8	78 4	69.2	59.5	55.0	44.9	22.6	48.6	....	.....	....	.....
Aver.	19.0	21 3	34.2	50.8	60 4	69.9	75.4	71.8	64.4	51 9	36.7	25.8	48.5	....	.....	....	.....

MAHASKA COUNTY—CONTINUED.

OSKALOOSA—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.				
1876	1.28	1.21	4.84	4.40	3.08	3 54	8.17	3.99	7.38	1.10	2.30	.14	41.44	....	.....	....	.....
1877	.98	.14	3.86	5.43	2.79	6.11	2.10	3.30	2.71	4.21	1.56	1.50	34.69	....	.... ..	....	.....
1878	.08	1.00	3.79	2.73	3.03	5.05	.98	...	3.13	2.74	....	.84	...	.... ..	....	.....	
1879	.20	.44	1.51	11.31	3.82	3.61	1.08	1.64	4.07	1.52	6.07	.61	25.88	.....	....	.....	
1880	.44	.65	1.17	2.36	1.79	1.37	4.04	7 42	5 63	1.85	1.11	.85	29.08	....	.....	....	.....
1881	.88	3.35	2 21	3.26	.75	12.40	5.32	.52	6.94	3.53	2.85	1.41	44.45	....	.....	....	
1882	36	.85	2.76	4.61	6.48	7 69	2 45	1.86	.80	3.59	1.48	1 90	34.83	...	....	....	.....
1883	1.21	2.38	.90	2.09	5.14	7.37	4.18	2.43	.73	4.79	2 08	.55	33.85	....	.....	....	.....
1884	.77	.87	2.35		3.44	5.47	5.85	2.27	2.50					....	.....	....	.....
1885								7.09	3.39	2.65	.31	1.60	.....	....	.....	....	.....
1886	2.43	.35	1.43	2.25	5.69	.62	.....	1 11	5 29	3.20	1.30	.51	.....	....	.....	....	.....
1887	.96	3.61	1.45	.88	.18	2.29	3.15	.64	3.99		1.06	2.61	.....	....	.....	....	.....
1888	1.05	.15	.29		5.52	1.75	7.29	7.38	1.25	1.40	2.21	1.15	....	....	.....	....	.....
1889	1.12	.40		2.00	3.25	4 75	2.38	.56	4.25	.62	.87	.75	.....	....	.....	....	.....
1890	1.41	.85	.89	.60	1.85	1.57	.37	2 78	2.61	1.59	1.27	.75	16.54	...	..	....	.....
1891	1.07	.28	1.84	2.50	3.62	2.60	2.95	3.80	.34	2.03	2.40	2.98	26.29	....	.....	....	.....
1892	.75	1.54	2.34	3.07	7.95	4 08	5 58	2.41	1.66	2.12	.71	1 53	32 72	.....	....	.....	
1893	.59	1.12	1 90	3.99	2.70	4.87	1.49	1.69	2 37	1.20	1.24	.93	23.49	....	.....	....	.....
1894	....	....	....	3 00	4.05									....	....	....	.....
1895	.62	.27	1.95	1.65	2.82	3.41	4 87	3.25	4.09	.42	1.17	1.98	26.48	....	.....	..	.....
1896	30	1 21	.77	3.63	5.51	1.34	10.31	4.57	2.29	3.90	1.09	1 24	35.21	..	.....	....	.....
1897	1.19	1.02	1.53	5.32	.80	5.06	3.25	1 10	.54	.39	15	1.42	21.77	....	.....	....	.....
1898	2.01	.67	87	2 04	3.10	2.40	3.44	1 85	2.21	3.64	1.50	.55	24.85	....	.....	....	.....
1899	.49	.44	.71	2.76	5.58	1.55	3.06	3.94	.83	1.45	1 03	1.91	23.75	..	....	....	.....
1900	.34	1.71	2.32	2.79	3.07	3 63	4.41	5.55	4.37	3.60	2 54	1.10	35.43	....	.....	....	.....
1901	.83	1.38	2.84	1 47	2 08	3.60	1.64	.81	2.29	1.30	.35	1.70	20.29	....	.....		.....
1902	.28	.88	.97	8.31	3.72	7.24	8.79	7.57	5.12	3 60	1.87	1.53	44.88	....	.....	...	.....
Average	.88	1.07	1 89	2.78	3.57	4.13	4 05	3.14	3.10	2.33	1.55	1.28	29.77		.....	....	.....

MAHASKA COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	20	18	28	18	41	1.4	1.85	1.57	.37	2.78	6.57
1891	43	20	44	28	152	2.0	3.62	2.60	2.95	3.80	12.97
1892	53	18	23	21	42	2.0	7.95	4.08	5.56	1.41	19.00
1893	36	16	22	18	50	1.7	2.70	4.87	1 49	1.69	10.82
1894	17	18	24	17	57	0.6	....	....	....	....	.....
1895	41	18	46	22	65	0.9	2.82	3.41	4.87	3.25	14.35
1896	46	15	24	20	82	1.6	5.51	1.34	10.31	4.57	21.73
1897	30	12	23	21	51	1.6	80	5 06	3 25	1.10	10.21
1898	36	15	32	30	86	1.8	3.10	2.40	3.44	1.85	10.79
1899	37	15	40	20	75	1.5	5.58	1.55	3.06	3.94	14.13
1900	40	16	35	30	56	1.5	3.07	3.63	4.41	5.55	16 66
1901	25	12	25	20	25	1.2	2.08	3.60	1.64	.81	8.13
1902	35	16	26	22	95	1.6	3.72	7.24	8.79	5.57	27.32
Average	34	16	30	23	68	1.5	.....	.....	.....	.....	14.39

MARION COUNTY.

Area, 576 square miles; area in farms, 351,163 acres; number of farms, 2,914; value of farms (census of 1900), $12,043,240; value of farm buildings, $2,104,720; value of live stock, $3,122,870; value of farm products of the year not fed to stock, $2,659,330; acreage in cereal crops, 142,520 acres. The following tables contain climatic records tabulated at Knoxville; elevation, 910 feet.

KNOXVILLE—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest	Month.	Lowest.	Month.
1893						72	76	70	66	54	35	22	.....	....	.....		.....
1894	30	20	42	....		74	78	76	67	55	34	31	.....	....	.....		.....
1895	16	18	34	54	62	71	73	74	69	48	36	26	48.4	....	.....	...	....
1896	25	28	33	57	67	71	74	72	60	45	38	33	50.0	....	.....	....	....
1897	20	28	36	50	60	71	77	72	73	59	37	20	50.2	....	....	...	.....
1898	26	27	40	50	62	73	75	74	68	50	37	21	50.2		.....		.....
1899	23.1	15 4	28.9	50.6	61.6	72.2	74.2	75 2	64.5	60.0	45.1	25.2	49.7	98	Sept..	-23	Feb.
1900	29.0	18 2	34.4	55.0	65 8	71.0	75.0	78.2	65 3	58.9	34.0	27.2	50.9	96	July..	- 9	Feb.
1901	25.2	18.2	36.8	51.0	63 0	74.0	84.7	74.9	65 8	57.0	38.3	22.6	51.0	109	July..	-17	Dec.
1902	24.8	....	48.6			....	74.6	70.3	60.0				.....				.....
Averages	24.4	21.6	37.0	52.5	63 1	72.1	76 2	73.7	65 9	54.1	37.2	25.3	50.2	109	1901 July..	-23	1899 Feb.

KNOXVILLE—PRECIPITATION (INCHES).

1893						4.63	2.81	3.41	2.67	1.50	.97	1.90	.....	....	.....	....	.....
1894	.90	1 20	2.57	....	3 20	1.65	T	2.62	5.09	3.04	.96	90	.....	....	.....	....	.....
1895	1.10	.60	.67	2.28	1.76	4.12	3.68	5.33	2.55	.40	1.43	1.58	25.40	....	.....	....	.....
1896	.80	.40	44	4.91	4 27	3.04	9.76	9.18	4.62	5 05	1.05	.52	43 54	....	.....	....	.....
1897	1.10	1.72	1.46	7.05	1.68	3.57	3.05	1 09	3.01	51	.65	2.15	27 04	....	.....	....	.....
1898	3.55	1.04	1.22	2.18	5.23	3.70	4.32	1.77	2.14	4 01	2.28	.38	31.82	....	.....	....	.....
1899	T	.49	1.31	3.58	5.61	2.50	5.81	3 48	58	1.04	.82	3.00	28.21	....	.....	....	.....
1900	.15	1.51	1 44	1.43	3 55	6.24	4.75	9.78	5.36	4 86	.63	.20	40.20	....	.....	....	.....
1901	.55	.90	3 34	.69	1.41	4 92	2.66	.50	2 43	1.17	.27	1.69	20.53	....	.....	....	.....
1902	.68	....	.94	....	....	....	8.23	8 03	6.68	....	....	....	.....		.....		.....
Averages	.93	.98	1.50	3.16	3.36	3 82	4.46	4.52	3.51	2.40	1.04	1.36	31.04	....	.....	....	.....

MARION COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels	Hay, tons.	May.	June.	July.	August.	Totals.
1890	20	14	26	20	49	1.4	.....	.....	.....	.....	.....
1891	46	20	41	37	170	2.0	.....	.....	.....	.....	.....
1892	31	16	22	24	71	1.5	.....	.....	.....	.....	.....
1893	37	15	23	21	79	1.5	.....	4.63	2.81	3.41	.....
1894	10	13	20	19	77	5	3 20	1.65	T	2.62	7.47
1895	39	18	42	30	70	1.2	1.76	4.12	3.68	5.33	14.89
1896	49	16	29	25	82	1.7	4.27	3.04	9.76	9.18	26.25
1897	28	12	27	17	50	1.8	1.68	3.57	3.05	1.09	9.39
1898	32	15	26	28	62	1 6	5.23	3.70	4.32	1.77	15.02
1899	38	12	30	25	85	1.4	5.61	2.50	5.81	3.48	17.40
1900	42	18	33	25	60	1.5	3 55	6.24	4.79	9 78	24.38
1901	20	10	26	21	36	1.8	1.41	4.92	2.66	.50	9.49
1902	36	18	25	30	78	2.0	.....	.....	.....	.....	.....
Average	32	15	29	25	74	1.5	.....	.....	.....	.....	15.53

WARREN COUNTY.

Area, 576 square miles; area in farms, 351,783 acres; number of farms, 2,926; value of farms (census of 1900), $11,931,710; value of buildings, $2,256,510; value of live stock, $3,306,985; value of the year's products not fed to stock, $2,675 808; acreage in cereal crops, 126,950 acres. Climatic records compiled at Simpson College, Indianola, are tabulated below. Elevation of the station, 969 feet.

INDIANOLA—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1891	....	23 2	28.4	50 6	55.2	67.5	....	....	....	52.0	40.8	31.5	....	....	.....	....	.....
1892	18.0	31 0	35 0	49.0	56.0	70.0	73 0	69.0	66.0	55.0	36 0	16.0	47 8	....	.....	....	.....
1893	11 0	19 0	35 0	48.0	58.0	70.0	....	....	65 0	58.0	37.0	23 0	....	....	.....	....	.....
1894	23.0	23.0	44.0	54.0	62.0	74.0	77.0	76.0	67.0	55.0	33.0	32.0	51.8	....	.....	....	.....
1895	18.0	19 0	35.0	55.0	62.0	....	....	75.0	69.0	48 0	36.0	26.0	....	....	.....	....	.....
1896	25.0	30.0	33.0	58 8	66.0	70.0	71 0	72 0	60.0	51.0	33.0	36 0	50.4	....	.....	....	.....
1897	21.0	27.0	35 0	51.0	59.0	69.0	76.0	71 0	74.0	59.0	40.0	....	.....	....	.....	....	.....
1898	....	26.0	39 0	50.0	60.0	72 0	74.0	74.0	68.0	49.0	37.0	21.0	....	....	.....	....	.....
1899	23.1	15.5	27.8	50.0	61 7	71.8	73.7	75.2	64.3	59.6	46.6	22.8	49.3	99	Aug.. Sept..	-25	Feb.
1900	27.7	17.8	34.3	55.0	64.6	70 4	74.8	74 5	66 0	60.6	35.6	25.8	50 8	94	July..	-12	Feb.
1901	....	19.5	36 5	50.4	61.6	73 2	84.6	75.8	64.9	55 8	37.3	21.0	....	109	July..	-19	Dec.
1902	24.9	18.6	40 4	48.8	65.2	66.2	73.4	70.0	61.2	55.4	45.0	21.8	49 2	94	Aug..	-20	Jan.
Averages.	19.0	22.5	38.0	55.6	60.9	70.4	75 6	72 7	65 6	54 2	41.6	25.2	49.9	109	1901 July.	-25	1889 Feb.

INDIANOLA—PRECIPITATION (INCHES).

1890	....	....	....	....	.....	....	....	....	....	2 13	1.30	.36	.....	....	.....	....	.....
1891	....	.5	1.42	2.90	5.42	3 56	....	....	....	....	....	....	.....	....	.....	....	.....
1892	1.21	1.24	.31	3.96	10 47	4 12	2.50	1.92	1.43	2.34	.79	1.29	32.58	....	.....	....	.....
1893	.34	.90	.80	5.05	4.78	6.87	....	....	2.76	.20	1.68	1.10	....	....	.....	....	.....
1894	.68	.77	.99	1.79	1.03	1.29	.40	.95	4 53	1.09	.83	.10	15.25	....	.....	....	.....
1895	1.15	.20	.52	2.35	3 64	....	....	4.01	2.17	.28	1.09	3.55	....	....	.....	....	.....
1896	.22	.44	.54	2.69	5.49	2 85	7.81	7.10	5.40	4.09	.48	.60	36.71	....	.....	....	.....
1897	3 48	.81	1 59	6.10	3.59	5.23	2.39	2.34	1.59	.64	.72	2.26	30 69	....	.....	....	.....
1898	3.38	.54	.79	4.71	4.17	5.35	2.86	3.53	1.99	3.74	3.61	1.01	30 68	....	.....	....	.....
1899	.13	.51	1.06	3.70	6.58	3.79	7.34	3.83	2.12	.68	1 21	1.93	32 88	....	.....	....	.....
1900	.39	.79	2.90	1.98	4.17	3.93	4.45	7.92	4.08	4 55	.96	.28	36 35	....	.....	....	.....
1901	.89	1.57	2.47	2.86	1.58	2.41	1.48	.57	4.53	2 51	.39	2.25	....	....	.....	....	.....
1902	.84	.72	1.12	1.61	5.54	5.49	....	9.48	....	3.25	2.59	....	.....	....	.....	....	.....
Averages.	1.15	.75	1.19	3.28	4 70	4.08	3.64	4.16	3.05	2 06	1.80	1.41	30.77	....	.....	....	.....

WARREN COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST TO SEPT. 1ST. May.	June.	July.	August.	Total.
1890	19	12	27	20	47	1.0					
1891	45	14	39	22	160	2.0	5.42	3.56	.....	.....	.....
1892	31	12	23	20	75	1.4	10.47	4.12	2.50	1.92	19.01
1893	33	12	23	16	61	1.6	4.78	7.87	.....	.....	.....
1894	12	13	19	20	60	0.5	1.03	1.29	.40	.95	3.67
1895	44	20	45	30	92	1.4	3 64	.....	.....	4.01	.....
1896	44	12	19	25	90	1.7	5.49	2.85	7 81	7.10	23.25
1897	30	12	28	22	64	1 6	3.59	5.23	2.39	2.34	13.55
1898	30	13	30	20	62	1.7	4.17	5.35	2.86	3 53	15.91
1899	36	13	34	20	92	1 5	6.58	3.79	7 34	3.83	21.54
1900	41	14	35	30	62	1 8	4.17	3.93	4.45	7.92	20.47
1901	26	12	25	20	20	1.7	1.58	2.41	1.43	.57	5.99
1902	38	13	28	20	85	2.0	5.54	5.49	.....	9.48	.....
Averages ...	33	12	29	21	74	1.5	.....	.....	.....	.....	15.42

MADISON COUNTY.

Area, 576 square miles; area in farms, 354,216 acres; number of farms, 2,600; value of farms (census of 1900), $11,373,216; value of farm buildings, $2,206,850; value of live stock, $3,325,232; value of arm products not fed to stock, $2,685,436; acreage in cereal crops, 121,710 acres. Meteorological stations have been established at Winterset (elevation 1,129 feet) and at St. Charles and Earlham R. F. D. The records of the Winterset station are tabulated below:

WINTERSET—TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest	Month
1891	26	24	29	52	61	70	69	70	68	62	32	34	48.8	....	.....	....	.....
1892	12	17	33	48	59	71	76	71	66	55	..	25	.....	....	.....	....	.....
1893	17	29	32	46	54	69	74	72	66	55	35	20	47.5	6	.....	....	.....
1894	21	21	42	54	62	74	78	76	66	50	35	30	50.9	....	.....	....	.....
1895	16	18	35	55	63	70	72	72	68	45	31	25	47.9	....	.....	....	.....
1896	23	28	31	56	65	69	72	71	57	49	35	32	48.7	....	.....	....	.....
1897	18	26	34	50	59	69	74	67	71	58	35	18	48.2	....	.....	....	.....
1898	25	26	38	50	60	71	72	72	65	49	45.4	21	48.6	....	.....	....	.....
1899	22.3	15.0	27.4	48.2	60.8	71.8	73.2	75	63 0	55.8	34.4	23.0	48.4	100	Sept..	-25	Feb.
1900	27 0	17 2	32 2	54.4	64.5	70.0	74.8	78.1	66.2	60.5	37.8	28.4	50.6	96	July ..	-11	Jan.
1901	26.2	19.3	34.5	50 4	62 8	73.8	83 8	75 5	66.2	57 0	43.4	....	.....	109	July ..	....	....
1902	24.7	19.6	41.3	59.4	64 3	66.0	73.6	70.0	60.3	58.4	....	21.0	49 4	91	July ..	-17	Jan.
Avgs ...	21.5	21.6	34.1	56 2	61 3	70.3	74.3	72 4	65.2	53 7	38.4	25.2	50.1	....	.....	....	.....

WINTERSET—PRECIPITATION.

1891	....	....	....	....	3.61	7.77	5.28	2.15	.66	2.18	.88	2.55	....	....	.....	....	.....
1892	.52	.94	1.85	5.65	3.16	5.86	2.00	2 91	2.72	.15	....	1.25	....	....	.....	....	.....
1893	.95	.65	2.97	4.33	10 70	3.16	5.01	2.91	1.74	2.41	.90	1.85	37 58	....	.....	....	.....
1894	.85	1.30	2.76	1.83	1.44	3.86	.50	.53	5.72	1.75	.50	1.03	27.07	....	.....	....	.....
1895	.95	.35	.63	3.20	2 68	5.67	5.11	6.07	4.06	.82	.96	.85	31.35	....	.....	....	.....
1896	.60	.70	1.20	3.28	8.43	5.73	11.37	6.00	5.00	3.89	1.19	.73	48.20	....	.....	....	.....
1897	1.68	1.10	1.91	9.86	1.82	6.21	5.43	2.32	2.46	1.03	.56	1.80	36.18	....	.....	....	.....
1898	2.24	1.17	1.51	2.88	4.62	11.13	7.79	1.57	2.45	3.22	3.28	.71	42.57	....	.....	....	.....
1899	.26	.60	1.62	2.49	6.77	3.69	6.12	3.27	1.08	1.20	.82	2.05	20.83	....	.....	....	.....
1900	.23	1.30	2.81	2.32	4.34	5.33	7.24	5.53	5.65	4.30	.92	.23	40.20	....	.....	....	.....
1901	.80	1.20	4.13	3.13	2.13	4.83	4.27	.86	2.84	2.95	1.11	....	.....	....	.....	....	.....
1902	1.20	.47	1.05	1.15	5.19	6.90	11.08	8.35	5.83	4.57	2.26	2.09	50.14	....	.....	....	.....
Averages	.94	.89	2.04	3.06	4 57	5.84	5.93	3.54	3.35	2.37	1.21	1.37	35.71	....	.....	....	.....

MADISON COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST TO SEPT 1ST. May.	June.	July.	Aug.	Total.
1890	27	12	28	22	42	1.0					
1891	39	14	42	25	145	2.5	3.61	7.77	5.28	2.15	18.81
1892	31	11	23	22	41	2 0	3.16	5.86	2.00	2.91	13.93
1893	37	11	20	18	51	1.7	10.70	3.16	5.01	2.90	12.77
1894	10	14	22	20	32	0.5	1.44	3.86	.50	.53	6.33
1895	37	17	54	40	87	1 0	2.80	5.67	5.11	6.07	19.71
1896	41	12	19	20	93	1.8	8.43	5.73	11.37	6.00	31.53
1897	29	10	23	21	64	1.8	1 86	6.21	5.43	2.32	15.82
1898	31	12	28	25	78	2.0	4.62	11.13	7.79	1.57	25.11
1899	41	13	35	27	110	1.3	6.77	3.69	6 12	3.27	19.85
1900	40	14	30	25	70	1.5	4.34	5.33	7.24	5.53	22.44
1901	23	14	28	25	30	2.0	2.13	4.83	4.27	.86	12.09
1902	34	13	31	25	90	1.8	5.19	6.90	11.08	8.35	31.52
Averages.....	32	13	29	24	71	1 6	.....	.....	.....	.....	19.15

ADAIR COUNTY.

Area, 576 square miles; area in farms, 360,224; number of farms, 2,387; value of farms (census of 1900), $10,868,310; value of farm buildings, $1,965,700; value of live stock, $3,414,436; value of the year's products not fed to stock, $2,869,447; acreage in cereal crops, 146,460 acres. The following tables contain records of the meteorological station at Greenfield.

GREENFIELD—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest	Month	Lowest.	Month
1891	26	20	27	51	58	68	68	69	68	50	30	32	47.8	....	.....	....	.....
1892	16	27	31	45	54	63	73	71	58	55	34	20	46	....	.....	....	.....
1893	11	16	32	48	58	71	76	70	68	53	36	23	46.8	....	.....	....	.....
1894	20	20	43	53	62	74	78	78	67	53	34	31	51.1	....	.....	....	.....
1895	17	19	36	55	60	70	73	73	68	47	37	27	48.6	....	.....	....	.....
1896	26	30	31	56	65	71	74	72	60	49	31	32	49.7	....	.....	....	.....
1897	19	26	33	49	59	71	76	70	73	58	35	19	49	....	.....	....	.....
1898	26	26	39	49	61	73	74	75	67	49	33	19	49.1	....	.....	....	.....
1899	22	13	26.3	48 4	60	71 2	73.2	....	63.2	58.6	45	22.4	.....	.....	.....	-29	Feb.
1900	26.8	16.4	33	54.1	64.4	72.2	75	76.7	64	60.3	35.4	28	50.5	97	June..	-12	Jan.
1901	15.8	20.8	36.2	50.1	61.2	72.8	82.4	75.2	64.4	56.3	37.5	20	50.2	106	July...	-22	Dec.
1902	24.5	18	39.4	49.1	63.8	65 1	72.2	69	58.8	54.2	42.5	20.2	48.1	90	{ June July.	-18	Jan.
Averages	21.7	21	33.9	50 6	60.5	70 6	74.6	72.6	65.8	53 6	35 9	24.5	48.8	106	1901 July...	-29	1899 Feb.

GEENFIELD—PRECIPITATION.

1891	2.22	1.65	2 83	2.28	2.98	9.21	5 60	1.66	.92	2.27	1.38	2.75	36. 15	....	.....	....	.....
1892	.72	1 32	3. 6	.35	7 93	2 08	7. 8	1.69	.82	1.50	.48	2.04	34.33	....	.....	....	.....
1893	.45	1.37	1.98	3 53	3.49	3.08	2 95	2.92	2 92	.23	.91	1.86	25 67	....	.....	....	.....
1894	.91	1.03	1.45	2.73	1.01	2 94	.57	.53	5. 11	2 10	.53	.88	19.76	....	.....	....	.....
1895	.57	1.03	1 13	4.65	4.59	4.45	1.85	5.90	5.68	.14	1.77	1.36	83. 12	....	.....	....	.....
1896	76	.70	2.06	3 21	7.48	3.52	11 93	4.86	4.68	3 41	1.22	91	44 74	....	.....	....	.....
1897	1.53	.48	4.95	5.12	2.09	3 52	2.35	2 14	1.66	1.61	.33	1 40	27. 65	....	.....	....	.....
1898	1.53	1.72	1.70	1.97	5.82	12.48	2 63	1.02	2.48	3.21	1.35	.49	36. 40	....	.....	....	.....
1899	.49	.85	1.57	2.38	6.69	4.08	4 78	2 80	.57	1.67	1 04	1.47	28. 34	....	.....	....	.....
1900	.33	.88	2. 19	2.26	2 99	3.56	5.33	3.37	4.67	5.86	.80	.13	32. 37	....	.....	....	.....
1901	.41	1.05	2.32	2.86	3.28	5.71	2.26	1. 17	3. 52	2.74	1. 59	.89	27. 61	....	.....	....	.....
1900	.9	38	1 54	1.28	6.76	6.27	10.87	5 77	6.30	2.91	1.46	1.98	46.38	....	..	....	.....
Average	.90	1 04	2 24	3 13	4.60	5 11	4.89	2.82	3. 28	2.30	1. 06	1 35	32.72	....	.....	....	.....

ADAIR COUNTY CROPS.

YEAR.	AVERAGE PER ACRE						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	23	13	24	22	42	1.0					
1891	31	14	25.	32	108	1 5	2.98	9 21	5.60	1.66	19.45
1892	29	12	23	20	47	2.0	7.98	2.08	7.18	1 69	18.93
1893	36	12	21	40	75	1 6	3.49	3.08	2.95	2.92	12.44
1894	6	12	18	21	28	0.5	1.01	2.94	.57	.53	4.45
1895	46	22	62	32	128	1.6	4.59	4.45	1.85	5.90	16.79
1896	42	14	20	40	78	1.6	7.48	3.52	11.93	4 86	28 09
1897	25	10	25	20	37	1.1	2.09	3.52	2 82	2.14	10.57
1898	25	11	24	22	65	1.4	5.82	12 48	2.68	1 02	19.95
1899	41	15	35	29	130	1.6	6 69	4 08	3.73	2.80	18.30
1900	37	18	25	25	53	1.4	2.99	3 56	5.33	3.37	15.25
1901	23	14	29	20	22	1.2	3.28	5.71	2.26	1.17	12.42
1902	30	10	30	30	120	1.5	6.76	6.27	10.87	5 77	29.67
Average	31	14	29	27	72	14					17.19

UNION COUNTY.

Area, 432 square miles; area in farms, 268,513 acres; number of farms, 1,823; value of farms (census of 1901), $8,622,540; value of farm buildings, $1,593,330; value of live stock, $2,517,181; value of the year's products not fed to stock, $1,967,490; acreage in cereal crops, 85,370 acres. Records of the voluntary meteorological station at Afton are tabulated below; elevation, 1,212 feet.

AFTON—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April	May.	June.	July	Aug	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1894	....	....	....	....	....	75. 0	78. 0	77. 0	68. 0	53. 0	25. 0	30 0	....	107	July	....	.....
1895	15. 0	19. 0	37 0	55. 0	68. 0	70. 0	78. 0	73 0	69. 0	48 0	36. 0	2. .0	48. 7	98	July	-21	Feb.
1896	26. 0	30. 0	33. 0	57. 0	66 0	70. 0	74. 0	72. 0	60. 0	50. 0	38. 0	33. 0	50. 3	98	July.	-10	Jan.
1897	20. 0	27. 0	35. 0	49 0	62. 0	71. 0	78 0	71. 0	72. 0	59. 0	36. 0	20. 0	50. 0	105	July..	-16	Jan.
1898	26. 0	27. 0	40. 0	50. 0	61. 0	74. 0	75. 0	75. 0	67. 0	48. 0	33. 0	19. 0	49. 6	101	July..	-11	Dec.
1899	22. 5	14. 1	28. 2	45. 6	61. 7	78. 2	74. 5	75. 4	63. 0	58. 8	44 0	28. 0	48. 7	98	Sept	-26	Feb.
1900	27. 4	19. 4	33. 6	54. 2	64. 4	70. 9	75. 0	77. 1	65. 0	59. 0	34. 5	28 6	50. 8	98	{ June. July.	-11	Jan.
1901	26. 0	19. 7	35. 0	49 6	61. 0	73. 4	82 6	73. 6	62 9	55. 0	34. 4	18. 2	49. 9	107	July..	-17	Dec.
1902	24. 3	18. 8	39. 8	50. 2	66. 0	67. 2	75. 0	71. 0	59 2	55. 0	42. 4	21 6	49.2	96	Aug..	-17	Jan.
Averages.	23. 4	21. 8	35. 2	51 3	63 1	71. 6	76. 1	73. 9	65. 1	53. 9	35. 9	24. 8	49. 7	107	1894 '01 July..	-26	1899 Feb.

AFTON—PRECIPITATION.

1894	....	....	....	....	....	2. 15	.96	.12	3.51	3. 58	.58	1.10	....	....	.....	....	.....
1895	.40	52	.76	4. 63	3 04	6. 58	3. 54	6. 45	3. 06	.50	1. 13	2 00	32 61	....	.....	....	.....
1896	.50	1. 09	2. 34	3. 67	3. 85	3. 00	9. 10	7. 15	4. 94	3. 98	1. 06	.5	44. 16	....	.....	....	.....
1897	1. 15	1. 70	5 61	8. 01	2. 19	4 57	1 89	1 33	2. 72	1. 12	.34	2 33	32. 6	....	.....	....	.....
1898	1. 75	1. 51	2. 07	2. 8.	4 .5	5. 76	2 67	.59	3. 29	2. 03	2. 24	.69	29. 23	....	.....	....	.....
1899	.40	.50	1. 25	2. 25	6 76	4. 73	6. 33	5 14	.50	1 53	.45	1. 31	31. 15	....	.....	....	.....
1900	.23	1. 51	2. 52	3. 39	4 42	2 02	5. 67	4 59	5. 96	6 90	1. 11	.25	38 57	....	.....	....	.....
1901	.76	1. 10	3. 19	3. 21	2. 90	5 05	4. 44	.44	3 56	2. 82	1. 17	1. 00	29. 02	....	.....	....	.....
1902	1. 30	.40	.71	1 85	7. 31	4 88	3 57	5. 80	7. 32	4. 32	1 90	2 30	46. 76	....	.....	....	.....
Means..	.81	1. 04	2. 30	3 67	4 71	4. 30	4. 80	3. 51	3. 87	2. 96	1 11	1. 28	34. 36	....	.....	....	.....

UNION COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.					RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Totals.
1890	28	12	29	50	1.0					
1891	33	14	38	138	2.0					
1892	34	17	24	46	1.5					
1893	35	14	20	63	1.3					
1894	11	11	22	24	0.4	....	2.15	.96	.12	.....
1895	47	15	55	142	1.4	3.04	6.58	3.54	6 45	19.61
1896	36	13	15	78	1 6	6.85	3.00	9.10	7. 15	26 10
1897	22	16	28	35	1.6	2 19	4.57	1.89	1. 88	10 08
1898	28	22	28	52	1.7	4.25	5.76	2.67	59	18 28
1899	41	13	33	120	1.4	6.76	4 78	6.33	5 14	22 96
1900	42	14	30	45	1.5	4 22	2.02	5 67	4.59	16.50
1901	30	12	27	25	1.8	2.90	5.05	4 42	.44	12.81
1902	35	12	25	150	1 5	7.31	4.88	8.67	5.80	26.66
Means	32	14	29	74	1.5					18.52

CLARKE COUNTY.

Area, 432 square miles; area in farms, 259,491 acres; number of farms, 1,714; value of farms (census of 1900), $7,131,900; value of farm buildings, $1,248,960; value of live stock, $2,183,388; value of the year's farm products not fed to stock, $1,509,431; acreage in cereal crops, 73,700 acres. The tables below contain weather records compiled at Osceola and Hopeville. Elevation of Osceola, 1,132 feet.

OSCEOLA—TEMPERATURE (DEGREES.

YEAR	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1894	....	....	....	....	....	74.3	78.1	77	65.7	48.7	33.9	3 02	....	102	July ..	....	....
1895	16	19	35	54	63	71	....	....	....	....	....	....	....	....	.....	-20	Feb.
1896	....	....	....	....	66.4	70.5	73.1	72.8	60.5	49.8	32.7	34.6	.....	95	June..	....	....
1897	18	28	34	50	59	70	77	71	74	59	37	21	49.1	100	July .	-17	Jan.
1898	26	26	39	49	60	72	73	74	66	48	34	20	48.8	97	} June } Aug.	-10	Dec.
1899	21	12.9	27.8	48 8	60.6	71.3	73	75.2	64.8	59.5	46.8	23.6	48.8	99	Sept	-32	Feb.
1900	29.7	16.6	33	53.8	64	69.6	75.4	78	66.4	60.4	35.5	28.7	50.8	95	July ..	-10	Jan.
1901	....	....	....	51	61	73	84.1	74.6	63.6	56.7	....	....	.....	107	July ..	....	.....
1902	....	....	....	48.9	64.7	74.2	78.6	70.7	59.8	55.2	46.8	22.5	.....	91	} July. } Aug.	.	.....
Averages	22.1	20.5	33.8	50 8	62.3	70.7	75.9	74 2	65.1	54.6	37.6	28.3	49 4	107	1901 July ..	-32	1899 Feb.

OSCEOLA - PRECIPITATION.

1894	....	....	.79	2.74	.....	1.91	.65	.27	6.67	2.86	1.28	.98	14 62	....	.....	....	.....
1895	.76	.30	....	....	3.54	5.96	....	4.94	3.17	....	....	....	.....	....	.....	....	.....
1896	....	....	....	....	6.64	3.26	10.60	5.56	5.03	4.52	1.29	50	.....	....	.....	....	.....
1897	1 63	1.52	4.68	9.74	3.40	4.74	1 01	.67	1.54	.60	.57	2 57	32.67	....	.....	....	.....
1898	3.30	1.18	1.26	1.44	5.30	4.95	4.77	1.48	3 09	3 68	1.50	.90	32.86	....	.....	....	.....
1899	.43	.64	86	3.61	7 85	2.91	4.80	2.89	1 07	1.75	1.00	1.35	29.16	....	.....	....	.....
1900	.19	1.67	1.80	2.64	3 96	4.62	6.04	5.29	6.78	5.95	1.28	.26	40 48	....	.....	....	.....
1901	....	....	....	2.88	3.20	4.81	2.92	.40	2.42	1.41	....	....	.....	....	.....	....	.....
1902	....	....	....	1.59	6 69	5.37	10.35	7.26	7.89	3.82	3 54	2.34	.....	....	.....	....	.....
Averages	1.26	1 08	1.88	3 52	5.07	4.28	5.14	3 19	4.18	3.07	1.49	1.27	31.43	....	.....	....	.....

HOPEVILLE—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month.
1891	26.0	23.0	29.0	52.0	58 0	69.0	69.0	67.0	67 0	50.0	31.0	33.0	48 1	....	.....	....	.....
1892	17.0	29 0	33.0	46.0	56.0	69.0	72.0	71.0	66.0	55 0	35.0	20.0	47.4	....	.....	....	.....
1893	12.0	18.0	34.0	....	57.0	70.0	75.0	70.0	67.0	58.0	....	25.0	....	....	.....	....	.....
1894	22.0	20.0	42.0	53.0	62.0	74.0	77.0	77.0	67.0	54.0	34.0	31.0	51.1	....	.....	....	.....
1895	17.0	19.0	37.0	55.0	62.0	69.0	71.0	74.0	69.0	49.0	36.0	26.0	48 7	....	.....	....	.....
1896	25.0	29.0	32.0	57.0	66 0	69.0	73.0	71.0	60.0	50.0	32.0	33.0	49.9	....	.....	....	.....
1897	19.0	26.0	35.0	49.0	59.0	70.0	76.0	71.0	74.0	59.0	36.0	19.0	49 4	....	.....	....	.....
1898	25.0	26.0	39.0	49.0	69 0	72.0	75 0	74.0	67.0	50.0	33.5	20 0	49.2	....	.....	....	.....
1899	23 2	14 2	27 6	48 8	60 8	70.8	72.8	74.6	64.4	59 0	45.4	23 5	48 8	97	Sept.	-25	Feb.
1900	27.8	16.8	33 2	42.6	63 0	70.5	74.5	77 0	66.1	60.6	34 6	28.8	49.6	....	.....	....	.....
1901	26 2	20.0	35.6	49.8	60.2	72.1	83 0	75.3	64.8	56.2	37.6	21.4	50.2	....	.....	....	.....
Av'ges..	21 8	21.9	34.8	50.2	60 4	70 5	74.4	73.1	66.6	54.6	35.5	25 5	49.1	....	.....	....	.....

CLARKE COUNTY—CONTINUED.

HOPEVILLE—PRECIPITATION.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.				
1891	2.34	.87	2.80	2 72	3.93	6.14	5.53	3.75	.13	2.14	1 05	1.49	32.59	....	.....	....	.....
1892	1.61	1.46	2.15	4.68	10.84	2.70	7 46	.91	1.86	2.61	.66	1.19	38.13	....	.....	....	.....
1893	.17	.50	.63	....	3.35	4 02	1.99	3 40	3.25	.21	.60	.53	....	....	.....	....	.....
1894	.74	1.23	1.32	1.60	1 21	2.30	1.00	75	3.48	2.29	1 19	.86	18.47	....	.....	....	.....
1895	.30	25	.50	3.64	2.98	6.03	3.55	5.39	3 61	.06	1 15	1.65	29.11	....	.....	....	.....
1896	.61	.76	1.09	3. 0	7.36	2.22	10.44	5 97	4.99	3.67	1 00	.40	41.81	....	.....	....	.....
1897	1.23	.84	3.57	8 92	3.13	4.09	1.20	1.62	3 32	.73	.63	1.82	31 10	....	.....	....	.....
1898	2.32	1.16	1.48	2.22	5.90	6 07	2 92	2.49	4.63	3.15	1.25	.65	34.24	....	.....	....	.....
1899	.15	.59	1.85	4 08	5.89	3.77	4.37	3.4-	.59	1.48	.67	1.68	28.06	....	.....	....	.....
1900	17	1.20	1 33	2.50	4.64	....	7.29	2.83	5 26	5.78	.76	.26	.....	....	.....	....	.....
1901	.60	84	2.76	2.33	3.22	4 85	1.79	.55	2.61	2.39	.88	....	.....	....	.....	....	.....
1902	.53	.61	.98	1.59	4.70	5.67	7.89	8.37	8.60	4.62	1.90	1.69	47.15	....	.....	....	.....
Averages.	.90	.77	1.68	3.42	4.76	4.35	4.62	3.29	3.58	2.43	.98	1.11	31.84	....	.....	....	.....

CLARKE COUNTY CROPS.

YEARS.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST. TO SEPT. 1ST. May.	June.	July.	August.	Total.
1890	22	12	26	44	1.0					
1891	34	15	37	93	1 8	3.93	6.14	5.53	3.75	19 35
1892	27	13	18	38	1.5	10.84	2.70	7.46	.91	21 91
1893	36	12	20	46	1.5	3.35	4.02	1.99	3.40	12.76
1894	10	12	18	20	0 5	1.21	2.30	1.00	.75	5 26
1895	42	16	47	136	1.3	2.98	6.03	3.55	5.39	17.95
1896	35	14	20	61	1.6	7.36	2.22	10.44	5 97	25 99
1897	22	18	20	41	1.5	3.13	4.09	1 20	1.62	10.04
1898	32	16	26	60	1.5	5.90	6.07	2.92	2.49	17 38
1899	35	12	32	80	1 4	5.89	3.77	4.37	3.44	17 47
1900	38	16	34	52	1.3	4 64	4.62	7.29	2.83	19.38
1901	23	20	26	25	1.2	3.22	4.85	1.79	.55	10.11
1902	35	20	32	115	1.5	4 70	5.67	7.89	8.37	26.63
Average...	30	15	27	63	1.4					17 02

LUCAS COUNTY.

Area, 432 square miles; area in farms, 263,674 acres; number of farms, 1,842; value of farms (census of 1900), $7,296,300; value of farm buildings, $1,318,340; value of live stock, $2,127,340; value farm products of the year not fed to stock, $1,571,589; acreage in cereal crops, 74,480 acres. The following tables contain records of the meteorological station at Chariton; elevation 1,042 feet.

CHARITON—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1895	....	20.0	37.0	55.0	64.0	72.0	78.0	75.0	70.0	48.0	37.0	28.0	...	94	July ..	....	....
1896	21.6	30.0	33.0	57.0	66.5	69.8	73.2	72.4	59.5	49.6	38.8	34.0	50.9	94	July ..	- 8	Jan.
1897	20.8	24.6	36.5	50.2	59.6	70.8	77.1	71.6	73.7	55.6	38.4	21.4	50.7	98	July ..	-14	Jan.
1898	27.2	27.3	40.7	50.0	61.1	71.8	73.0	73.6	67.6	49.8	34.8	21.6	49.9	96	Aug	- 9	Dec.
1899	23.6	15.0	28.2	44.6	61.1	71.1	72.7	74.4	63.8	59.8	46.8	25.6	49.2	98	Sept	-24	Feb.
1900	28.4	18.1	33.5	53.7	63.4	69.2	74.6	78.1	65.5	60.4	36.3	29.2	50.9	94	July ..	-10	Jan.
1901	27.0	19.8	36.4	49.4	60.4	73.2	83.7	74.3	65.2	56.0	37.8	22.1	50.4	109	July	-16	Dec.
1902	24.4	18.4	40.4	49.0	65.4	65.6	73.8	70.3	59.6	55.4	44.1	22.8	49.1	92	Aug	-20	Jan.
Average.	25.4	22.2	35.7	51.7	62.7	70.4	75.1	73.7	65.6	54.8	38.6	25.6	50.1	109	1901 July ..	-24	1899 Feb.

CHARITON—PRECIPITATION (INCHES).

1895	....	.42	.61	2.95	3.04	5.23	4.83	3.84	3.51	.10	1.50	2.40	.....	....	....	....	.....
1896	.62	1.05	.96	3.13	7.36	2.42	9.06	7.03	3.76	3.25	.78	.65	40.07	....	....	....	.....
1897	1.49	1.30	1.11	3.48	1.30	4.25	1.74	.69	1.20	.88	1.09	2.13	25.66	....	....	....	.....
1898	3.49	.84	1.60	2.20	5.17	4.77	6.94	1.41	4.23	5.29	1.67	.83	38.47	....	....	....	.....
1899	.33	.61	1.42	2.79	6.95	2.52	7.20	4.51	.81	2.09	1.17	2.22	32.62	....	....	....	.....
1900	.15	1.85	2.23	2.95	3.47	2.63	6.20	4.85	5.15	4.72	1.60	.43	36.87	....	....	....	.....
1901	.95	1.13	2.95	2.02	1.28	5.18	4.25	6.61	2.08	1.70	.58	1.51	24.19	....	....	....	.....
1902	.74	1.15	1.10	3.42	5.60	1.19	10.07	8.23	9.10	4.55	2.89	1.91	55.95	....	....	....	.....
Averages	1.11	1.04	1.50	3.49	4.27	4.27	6.24	2.90	3.73	2.82	1.41	1.52	34.30	....	....	....	.....

LUCAS COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST TO SEPT. 1ST. May.	June.	July.	August.	Total.
1890	17	13	27	13	26	0.5					
1891	38	18	35	14	155	1.8					
1892	31	15	25	14	32	1.0					
1893	32	13	22	13	36	1.6					
1894	9	16	18	14	22	0.5					
1895	43	22	45	22	124	1.8	3.04	5.23	4.83	3.84	16.44
1896	41	17	16	14	101	1.3	7.36	2.42	9.06	7.03	25.87
1897	23	13	24	13	25	1.7	1.30	4.25	1.74	.69	7.98
1898	40	15	28	14	90	1.5	5.17	4.77	6.94	1.41	18.29
1899	26	11	30	14	62	1.8	6.95	2.52	7.20	4.51	21.18
1900	38	15	33	14	61	1.4	3.47	2.63	6.29	4.85	17.24
1901	22	14	25	12	20	1.2	1.28	5.18	4.25	.61	11.32
1902	34	20	33	17	92	1.7	5.60	7.19	10.07	8.23	31.09
Averages...	30	16	28	14	65	1.4	.....	.....	.....	.....	18.68

MONROE COUNTY.

Area, 432 square miles; area in farms, 262,296 acres; number of farms, 1,987; value of farms, $7,756,140; value of farm buildings, $1,363,820; value of live stock, $1,839,749; value of the year's products not fed to stock, $1,452,296; acreage in cereal crops, 68,100 acres. The following tables of climatic data were compiled at Maxon and Albia; altitude of Albia, 945 feet.

ALBIA—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1898	29	....	....	....	.....	74.0	74.0	78.0	68.0	51.	37.	21.	....	....	.....	....	.....
1899	25.2	....	....	....	.....	.....	.....	.....	62.8	....	....	....	....	....	.....	....	.....
1900	28.8	18.2	33.6	52.8	63.2	69.5	72.8	77.8	64.1	59.3	34.7	29.8	50.4	....	.....	....	.....
1901	26.0	20.9	35.0	49.8	60.4	73.2	83.8	73.6	64.6	55.2	37.0	21.8	....	....	.....	....	.....
1902	26.1	19.8	41.0	51.2	67.6	66.0	72.2	70.6	61.0	55.6	45.8	23.0	50.0	....	.....	....	.....

ALBIA—PRECIPITATION.

1898	2.93	.88	....	....	3.40	5.16	4.66	3.39	3.07	4.90	1.90	.85	....	....	.....	....	.....
1899	.71	....	....	....	.....	.....	.....	.....	1.09	....	....	....	....	....	.....	....	.....
1900	.34	2.10	1.13	3.04	4.58	2.52	5.12	4.24	3.92	3.55	1.85	.60	32.79	....	.....	....	.....
1901	.60	2.35	2.74	2.65	1.46	2.47	2.75	1.25	2.36	1.2	2.0	1.58	....	....	.....	....	.....
1902	.82	.92	91	2.85	5.48	7.99	8.82	7.27	6.42	4.57	3.84	1.92	51.25	....	.....	....	.....

MAXON (NEAR ALBIA)—MEAN TEMPERATURE.

189	....	....	....	52.	61.	69.	69.	71	69.	49.	33.	31.	.....	....	.....	....	.....
1892	16.	29.	32.	....	59.	75.	77.	78.	66.	54.	33.	18.	.....	....	.....	....	.....
1893	9.	18.	33.	47.	58.	72.	78.	72	67.	54.	34.	23.	46.9	....	.....	....	.....
1894	20.	30.	42.	53.	62.	76.	80.	76	67.	53.	32.	31.	50.9	....	.....	....	.....
1895	14.	20.	37.	56	63.	74.	75.	75.	71.	48.	37.	29.	49.9	....	.....	....	.....
1896	26.	29.	33.	59.	69.	73.	76.	74.	60.	....	....	....	....	....	.....	....	.....
Means..	17 0	23.2	35.4	53.4	62 0	73.2	75.8	73.5	66.7	51.6	33.8	26.4	49.3	....	.....	....	.....

MAXON—PRECIPITATION.

1891	....	....	....	3.65	4.06	3.49	3.69	13.02	51	1.62	3.30	2.91	.....	....	.....	....	.....
1892	0	2.16	1.90	3.10	1.88	4.71	5.10	.65	1.95	2.58	.7[illegible]	2.58	36.88	....	.....	....	.....
1893	2.	1.00	2.56	4.63	3.98	5.88	2.82	3.42	3.[illegible]	.92	1.2[illegible]	1.25	31.50	....	.....	....	.....
1894	1.20	.28	2.24	1.60	1.64	.52	1.06	.60	4.5[illegible]	.62	2.03	.26	19.54	....	.....	....	.....
1895	.11	.44	.56	2.77	8.02	4.05	4.34	4.21	2.0[illegible]	T.	1.59	2.86	36.97	....	.....	....	.....
1896	.47	.52	1.08	4.48	7.46	1.90	8.18	7.30	8.55	....	....	....	....	....	.....	....	.....
Averages.	.6	.28	1.67	3.48	5.16	3.42	4.26	4.87	2.62	1.55	1.78	1.97	32.58	....	.....	....	.....

MONROE COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1st TO SEPT. 1st. May.	June.	July.	August.	Total.
1890	18	17	26	17	38	1.0					
1891	48	21	38	15	156	1.5	4.06	3.49	3.69	13.02	24.26
1892	29	17	22	13	39	2.0	11.38	4.71	5.10	.65	21.84
1893	33	13	26	13	35	1.4	3.98	5.88	2.82	3.42	15.60
1894	9	12	18	14	21	0.5	1.64	1.52	1.06	.60	4.82
1895	40	22	34	16	184	1.0	8.02	4.05	4.34	4.21	14.61
1896	39	14	19	15	60	1.2	7.46	1.90	8.18	7.30	24.84
1897	24	12	25	11	35	1.1					
1898	39	11	28	12	68	1.7	3.40	5.16	4.66	3.39	16.61
1899	26	15	25	10	60	1.2					
1900	40	15	35	18	60	1.3	4.58	2.52	5.12	4.24	16.26
1901	28	12	28	16	20	1.2	1.46	2.47	2.75	1.25	7.93
1902	40	18	35	18	125	2.0	5.48	7.99	8.82	7.27	29.50
Averages..	31	15	27	15	65	1.3	.....	.....	.....	.....	17.61

APPANOOSE COUNTY.

Area, 500 square miles; area in farms, 310,147 acres; number of farms, 2,526; value of farms (census of 1900), $8,111,620; value of farm buildings, $1,653,450; value of live stock, $2,321,730; value of yearly product not fed to stock, $1,767,170; acreage in cereal crops, 64,630 acres. A meteorological station was established at Centerville in 1892, from which the following somewhat irregular records have been received; elevation of Centerville, 1,013 feet.

CENTERVILLE—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l	Highest.	Month	Lowest.	Month
1892	....	....	....	....	....	70	71	69	68	52	33	30	....	....	.....	...	.....
1893	13	21	36	48	60	72	78	73	66	54	37	29	49.0	....	.....	...	.....
1894	20	35	46	50	65		83	79	....	....	....	....	....	....	.....	...	.....
1895	30	12	40	50	64		74	76	74	50	41	....	....	....	.....	...	.....
1897	24	....	....	51	60	78	78	74	73	....	....	....	....	....	.....	...	.....
1898	....	....	....	50	61	73	75	76	68	50	....	....	....	....	.....	...	.....
1899	25 9	17.5	31.8	50.8	2.2	72 9	75.4	76.2	65 4	50.8	47.8	....	....	....	.....	...	.....
1900	29.5	18.6	33 4	51.3	64.6	70 8	....	....	....	....	....	30.6	....	....	.....	...	.....
1901	28 6	20.9	....	....	58.1	....	82 5	76.0	66.4	57	40.6	....	....	....	.....	...	.....
1902	26 4	19.4	41.2	51.5	66 8	66 2	.....	....	....	....	....	....	....	....	.....	...	.....
Averages																	

CENTERVILLE—PRECIPITATION.

1892	....	....	....	....	....	4.48	11.69	1 95	1.07	2 08	1.21	2.42	.		....	..	.....
1893	.55	2 10	1.10	4.80	5.14	3.05	2.67	3 20	4.20	1 30	1.45	2 80	32.26	....	.....	..	.....
1894	1.50	1.30	2.15	2.30	2.71	3 20	3 50	65	....	....	4.00	....	....	....	.....	..	.....
1895	2.65	.15	2.60	4 80	3.45	4 10	6.51	8.35	1.32	....	1.91	3.55	....	....	.....	..	.....
1897	1.22	....	....	3.37	.60	3 20	5 04	2.85	....	....	....	....	....	....	.....	..	.....
1898	....	....	....	2.23	5.25	4.61	3.63	5 12	3.00	3 57	....	....	....	....	.....	..	.....
1899	.20	.40	1.05	3.12	6.70	2.43	3.36	3.04	1.55	.35	....	....	....	....	.....	..	.....
1900	.30	2.0	1.30	1.30	4 80	3.43	1 97	....	....	....	....	.50	....	....	.....	..	.....
1901	.40	1 50	....	....	.35	6.59	2.09	.21	2 43	2.05	.78	....	....	....	.....	..	.....
1902	.30	1 14	1.20	2.46	3.27	6.97	....	....	....	....	....	....	....	....	.....	..	.....
Average	.91	1.22	1.55	3 68	3 58	3 70	3.38	2.98	2 33	1.87	1.33	2.39	28.92	...	....		.....

APPANOOSE COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Rye, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	Aug.	Total.
1890	24	17	23	14	68	1.0					
1891	31	18	31	14	125	2.0					
1892	27	13	19	12	37	1.7	....	4.48	11 69	1.07	....
1893	30	13	25	15	38	1.9	5.14	3.05	2.67	3.20	14.06
1894	12	16	20	13	105	0 6	2 71	3.20	3.50	.65	10.06
1895	38	15	40	15	90	1.5	3.45	4 10	6 51	8.35	22.41
1896	34	14	19	12	61	1.4	....	....	....	....	....
1897	25	13	20	16	42	1.2	.60	3.20	5.04	1.52	10.36
1898	32	12	26	11	70	1.8	5.25	4.61	3.63	5.12	18.61
1899	27	12	25	14	84	1.5	6.70	2.43	2 36	3.04	15.53
1900	36	18	33	15	75	1.0	4.83	3.43	1.97	....	....
1901	18	18	20	13	80	0.6	.35	1 56	2.09	.21	4.21
1902	35	15	30	10	100	1.5	3.57	6.97	....	....	.....
Averages	29	15	26	13	70	1.4	.....	.....	.....	.....	13.60

WAYNE COUNTY.

Area, 528 square miles; area in farms, 332,762 acres; number of farms, 2,285; value of farms, $9,826,640; value of farm buildings, $1,891,240; value of live stock, $2,732,306; value of farm products not fed to stock, $1,859,592; acreage in cereal crops, 80,400 acres. Records of a meteorological station at Ovid are tabulated below. A station was established at Allerton in 1902:

OVID—TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1893	....	....	....	....	60	70	76	71	68	53	37	25	....	....	.....	....	.....
1894	24	23	43	53	61	75	78	79	68	54	35	32	52.2	....	.....	....	.....
1895	18	19	36	54	62	70	72	71	69	54	35	32	48 7	....	.....	....	.....
1896	26	29	33	57	66	70	74	72	66	52	34	26	48 7	....	.....	....	.....
1897	20	27	36	50	59	71	78	72	75	60	42	35	51.6	....	.....	....	.....
1898	25	26	32	49	60	72	74	74	67	49	35	19	50.3	....	.....	....	.....
1899	23.2	15.7	28.8	49.5	61.2	71.2	73.6	75.8	64.7	50.2	47.2	21.8	49.3	....	.....	....	.....
1900	28.0	18 0	33.4	51.4	63.1	69.6	73.8	78.1	66 2	50.2	35.8	29.4	50.8	96	Aug..	-10	Feb.
1901	26.4	19.4	35 2	49.6	61.2	73 4	75.2	76.3	65.8	58.2	39.2	29.2	51.1	112	July ..	-18	Dec.
1902	24.4	18.8	40.7	50.5	64 8	65.6	73.6	70.6	60 4	56.3	44.9	22 6	49.4	92	A g.	-20	Jan.
Averages	21.5	21.8	36.1	51.8	61.8	70.8	75.8	74.5	66.5	55 1	38 1	25.8	50.2	112	1901. July..	-25	1899. Feb.

OVID—PRECIPITATION.

1893	....	....	....	....	3.26	4 31	2.40	3.53	3.30	1 32	1.16	1.22	....	....	.....	....	.....
1894	1.23	1 96	2.36	1.25	1.23	1.39	.48	.35	4 94	3.69	1.70	.78	21.27	....	.....	....	.....
1895	.94	.53	1.30	3.44	2.46	5 8	3.19	5.0	3 99	.14	1.91	2.62	31.41	....	.....	....	.....
1896	.87	1.32	1.27	3.48	7.59	2.58	7.24	5.84	5.06	3.87	1.09	.72	40.88	....	.....	....	.....
1897	1.71	1 71	3.45	7.20	1 77	4.50	1.57	1.40	.09	.70	.54	3.32	28.46	....	.....	....	.....
1898	5.31	1.25	2.50	2 84	4.23	5 42	6.29	6.99	4.45	4 33	1.77	.98	46 43	....	.....	....	.....
1899	.50	.75	2 07	3.21	7.03	3.67	4 72	4.02	.94	2 91	1.77	1 87	33.46	....	.....	....	.....
1900	.25	2.56	1.78	4 15	5.75	4.6	3.47	3 39	5 40	4 41	1.73	.64	37.17	....	.....	....	.....
1901	1.86	1.58	2.75	2.00	1.54	5.01	3.08	.91	2.33	2.73	.87	1.79	28.35	....	.....	....	.....
1902	.81	1.16	1.12	2.55	4 83	6 04	11.67	8 64	7.67	4 60	2.44	2 39	51.72	....	.....	....	.....
Averages	1.61	1 42	2 07	3 12	4 97	4.33	4.40	4.01	3 86	2 87	1.60	1.62	35.78				

WAYNE COUNTY CROPS.

YEAR.	AVERAGE PER ACRE						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Rye, bushels	Potatoes, bushels	Hay, tons.	May.	June.	July.	August.	Total.
1890	31	20	30	12	35	1 0					
1891	37	19	28	13	132	2.0					
1892	26	14	17	8	31	1.5					
1893	35	20	22	15	150	1.6	3.26	4.31	2.40	3.53	13.50
1894	9	15	19	14	38	0.4	1.23	1.39	.48	.35	3.45
1895	45	16	47	19	133	1 6	2.46	5.83	3 19	5.06	16.54
1896	3	14	22	14	51	1.8	7 59	2.53	7.24	5.84	23 20
1897	23	13	22	11	36	1.4	1.77	4.50	1.57	1.40	9.24
1898	36	12	24	12	78	2.0	4.23	5.42	6.29	6 99	22.93
1899	26	8	28	11	61	1 5	7.03	3.67	4.72	4.02	19 44
1900	38	13	35	12	65	1.4	5 75	4.64	3.47	3.39	17.25
1901	32	15	25	12	30	1.0	1 54	5 01	3.08	.91	10.54
1902	40	16	35	18	150	1.6	4.83	6 04	11.67	8.64	31.08
Averages	30	15	27	14	76	1 4					16.71

DECATUR COUNTY.

Area 534 square miles; area in farms, 326,078 acres; number of farms, 2,508; value of farms (census of 1900), $8,537,330; value of farm buildings, $1,676,120; value of live stock $2,417,731; value of farm products of the year not fed to stock, $1,800,227; acreage in cereal crops, 82,360 acres. A voluntary meteorological station was established at Leon in April, 1902. The precipitation for the nine months of that year was 48.93 inches, and for the first full year (to April 1, 1903) the total was 52 13 inches.

DECATUR COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.					
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Rye, bushels.	Potatoes bushels	Hay, Tons.
1890	33	16	29	17	69	1.0
1891	23	17	44	14	100	1.8
1892	47	16	17	13	46	2.0
1893	35	13	21	14	56	1.6
1894	10	17	22	15	22	0 4
1895	48	20	49	19	130	1.6
1896	37	17	21	12	69	1.2
1897	24	14	20	12	37	1.3
1898	32	15	35	13	73	1.6
1899	31	10	32	11	73	1.4
1900	40	16	32	15	63	1.5
1901	23	21	27	20	24	1.2
1902	36	18	35	16	130	1.4
Average	31	16	27	15	66	1.4

RINGGOLD COUNTY.

Area, 545 square miles; area in farms, 349,110 acres; number of farms, 2,356; value of farms (census of 1900), $9,877,970; value of farm buildings, $1,688,320; value of live stock, $3,215,151; value of year's products not fed to stock, $2,229,624; acreage in cereal crops, 112,050 acres. The following tables contain the weather records compiled at Mt. Ayr; elevation, 1,236 feet.

MT. AYR—TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May	June.	July.	Aug.	Sept	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month		
1892							78	77	74	68	50	37	23						
1893	16	21	35	49	59		72	73	72	71			29						
1895			37	55	62		70	73	74	69	49	36	26						
1896	20	30	34	57	67		72	75	72	60	51	33	34	90.8					
1897	21	28	35	50	61		72	77	71	74	59	36	21	50.5					
1898	26	27	40	50	62		73	74	75	67	50	35	20	49.8					
1899	33.4	13.9	28.2	49 0	61 4		71.5	73.6	75 2	64 8	60 1	46	23 6	49 2	98	Sept	-26	Feb.	
1900	27.8	17 2	31.8	54.2	64 0		71 1	75.9	78.1	67.0	0 3	36 6	29.1	51.3	97	Jul	-10	Feb	
1901	26 7	20 2	35.8	49 8	60.4		72.8	82.9	75 8	65.5	56 8	38.8	21.4	50 6	109	July	-19	Dec.	
1902	23.9	17.5	40.2	49.4	64.6		69.5	74.0	71.0	59 8	55 4	42.8	19.4	48.7	93	June July, Aug.	-23	Jan.	
Average	23 9	21.8	35.5	51.5	62.4		70.7	75.7	73.8	66.7	55 8	37.9	24.6	50.0	109	1901 July	-26	1899 Feb.	

MT. AYR—PRECIPITATION.

1892						.40	8 17	1.05	2.8	2 58	.75	1.45							
1893	.16	.95	2 13	3 31	5.09	1 14	4.75	3.98	1.4	03		.59							
1895			1.50	2.28	2 10	9.26	7.21	4.01	1 19	11	1 01	1.68							
1896	.65	.95	1 47	2 83	11.79	2.09	2.92	4.95	4.5	3.63	1 39	.50	37 67						
1897	1.06	1.23	3 39	7.93	2 60	6.17	2.25	1.72	1.22	1.08	.90	2.53	32 66						
1898	2 80	1 41	2 15	2.45	7.29	4 55	3 69	2.36	5.3	4.46	2.23	1.01	38.76						
1899	.55	.81	1.64	3.11	7 55	3 13	6.25	2.12	1.06	2.04	.52	1.25	30.03						
1900	.24	1.70	1 75	1.92	4.1	1 85	4.79	3.12	3.6	5.09	1 38	38	30.54						
1901	.73	1.52	3 01	2.22	2.90	4 59	3.62	.75	3 12	2.36	1 28	1.24	27.40						
1902	1.45	.67	.09	2.27	5 13	8 18	7.44	9.09	7.29	3.30	2.00	2 5	50 08						
Average	1.03	1.16	1.93	3.15	5 39	4.44	5 11	3 32	3.17	2.39	1.28	1 82	33.69						

RINGGOLD COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT 1ST.				
	Corn, bushels.	Wheat, bushels	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	34	16	31	13	72	1.0					
1891	24	17	30	14	116	2.0					
1892	53	17	17	14	24	2.0		.40	8.17	1.05	
1893	37	12	22	15	48	1.6	5 09	4.14	4.75	3.98	17.96
1894	11	16	18	11	24	0.4					
1895	46	17	47	16	155	1.5	2 10	9.26	7.21	4.01	22.58
1896	35	17	22	13	73	1.5	11.79	2.09	2.92	4.95	21.75
1897	22	13	20	13	42	1.6	2.60	6.17	2.25	1.72	12.74
1894	35	20	25	19	58	1.8	7.29	4.55	3.69	2.36	17.89
1899	36	10	32	12	95	1.5	7.55	3.13	6 25	2.12	19.05
1900	41	13	33	12	45	1.2	4.11	1.85	4.79	3.12	13.87
1901	38	18	30	14	25	1.4	2 90	4.59	3.62	.75	11.86
1902	38	14	30	13	105	1.8	5.13	8.18	7.44	9.09	29.84
Average	32	15	27	14	75	1 5					18.61

SOUTHWEST DISTRICT.

This district comprises the following counties, viz: Cass, Pottawattamie, Mills, Montgomery, Adams, Taylor, Page and Fremont. The mean annual temperature of the district is 50 degrees; average annual precipitation, 32.60 inches; average rainfall, May 1st to Sept. 1st, 18.02 inches; average yield of corn, 13 years, 32 bushels per acre.

CASS COUNTY.

Area, 576 square miles; area in farms, 354,644 acres; number of farms, 2,395; value of farms (census of 1900), $13,725,420; value of farm buildings, $2,395,790; value of live stock, $3,610,416; value of the year's products not fed to stock, $3,348,196; acreage in cereal crops, 171,000 acres. Meteorological records compiled at Atlantic are tabulated below. Elevation of the station, 1,164 feet.

ATLANTIC—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1891	21	21	27	51	57	68	69	68	66	50	30	34	45.1	97	Aug.	-20	Feb.
1892	6	28	32	49	53	69	76	72	67	55	36	19	46.6	103	July.	-38	Jan.
1893	13	18	33	47	57	72	76	66	59	53	35	22	45.9	102	July.	-21	Jan.
1894	19	19	42	53	60	71	74	74	64	50	32	30	49.1	105	Aug.	-28	Jan.
1895	16	18	34	53	61	68	71	70	68	45	34	26	47.0	103	July.	-21	Feb.
1896	25	28	30	54	63	70	73	72	59	48	29	32	48 6	97	June. Aug.	- 8	Jan.
1897	14	26	33	48	58	70	74	69	71	55	33	18	47 4	102	July. Aug.	-25	Dec.
1898	23	25	36	47	58	70	72	74	65	46	31	18	47.1	98	July. Aug.	-12	Dec.
1899	22.1	3.2	29.4	18.3	60 1	71	72.4	74 6	62	56.8	43	22.6	47.7	99	Sept.	-26	Feb.
1900	21.2	15.5	32.6	52.6	63.2	69.1	74 8	77	64.4	58.8	34.4	27.8	49.8	99	June.	-21	Feb.
1901	24.8	9.4	36	49.2	60 4	72.4	82.3	74 7	63 4	53 4	36.7	20.7	49 4	110	July.	-25	Dec.
1902	22.4	17.2	40.2	49 2	64.2	65.8	73 4	69.8	58.9	44 4	40.3	19 6	47.9	96 1901	Aug.	-31 1892	Jan. Jan.
Average	20.2	20.7	33.5	49.3	59.6	69 7	73.7	70 9	59.1	52 0	34.5	22.5	47 6	110	July	-38	Jan.

ATLANTIC—PRECIPITATION (INCHES).

1891	1.48	1.66	1.61	2.16	6.68	8.78	6.16	1.72	1.94	3.35	.77	1.88	38.19	....	... ..		.....
1892	.45	66	2.01	3.88	8.08	1.07	5 52	2 18	79	1 27	.12	1.70	27.93	...	.. ..	...	.....
1893	.24	1 22	1.58	2.68	3 64	7.54	2 58	2 58		.34	.77	1.95	25.20	....	.....		.....
1894	.95	1.15	1.43	1.54	1.18	3 95	1.23	.55	3.99	3.78	.20	.97	20 91	...	.....	...	...
1895	10	.47	.44	5 16	1.20	5.09	.92	7.09	4 59	.30	2 52	66	28 11	..	.....	....	.....
1896	50	.30	2 05	3.59	6.52	7.89	7.14	3.07	3.23	4.20	1 49	1.25	41 42	....	.....	....	.....
1897	88	.63	3 67	6.80	2.68	3.76	2.39	2 68	2 31	2.11	T	1.50	29.41	....	.....	....	...
1898	1 48	1.10	2 02	2.42	4 61	8 74	2.60	.63	2.72	2.11	1 05	.58	30.06		.....	....	.....
1899	T	65	1 24	1 69	6 08	5 7	4.71	4.06	.59	3 09	.72	1 58	31 25		.....	....	.....
1900	40	1.30	2 04	2 33	2.35	2.04	8.20	4.81	3.68	5.15	.30	1 24	33.89	..	.....	....	.....
1901	78	1.70	3.02	2 85	2 48	6.70	41	1.13	3 74	2.80	72	.61	21 93	...	..		.....
1902	1 70	59	2.08	1.37	4.48	6 89	9 36	4.75	4 44	2.51	2.68	2 66	43.51	...	..		.....
Averages	.76	.96	1.96	3.04	4 17	5.68	4 35	3.06	2 67	2.64	.86	1.38	31.53	....	..	....	....

CASS COUNTY—CONTINUED.

CASS COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay tons.	May.	June.	July.	August.	Total.
1890	37	13	24	23	78	1.5					
1891	32	16	31	23	177	2.0	6.68	8.78	6.16	1.72	23 34
1892	32	14	26	22	74	1.8	8.08	1.07	5.52	2.38	17.05
1893	33	12	19	25	63	1.7	3.64	7.56	2.58	2.58	16.36
1894	9	14	18	11	53	0 3	1.18	3 95	1.23	.55	6.92
1895	32	23	47	27	84	1 4	1.20	5.06	.92	7.09	14.87
1896	37	13	19	24	100	1.6	6 52	7 89	7.14	3 07	24.62
1897	20	12	26	24	65	1 5	2.68	3.76	2 39	2.68	11 51
1898	29	12	26	24	48	1.8	4.61	8 74	2.60	.63	16.58
1899	38	13	28	25	105	1 5	6 68	5.70	4 71	4.06	21.15
1900	41	16	24	25	58	1.6	2.35	2.09	8.20	4.81	17.45
1901	28	14	31	25	20	1.5	2.48	6 70	1.41	1.13	11.72
1902	35	12	30	23	85	1.5	4.48	6.89	9.36	4.75	25.48
Averages	31	14	27	23	78	1 5	...	...	...		17.25

POTTAWATTAMIE COUNTY.

Area, 876 square miles; area in farms, 500,930 acres; number of farms, 4,233; value of farms (census of 1900), $24,223,790; value of farm buildings, $4,440,310; value of live stock, $5,414,155; value of the year's products not fed to stock, $5,330,1 6; acreage in cereal crops, 294,910 acres. Climatic records tabulated below were compiled at Council Bluffs; altitude, 990 feet.

COUNCIL BLUFFS—MEAN TEMPERATURE (DEGREES).

YEAR	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Annl	Highest	Month	Lowest.	Month
1876		25	34	51	62	72	74	72	75	58	41	24	.	103	July.		
1898	27	30	40	52	61	75	76	73	68	50	33	21	50 9	103	Aug.	-9	Dec.
1899	15.4	15	17.6	53.8	62.9	73 4	75 2	76 8	65.8	50 2	40 2	24 9	50 3	101	Sept.	-24	Feb.
1900	28 8	7	35	54	5 65 4	73 1	76 3	74 1	66 4	46	31 4	31.9	101	July.	-18	Feb.
1901	27 6	22 8	37 2	52 6	62.1	74 9	83.8	77.1	65 8	56 5	40 9	23 4	52.2	108	July.	-15	Dec.
1902	25 8	21 2	32.2	51.8	66 2	67.1	75	72 8	60 8	57	40 6	21	50.1	97	July	-19	Jan.
															1901		1899
Averages	26.9	22 4	36	51.9	63 2	72.6	77.9	75 8	63.9	56.8	38.6	23.6	51.1	108	July.	-24	Feb.

COUNCIL BLUFFS—PRECIPITATION.

1871	..	..	.22	2.04	2.18	2.39	6.95	3.55	1.92	1.95	3.47	.83	..	.....	...	.....
1872	.18	.23	.97	4 70	5..1	4.75	7 98	1.56	4 09	3.56	.67	.32	32.62	....	.....	...	.....
1873	.57	.32	.31	2 70	5.37	5.30	3.98	3.03	2 21	1 94	.15	1.29	27 78	....	.....	...	.....
1874	.53	.91	1.10	1 08	1.95	6 40	.55	2.48	0 49	1.56	1.05	.73	25 4	..	.....	...	.....
1875	.42	.72	2.07	2.02	6.58	8.22	7.65	5.06	2 34	1 31	.17	1.00	38.65	...	.....	...	.....
1876	.62	.89	4.31	2 74	1.94	2.94	5.24	7.69	7.11	23	1.30	.94	35 05	....	.....	...	.....
1877	.95	.65	1.05	4 55	7.85	7.61	1.14	4 27	2.10	5 60	1.20	1.75	38.72	...	.....	...	.....
1878	.95	10	2.80	2 94	5.35	8.85	8.33	2.10	2.60	.75	.30	.12	34 69	....	.....	...	.....
1879	.66	70	1.65	1 20	4.61	4.05	2.10	1.50	1.80	4 80	1.10	81	25.16	....	.....	...	.....
1880	.85	27	.70	.35	3 95	..	..	..	..	..	..	..	..	..	.....	...	....
1881	.10	5.00	..	..	7.40	6 07	5.60	1.25	5.50	6.65	1.45	2.40	.....	...	.....	...	.....
1882	1 65	1.30	.50	3 80	3.87	9 75	6 90	.70	0.25	..	2.11	..	..	....	.....	...	.....
1883	2.00	.84	.93	1.95	8.20	14 20	4.30	2.10	4 50	5 10	.60	.75	45 47	..	.....	...	.....
1884	.90	3.35	4.20	3.35	3 00	4 05	11.30	5 75	5 60	6.25	.10	.85	46.60	..	.....	..	.....
1885	.85	.65	.20	4.89	4 55	3.35	7.00	4.80	2 68	3.85	.50	2.05	35.32	...	.....	...	.....
1886	2.35	.60	2 85	2.20	5.60	1.00	.15	3.10	5.60	1.50	1.80	1.10	27.85	...	.....	...	.....
1887	.40	2.15	.60	1.40	2.30	6.30	1.55	3.45	3.08	.55	.10	.75	23.35	....	.....	...	.....
1888	.70	1.30	2.10	2.65	2 00	..	....	....	....	..	.....	....	....	....	.....	...	.....
1896	..	..	..	..	11.15	1.72	5.19	5 80	3 16	4 19	2 46	.44	.	....	.....	...	.....
1897	.54	.28	1.28	5.40	2.02	1.47	1.82	2.28	1.90	2 53	.15	1.23	20.80	....	.....	..	.....
1898	.18	.42	1.17	2.85	2 44	3.14	3 68	1 57	3 8	2 07	.97	.70	23.90	....	.....	...	.....
1899	T	.89	.72	1 27	4 42	..	2.21	6.93	.77	1 87	1.45	1.37	.	....	.....	.	.....
1900	.19	.35	1.12	3.03	2.93	2.32	6.47	5.52	3 57	5.90	.12	.56	31.87	....	.....	...	.....
1901	.27	1.06	3.74	.82	2 51	4 75	2.11	.88	5.35	1 88	.88	.68	24.93	....	.....	...	.....
1902	1.05	.06	.56	1.29	3.33	9 84	10 23	3 30	2 21	2.24	1.67	1.94	37.69	....	.....	...	.....
Averages	.69	1.00	1.53	2 51	4 45	5.38	4.81	3.45	3.30	3 04	1.10	.99	32.25		...		.....

POTTAWATTAMIE COUNTY—CONTINUED.

POTTAWATTAMIE COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL, MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	20	1	24	19	40	1 0					
1891	35	14	21	125	2.0						
1892	30	14	24	50	2.0						
1893	15	12	17	19	11	1.8					
1894	10	13	21	12	42	0.6					
1895	37	22	30	27	120	1.3					
1896	30	15	32	26	71	2.0	11.15	1.72	5.19	5.80	23.94
1897	20	15	25	21	40	1.8	2.02	1.47	1.82	2.28	7.59
1898	33	15	32	24	68	2.0	2.24	3.14	3.68	1.57	10.63
1899	30	5	25	25	105	1.8	4.42	3.70	2.21	6.93	17.32
1900	39	13	25	31	61	1.7	2.93	2.32	6.47	5.52	17.64
1901	28	15	27	20	70	1.8	2.51	4.75	2 11	.88	10 25
1902	40	12	35	26	120	2.0	3.33	9.84	10.23	3.30	26 70
Averages	33	14	24	22	73	1.6	.....	....		...	16.21

MILLS COUNTY.

Area, 445 square miles; area in farms, 272,815 acres; number of farms, 2,016; value of farms (census of 1900), $11,492,560; value of farm buildings; $2,033,310; value of live stock, $2,683,799; value of farm products not fed to stock, $2,450,667; acreage in cereal crops, 129,967 acres. Climatic data compiled at Glenwood are included in the following tables. Elevation of the station, 891 feet.

GLENWOOD—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April	May	June	July.	Aug.	Sept.	Oct	Nov.	Dec.	Annl.	Highest.	Month	Lowest.	Month
1888	6.7	25.8	29.9	50.3	60.1	78.2	81.1	74.5	65.6	52.5	30.2	22.2	49.7	....	.....	.....	.....
1889	25.1	21.1	43.4	55.9	57.1	72.0	76.3	74.7	65.2	55.3	35.5	31.7	51.0	....	.....	.....	.....
1890	16.0	25.9	32.8	50.8	61.9	77.2	81.9	73.6	64.7	53.0	42.9	34.3	51.8	....	.....	.....	.....
1891	26.2	21.2	29.8	55.4	62.7	72.5	72.8	75.4	72.8	56.4	36.8	38.0	51.7	....	.....	.....	.....
1892	31.0	32.5	36.4	49.6	57.1	73.8	79.0	74.8	70.3	58.4	40.7	24.8	51.6	....	.....	.....	.....
1893	18.2	22.1	37.9	55.0	61.3	....	....	73.7	71.4	58.4	40.0	28.5	....	....	.....	.....	.....
1894	24.2	23.4	46.3	56.2	66.4	76.8	80.0	80.8	68.6	55.8	35.0	31.1	53.6	....	.....	.....	.....
1895	18.0	20.0	39.0	50.0	66.0	72.0	74.0	75.0	74.0	59.0	38.0	31.0	51.3	....	.....	.....	.....
1896	20.	33.0	35.8	50.0	68.0	75.6	74.3	72.0	53.6	49.0	29.2	14.0	51.1	....	.....	.....	.....
1897	19.0	26.0	43.0	46.0	58.0	70.0	78.0	71.0	75.0	59.0	38.0	23.0	49.8	....	.....	.....	.....
1898	26.0	30.0	41.0	51.0	60.0	72.0	74.0	75.0	68.0	50.0	35.0	22.0	50.5	....	.....	.....	.....
1899	24.0	15.4	27.7	55.9	62.0	72.0	73.6	77.2	66.6	60.5	46.4	26.6	50.2	....	.....	.....	.....
1900	30.6	18.3	36.7	54.8	64.7	70.6	75.1	79.6	66.6	61.5	37.4	31.4	....	....	.....	.....	.....
1901	28.8	22.0	37.4	52.2	62.2	74.6	84.8	76.5	65.0	60.6	40.5	23.2	....	....	.....	.....	.....
1902	25.2	19.9	42.4	51.6	....	....	....	....	....	....	....	....	....	....	.....	.....	.....
Averages.	22.7	23.2	36.6	53.5	61.9	73.0	77.0	74.1	67.9	55.6	38.6	29.1	51.2	....	.....	.....	.....

GLENWOOD—PRECIPITATION.

1880	.90	.18	.43	.66	5.89	1.45	4.06	7.61	2.68	3.05	1.38	.08	28.41	....	.....	.....	.....
1881	.92	3.18	.91	3.40	3.73	5.38	3.82	.85	4.97	6.85	.60	2.45	37.13	....	.....	.....	.....
1888	.60	.91	2.76	.41	6.11	3.81	2.52	7.56	.43	1.35	.37	.5	27.42	....	.....	.....	.....
1889	1.33	.01	.72	1.31	3.10	3.39	7.15	2.77	2.07	.55	.05	.20	23.71	....	.....	.....	.....
1890	.0	.25	.32	.38	3.48	3.79	3.13	4.08	2.64	3.2	1.30	.00	22.59	....	.....	.....	.....
1891	2.35	.57	1.44	3.21	4.84	6.07	5.26	2.58	1.65	4.81	.00	1.21	4.05	....	.....	.....	.....
1892	.54	.53	2.58	4.26	8.89	.67	3.92	2.90	.79	.40	.54	1.87	28.01	....	.....	.....	.....
1893	.53	.06	.97	2.04	4.9	2.9	3.0	3.85	1.35	.22	.23	.47	2.58	....	.....	.....	.....
1894	.49	1.03	1.12	3.05	1.00	5.24	.37	.62	2.79	3.5	.01	.80	19.63	....	.....	.....	.....
1895	.61	.70	.77	2.03	1.40	6.27	2.26	6.12	1.33	.12	1.27	.22	23.30	....	.....	.....	.....
1896	.55	.40	1.76	3.20	10.03	2.21	6.87	2.07	3.15	4.85	1.50	.42	35.08	....	.....	.....	.....
1897	.77	.30	1.37	5.62	3.26	.71	1.31	2.20	2.63	2.58	T	1.70	22.88	....	.....	.....	.....
1898	1.40	1.35	1.18	2.07	4.87	4.66	5.85	1.45	2.80	1.65	.78	.39	29.24	....	.....	.....	.....
1899	T	.50	.66	3.51	5.76	5.97	2.95	1.19	.62	3.57	.94	.92	32.59	....	.....	.....	.....
1900	.27	.50	.90	2.87	2.40	4.48	3.79	3.95	2.33	5.85	T	.29	27.57	....	.....	.....	.....
1901	.32	.79	1.7	1.83	2.31	4.66	2.31	.98	3.43	2.64	.60	.90	22.43	....	.....	.....	.....
1902	.73	.29	1.02	.40	....	....	....	....	....	....	....	....	....	....	.....	.....	.....
Averages	.85	.68	1.29	2.55	4.49	3.91	3.66	4.51	2.18	2.58	.60	.78	28.69	....	.....	.....	.....

MILLS COUNTY—CONTINUED.

MILLS COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Rye, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	26	13	24	6	78	1.0	3.48	3.79	3.13	4.08	14.48
1891	34	15	33	14	124	2.0	4.84	6.07	5.26	2.58	18.75
1892	38	13	38	17	95	2.0	8.89	.67	3.92	2.9	16.44
1893	37	12	21	17	53	1.7	4.93	3.90	3.03	3.85	14.71
1894	10	11	24	18	26	0.5	1.00	5.24	.37	.62	6.03
1895	43	19	48	20	100	1.7	1.40	6.27	2.26	6.12	16.05
1896	40	20	40	14	100	2.0	10.03	2.21	6.87	2.01	21.12
1897	30	13	34	20	55	1.5	3.26	1.71	1.31	2.20	8.48
1898	27	14	35	20	75	1.5	4.87	4.66	5.85	1.45	16.83
1899	38	12	32	16	130	1.8	5.76	5.97	2.95	7.19	21.87
1900	36	12	28	18	45	1.6	2.40	4.48	3.79	3.95	14.62
1901	25	15	30	16	50	1.0	2.31	4.66	2.31	.18	10.26
1902	40	12	30	19	110	2.0	....	....	....	....	....
Averages.	32	14	31	17	70	1.6	....	....	....	....	14.85

MONTGOMERY COUNTY.

Area, 432 square miles; area in farms, 276,100; number of farms, 1,904; value of farms (census of 1900), $12,045,480; value of farm buildings, $1,976,010; value of live stock, $2,799,733; value of farm products of the year not fed to stock, $2,321,883; acreage in cereal crops, 125,030 acres. Climatic records compiled at Red Oak and Villisca are tabulated below. Altitude of Red Oak, 1,032 feet; Villisca, 1,050 feet:

RED OAK—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mch.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month.	Lowest.	Month.
1897		30.0	36.0	51 0	62.0	74 0	76.0	71.0	72 0	59.0	37.0	20.0	.....	100	July ..	...	.....
1898	26.0	28.0	40.0	50.0	61.0	74.0	75 0	74.0	67 0	50.0				99	Aug ..	...	.....
1899	24.8	16.1	29.5	51.6	63.2	74.0	75.4	77 0	67.0	60 9	48.8	27.8	51.5	100	Sept..	-25	Feb.
1900	31.6	21.6	37.8	56.6	65.4	72.9	75.6	78.4	67 8	61.7	38.0	29.4	53.1	98	July..	- 9	Feb.
1901	20.8	19.9	36.1	51.0	61.4	73 9	83.0	76.2	65.6	56.4	40.0	22 0	51 4	101	July..	-13	Feb.
1002	27.4	21.4	41 8	50.6	65.6	67.0	74 1	71.1	60.9	56.0	44.2	25.2	50.5			....	
Average	26.1	22.8	36.8	51.8	63.1	72.6	76.5	74.7	66 7	57.3	41.6	24.8	...	....	.....		

RED OAK—PRECIPITATION.

YEAR.	Jan.	Feb.	Mch.	April.	May	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l				
1897	....	.56	2.44	5.62	1.99	3.9.	2 81	2.84	.92	3.09	.18	1.53	.....	....	.....	....	.....
1898	1.49	1.49	1 71	2.69	3 79	4 66	3 37	.97	3.83	2.20				....	.....	....	.....
1899	.15	.72	1.23	2.39	6.18	5 38	4.01	5.08	.80	4.09	.83	2.15	32.91	....	.....	....	.....
1900	.34	.84	1 31	2.46	2.56	3 82	4.57	3.39	4 19	4.95	.16	.48	29.02	....	.....	....	.....
1901	.40	.80	5.25	2.88	3.29	4.33	2.80	1 07	3 79	2.80	.74	.71	28.34	....	.....	....	.....
1902	1.22	.29	1.76	1.01	4.66	8.90	11.19	5.71	4.28	2.71	3.31	2.32	47.86	....	.....	....	.....
Averages	.72	.78	2.26	2.84	3 74	5 16	4.80	3.09	2.96	3.20	1.04	1.22	31.91	....	.....	....	.....

VILLISCA—TEMPERATURE.

1893	18.0	22.0	34 0	50.0	60.0	73.0	78.0	70.0	63.0	53.0	38.0	24 0	48.5	....	.....	....	.....
1894	19 0	21.0	41.0	....	....	....	....	....	66.0	2.0	....	....	.....	....	.....	....	.....
1895	17.0	20.0	36.0	55.0	62.0	69.0	71.0	71.0	68.0	46.0	35.0	26.0	48.0	....	.....	....	.....
1896	24.0	30.0	31.0	56.0	65.0	70.0	72.0	71.0	59.0	48 0	31.0	33.0	49.2	....	.....	....	.....
1897	21.0	27.0	37.0	50.0	60.0	71.0	76.0	69 0	70.0	57.6	36.0	19.0	49.4	....	.....	....	.....
1898	26 0	27.0	38.0	49.0	60.0	72.0	73.0	74.0	65.0	48 0	31.0	18.0	48.4	....	.....	....	.....
1899	21.6	15.2	29.6	49.6	61.8	72 6	74.1	75.8	63.2	58.8	43.8	23.2	49.1	100	Sept..	-27	Feb.
1900	26.8	20.1	35 0	54.9	66.8	72.4	75.6	77 7	67.5	59.8	37.2	31.6	52.4	101	July..	-12	Feb.
1901	25 7	20 6	37.2	50 9	61 0	74.0	80.6	79.2	65.2	....	37.7	24.0	.....	104	July..	-20	Dec.
1902	24.8	18.5	41.8	49.8	65.3	65.9	74.1	....	59.9	56 4	42.8	21.8	.....	....	.....	-25	Jan.
															1901		1899
Averages	22.1	22 5	36.1	51.6	62.4	71.1	74.9	72.7	61.7	53.2	36.7	22.3	49 3	104	July..	-27	Feb.

VILLISCA—PRECIPITATION.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.				
1893	.22	.21	3 09	1.24	2 96	3.80	5.75	6.82	1.99	.24	....	.46	.....	....	.....	....	.....
1894	.93	1.42	2.53	....	....	....	....	....	2.64	2.35	....	....	.....	....	.....	....	.....
1895	.57	.91	74	3.74	3.44	7.24	5.68	6 88	1.15	.15	1.55	.90	32.25	....	.....	....	.....
1896	.49	.28	2.21	3.88	6.73	3.01	7.30	5.71	2.89	4.16	.90	1.24	38.86	....	.....	....	.....
1897	1.09	38	2.50	7.79	1.83	6.50	1.79	2.24	1.53	1.64	.34	1.32	28 95	....	.....	....	.....
1898	1.21	1.92	1.80	3 05	4.52	3.92	2.25	1.44	4.15	2.90	1.65	.70	29.51	....	.....	....	.....
1899	.10	.76	2 10	3.58	6.45	4.13	3.18	3.81	.57	2.82	.75	2.44	29.99	....	.....	....	.....
1900	.82	2.48	1.71	2.72	4.22	8.32	5.45	4.45	4.03	7 40	.74	1 33	38.12	....	.....	....	.....
1901	.82	1.15	4.35	2.91	2.10	5.70	4.04	.69	5.19	1.03	.50	1.15	29.69	....	.....	....	.....
1902	1.55	.60	.92	1.98	5.11	7 37	10.52	5.71	4.78	3.08	2 20	2.80	.....	....	.....	....	.....
Average	.62	1.05	2.48	3.41	4.15	4.99	5.11	3.82	2.89	2.77	1.08	1.37	32.09	....	.....	....	.....

MONTGOMERY COUNTY—CONTINUED.

MONTGOMERY COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons	RAINFALL MAY 1ST TO SEPT. 1ST. May.	June.	July.	August.	Total.
1890	17	14	25	17	40	1.0					
1891	33	17	34	16	160	1.8					
1892	33	11	25	23	54	1.8					
1893	39	13	25	17	76	1.7	2.96	3.80	5.75	6.32	18.13
1894	7	9	19	18	32	0.8					
1895	48	21	61	14	69	1.4	3.44	7.24	5.68	6.38	22.74
1896	43	13	27	17	150	1.5	6.73	3.01	7.30	5.71	22.75
1897	26	15	31	16	35	1.5	1.83	6.50	1.79	2.24	12.36
1898	33	14	34	15	78	2.0	4.52	3.92	2.25	1.44	12 13
1899	42	13	32	16	120	1 5	6.45	4 13	3.18	3.31	17.07
1900	38	13	25	15	55	1 4	4.22	3.32	5.45	4.45	17.44
1901	26	12	25	15	15	1.0	2.10	5.70	4.04	.69	12.53
1902	38	10	30	15	100	1 8	5.11	7.37	10.52	5.71	28.71
Averages	32	14	34	16	74	1 4	.....	.....	.....	.....	16.20

ADAMS COUNTY.

Area, 432 square miles; area in farms, 272,042 acres; number of farms, 1,049; value of farms $9,662,040; value of farm buildings, $1,286,760; value of live stock, $2,903,761; value of products of the year not fed to stock, $2,313,077; acreage in cereal crops, 96,640 acres. Climatic records of a station at Corning are tabulated below; altitude of the station, 1,127 feet.

CORNING—TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1892	18.0	20.0	34.1	48.0	55.6	70.0	75.0	72.3	66.4	55.1	36.0	19.0	47.9				
1893	13.0	18.0	33.4	47.0	57.0	69.0	73.0	68.8	65.0	54.4	37.0	26.0	46.8				
1894	22.0	22.0	43.0	55.0	64.0	72.0	75.0	75.0	66.0	53.4	6.0	33.0	50.8				
1895	18.0	20.0	38.0	55.0	63.0	68.0	70.0	73.0	69.0	50.4	37.0	28.0	49.1				
1896	26.0	31.0	34.0	53.0	66.0	70.0	73.0	71.4	70.0	49.4	31.0	35.0	50.2				
1897	30.0	37.0	35.0	49.0	59.0	71.0	77.0	70.6	73.4	50.4	18.0	21.0	50.0				
1898	7.0	28.0	40.0	56.0	61.0	78.0	74.0	75.0	67.0	48.4	36.0	24.0	50.2				
1899	24.3	15.5	28.6	49.7	60.9	71.2		75.2	3.4	58.5	4.6	42.6				3	Feb.
1900	28.0	17.0	34.0	53.1	62.8	70.0	75.8	77.0		50.5	35.6	29.0				-11	Feb.
1901	26.4	19.7	35.2	48.8	60.8	72.6	80.7	74.0	63.9	54.5	37.0	21.4	49.6	100	July ..	-19	Dec.
															June		
1902	23.0	16.4	38.0	48.2	64.6	65.4	73.2	70.3	58.5	53.8	41.5	20.6	47.8	92	July.	-25	Jan.
															Aug.		
															1901		Jan. '02
Average	22.3	22.2	35.7	50.7	61.0	70.4	74.5	72.9	65.1	54.1	35.2	27.2	49.4	100	July	-25	Feb. '99

CORNING—PRECIPITATION (INCHES).

YEAR.	Jan.	Feb.	Mar.	April.	May	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1892	1.35	.08	2.11	3.85	11.02	1.10	5.47	1.95	2.86	1.74	.33	1.78	35.68
1893	.25	.45	2.01	3.76	3.37	5.85	4.18	6.16	1.70	.22	1.10	.82	28.04
1894	.86	1.72	.84	1.29	1.29	3.59	3.30	.37	3.13	2.31	.85	.84	30.42
1895	.30	.78	.48	3.56	3.78	5.22	2.71	4.00	1.00	T	1.78	.96	27.54
1896	.87	.30	1.90	2.84	6.27	3.07	8.34	5.33	3.06	3.44	.80	.91	36.95
1897	.85	.60	3.48	7.88	2.18	4.53	1.98	2.15	.79	1.29	1.15	26.98	
1898	1.5	1.25	.8	1.68	4	1.15	3.25	2.31	1.75	3.34	3.06	1.15	.6	26.90
1899	.33	.40	1.77	2.93	5.56	3.29		3.99	.59	2.35	.68	2.39	
1900	.25	.75	1.55	1.79	3.97	1.23	5.85	3.14		6.66	.18	.12	
1901	.50	1.40	2.80	2.87	4.15	5.34	1.91	.90	3.34	3.57	1.50	1.18	28.36
1902	1.50	.5	1.08	1.56	5.87	5.70	8.72	7.83	5.01	3.4	2.04	3.10	46.34
Av'ges	.75	.80	1.75	3.06	4.78	4.19	4.47	3.40	2.48	2.56	.96	1.24	30.42

ADAMS COUNTY CROPS.

YEAR.	AVERAGE PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons	RAINFALL MAY 1ST TO SEPT. 1ST. May.	June.	July.	August.	Total.
1890	28	12	26	30	71	1.5					
1891	29	14	33	28	158	2.0					
1892	32	11	23	20	26	2.2	11.62	1.99	5.47	1.95	21.03
1893	36	12	22	15	110	1.8	3.27	3.82	4.18	6.16	17.43
1894	14	15	27	15	16	6	1.29	3.59	3.30	.37	8 55
1895	47	14	52	28	112	1.4	3 78	8.22	2.71	4.00	18.71
1896	45	12	20	18	100	2 0	6.27	3.07	8.34	5 36	23.04
1897	24	10	28	20	53	1.7	2.18	4.53	1.90	2.15	10.76
1898	25	14	37	21	40	1.6	4.11	5.35	2 31	1.75	13.52
1899	41	12	25	28	90	1 3	5 56	3.29	2.30	3.99	15.14
1900	41	14	28	25	43	1.5	3.97	1.23	5.75	3.14	14.19
1901	26	16	36	22	20	1.5	4 15	5.34	1.91	.70	12.10
1902	38	11	35	25	150	1.5	5.87	5.70	8.72	7.83	28.12
Averages	33	13	29	22	75	1 6					16.59

TAYLOR COUNTY.

Area, 540 square miles; area in farms, 337,002 acres; number of farms, 2,581; value of farms (census of 1900), $11,581,040; value of farm buildings, $2,070,700; value of live stock, $3,244,361; value of yearly farm products not fed to stock, $2,5 8,801; acreage in cereal crops, 107,450 acres. Meteorological records compiled at Lenox (altitude, 1,250 feet) are tabulated below:

LENOX—TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	Aprfl.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1895					69.8	70.2	72.2	73.4	69.4	48.6	30.6	27.4					
1896	20.1	20.8	34	57	66.2	70.3	73.4	72	63.9	50	32.4	34.4	50.5	95	July ..	- 7	Jan
1897	21.2	21.5	35.6	49.6	60.4	70.7	76.2	70.2	72.6	50.5	36.1	20.5	50	98	Aug..	-12	Jan
1898	20.8	27.5	40	49.6	60.2	71.4	73.7	74.2	66.6	48.3	35.4	19.3	49.3	96	July	-15	Dec.
1899	22.7	15.6	27.4	49	61.3	71.4	72.6	74	63.6	50	45.6	28	48.6	95	Sept.	-29	Feb
1900	27.8	16.8	34.4	53.8	63	69.9	75	76.5	69.3	53.8	5.7	37.4	50.4	94	July	-12	Feb.
1901	25.8	19.1	35.8	49.3	59	71.5	82	75.1	64.5	55.5	36.7	21.2	49.9	104	July.	-29	Dec
1902	23.8	17.2	39.8	49.4	64.4	65.3	72	70.2	59.4	54.6	42	20.4	48.3	91	July..	-24	Jan
Averages	24.9	22	34.9	51.2	62.1	70.3	74.7	73.2	65.3	51.2	37.4	24.2	49.6	104	1901 July	-29	1899 Feb.

LENOX—PRECIPITATION.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.
1895					3.80	7.79	3.87	4.16	4.50	.87	.57	1.57	2.50
1896	.75	.5	2.37	3.32	8.45	2.59	6.05	5.41	2.91	5.89	1.01	.61	37.94
1897	1.00	.70	3.25	7.23	1.69	4.53	4.06	2.26	1.32	1.17	.39	2.00	29.58
1898	1.07	1.54	1.21	2.80	4.97	3.01	3.11	1.86	4.87	3.00	1.30	.84	30.23
1899	.24	1.38	1.28	2.32	5.89	.77	5.06	3.58	.94	2.01	.47	1.83	29 18
1900	.39	.56	1.49	2.14	5.71	2.42	6.34	3.78	4.14	7.27	.45	.24	34.93
1901	.23	.47	2.50	2.35	2.30	4.99	1.81	.90	4.46	2.77	2.30	.74	25.99
1902	.70	.20	.83	1.62	4.71	5.99	7.86	6.86	4.26	3.11	1.58	1.69	38.81
Averages	.63	.65	1.85	3.02	4.71	4.13	5.22	3.69	2.95	2.99	1.13	1.28	32.62

TAYLOR COUNTY CROPS.

YEAR.	AVERAGE YIELD PER ACRE. Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	RAINFALL MAY 1ST TO SEPT. 1ST. May.	June.	July.	August.	Total.
1890	29	14	33	21	43	1.0					
1891	30	13	36	20	122	2.0					
1892	27	12	20	18	36	1.7					
1893	38	16	20	30	95	1.7					
1894	17	15	20	21	57	0.6					
1895	44	14	46	28	94	1.6	3.80	7.79	3.87	4.16	19.62
1896	35	10	24	20	68	1.7	8.45	2.59	6 05	5.41	22.50
1897	32	14	31	27	46	1.7	1.69	4.53	4.06	2.26	12 54
1898	30	15	27	40	20	2.0	4.97	3.01	3.11	1.89	12 98
1899	38	15	30	22	65	1.8	5.89	1 77	8.66	3.58	19.87
1900	38	12	30	22	40	1.5	5.71	2.42	6 34	3.78	18.25
1901	30	16	28	20	25	1.8	2.50	4.96	1.81	.90	10.17
1902	33	13	25	24	120	2.0	4.71	5.99	7.86	6.86	25.42
Averages	32	14	28	23	65	1.6					17.66

PAGE COUNTY.

Area, 528 square miles; area in farms, 330,132 acres; number of farms, 2,643; value of farms (census of 1900), $14,962,640; value of farm buildings, $2,660,300; value of live stock, $3,446,301; value of year's products not fed to stock, $3,184,944; acreage in cereal crops, 169,850 acres. The following tables contain climatic data compiled at Clarinda and College Springs. Elevation of Clarinda, 1,069 feet.

COLLEGE SPRINGS—TEMPRATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1891						68.0	72.4	71.0	68.0	55.0		38.0					
1892		31.0	35.0	44.0	48.0	70.0	74.0	75.0	69.0	50.0	39.0	22.0					
1893	13.0	19.0	34.0	49.0	58.0	70.0	74.0	68.0			37.0	26.0					
1894	12.0	22.0	40.0	54.0	62.0	71.0	77.0	78.0	68.0	55.0	37.0	31.0	51.8				
1895	22.0	21.0	38.0	55.0	64.0	69.0	71.0				38.0	29.0					
1896	27.0	33.0	39.0		67.0	70.0	74.0		62.0	50.0	35.0	26.0					
1897	24.0	29.0	38.0	51.0	62.0	72.0	76.0	73.0	64.0	50.0	38.0	21.0	51.8				
1898	27.0	28.0	40.0	51.0	62.0	74.0	74.0	76.0	71.0	50.0	36.0	21.0	50.8				
1899	25.0	33.4	28.3	49.2	63.4	73.4	75.3	76.1	66.1	50.0	44.2	25.2	50.0	99	Aug.	-27	Feb.
1900	30.0	18.3	34.8	54.4	65.1	71.9	76.4	77.0	68.1	59.3	36.0	30.0	51.8	98	June. July.	-13	Feb.
1901	27.1	21.3	36.5	50.4	61.6	74.8	81.2	75.0	65.4	50.5	39.2	22.7	51.1	105	July ..	-19	Dec.
1902	25.4			49.4			74.3	71.8	58.8	56.6	43.1	22.6		96	Aug ..	-17	Jan.
														1901			1899
Averages	24.2	23.8	36.1	50.7	61.4	71.5	75.4	74.2	67.1	52.7	38.4	27.0	51.2	107	July	-27	Feb.

COLLEGE SPRINGS —PRECIPITATION (INCHES).

1891					3.30	8.72	5.18	5.74	.41	2.76	1.63	2.78					
1892		.66	3.09	8.58	8.64	2.16	3.57	2.95	1.24	2.43	.44	3.04					
1893	.20	1.89	1.80	3.80	3.61	4.37	6.13	3.54	3.26		1.45	.99					
1894	.96	1.17	1.36	1.56	1.56	3.25	.44	T	2.00	1.11	.45	.96	16.92				
1895	.40	1.09	1.10	2.74	3.49	7.94	8.64				1.39	.94					
1896	.42	.07	1.92	4.13	7.87	2.00	7.10	9.28	2.78	3.11	.84	1.15	33.79				
1897	.62	.44	1.91	5.26	3.07	2.69	2.82	2.41	1.16	1.63	.44	1.20	24.43				
1898	1.01	1.11	1.35	2.56	4.87	3.94	8.28	1.91	4.82	2.08	.66	.86	34.05				
1899	.12	.44	2.44	3.12	8.13	1.31	5.93	4.19	.78	2.42	1.13	1.38	31.89				
1900	.22	1.10	.94	3.75	3.85	2.34	4.62	8.07	2.98	8.00	.47	.42	36.76				
1901	.69	.98	2.42	3.47	3.00	4.88	5.57	7.43	1.81	1.35	1.01	.85	28.13				
1902	1.05		1.95	1.11	7.86	9.61	9.91	6.00	3.56	3.63	3.66	2.44					
Averages	.56	.90	1.85	3.67	4.94	4.43	5.73	3.44	2.46	3.11	1.04	1.59	33.72				

PAGE COUNTY—CONTINUED.

CLARINDA—MEAN TEMPERATURE.

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1890	10.0	26.0	31.0	54.0	62.0	76.0	80.0	71.0	62.0	52.0	40.0	32.0	50.6				
1891	27.0	22.0	29.0	54.0	59.0	70.0	71.0	71.0	69.0	52.0	34.0	35.0	49.6				
1892	19.0	30.0	35.0	49.0	56.0	72.0	77.0	74.0	69.0	57.0	37.0	21.0	49 7				
1893	13.0	18.0	33.0	47.0	58.0	70.0	75.0	70.0	66.0	54.0	35.0	25.0	47.1				
1894	20.0	21.0	42.0	53.0	62.0	74.0	76.0	78.0	66.0	54.0	35.0	31.0	51.0				
1895	18.0	20.0	36.0	54.0	62.0	69.0	70.0	73.0	68.0	45.0	34.0	25.0	47.8				
1896	24.0	29.0	40.0	54.0	64.0	68.0	74.0	74.0	62.0	51.0	33.0	26.0	49.8				
1897	22.0	28.0	37.0	51.0	62.0	73.0	79.0	72.0	73.0	50.0	38.0	22.0	51 3				
1898	28.2	30.0	41.0	52.0	62.0	75.0	80.0	81.0	73.0	53.0	36.0	18.0	52.4				
1899	23.6	14.4	38.0	49.8	62.2	73.4	74.9	77.0	65.4	50.2	45.8	24.3	50.0	101	Sept.	-24	Feb.
1900	28.4	18.7	35.6	55.2	65.0	71.8	76.4	78.2	66.8	58.6	37.0	29.7	51.9	98	June. July. Aug	-10	Feb.
1901	27.0	22.0	37.4	51.4	61.5	74.0	83.6	76.1	66.1	57.1	39.2	23.4	51.6	110	July.	-19	Dec.
1902	25.7	20.0	41.8	51 8	65.4	66.9	75.0	72.5	59.9	56.4	42.5	22.0	50.0	96	June. July. Aug.	-21	Jan.
Averages	22.7	23.0	35 2	52 0	61.7	71.8	76.3	74.4	66.0	54.6	37.4	26.5	50.2	110	1901 July.	-24	1899 Feb.

CLARINDA—PRECIPITATION.

1890	2.15	.40	1.95	.65	4.42	6.40	1.15	4.95	2.62	1.65	1.39		27.73				
1891	2.20	1.10	1 89	4 17	3.19	6.18	3.50	4 67	.20	2.78	1.20	2.27	33 41				
1892	.44	1.19	2.54	5.14	11.55	7.25	4.87	2.85	.63	1.98	.29	2.16	40.86				
1893	.68	1.12	1.73	3.11	3.17	4.12	8.84	6.22	2.38	.09	1.05	.76	33 25				
1894	.68	1.40	1.17	2.06	1.37	4.02	.41	.23	2.58	2.77	.55	.99	18.18				
1895	.30	1.34	.96	2.54	2.99	8.33	6 44	1.64	.95	.09	1.28	.89	30.79				
1896	.55	.94	2.27	3 72	7.48	2.12	6.63	2.86	2 56	3.30	.94	.96	33.73				
1897	1.31	.56	2.14	6.00	2.01	4.04	2.63	2.53	1 55	1.62	.37	1.56	26.32				
1898	1.42	2.13	1.73	4.70	5.15	2.99	4 49	1.16	5 74	2 61	1 47	.90	33.49				
1899	.24	.77	2.98	4.30	7.09	1 54	5.36	5 03	.87	3 21	1.10	1 87	34 07				
1900	.49	1 25	1.07	2.48	4.46	3.15	3.46	5 07	3.64	7.85	.48	.50	34.50				
1901	.82	1.42	3.64	3 33	2.10	5 94	5.18	.65	4 89	4.03	1.30	.75	34.05				
1902	1 23	.30	.92	1.79	7.18	11.64	8.02	6.76	4.72	4.23	2.05	2 53	51.37				
Averages.	.97	1.02	1.90	4 31	4.79	5.11	4.68	3.71	2.56	2.79	1.03	1.24	32 22				

PAGE COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL, MAY 1ST TO SEPT. 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	August.	Total.
1890	26	16	29	15	90	1.0	4.42	6.40	1.15	4.95	16.92
1891	35	17	33	20	166	1.8	3.19	6.18	3.50	4.67	17.54
1892	34	20	25	25	28	2.4	11.55	7.25	4.87	2.85	26.52
1893	38	16	19	18	30	1.8	3.17	4.12	8.84	6.22	22.35
1894	5	13	25	26	22	.6	1.37	4.02	.41	.23	6.43
1895	47	15	49	46	104	1.9	2.99	8.33	6.44	4 64	22.40
1896	45	15	20	40	48	1.9	7.48	2.12	6.63	2.86	19 09
1897	28	15	30	40	47	1.6	2.01	4.04	2 63	2.53	11.21
1898	36	16	32	31	58	1.8	5 15	2.99	4.49	1.16	13.79
1899	33	12	35	28	102	1.6	7.09	1.54	5.39	5.03	19.05
1900	40	17	33	20	85	1.5	4.46	3.15	3.46	5.07	17.74
1901	24	14	28	20	40	2.0	2.10	5.94	5.18	.65	12.87
1902	32	13	25	23	120	1.8	7.18	11.64	8.02	6.76	33.60
Averages.	32	15	29	27	76	1.6					18.50

FREMONT COUNTY.

Area, 514 square miles; area in farms, 320,100 acres; number of farms, 2,394; value of farms (census of 1900), $12,791,750; value of farm buildings, $1,996,860; value of live stock, $2,646,021; value of the yearly products not fed to stock, $2,457,785; acreage in cereal crops, 145,460 acres. The following tables contain climatic data compiled at Thurman and Sidney.

THURMAN—MEAN TEMPERATURE (DEGREES).

YEAR.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Ann'l.	Highest.	Month	Lowest.	Month
1897	.....	.....	40	50	61	74	78	71	73	59	36	20	....	100	July	..	.....
1898	25	28	38.6	51.5	62.8	73	73.7	70.1	64.6	50	34	21	49.9	99	Aug..	-11	Dec.
1899	24.0	15.8	35.2	53.6	65.6	72.2	75.7	77.2	66.2	59.8	36.1	30.4	51.6	96	June.	-14	Feb.
1900	28.0	18.3	38.2	50.8	61	74	82.7	74.2	64	55	37.4	22.2	50.6	102	July..	-32	Dec.
1901	28	22	36.2	53.1	66.5	67.8	75.1	72	60.2	55.5	41	21	50.3	96	June.	-27	Jan.
1902	25.2	22.2	44.5														
Averages	26.2	20.2	38.9	51.8	63.3	72.2	76.5	74.2	65.8	56.9	38.2	23.2	50.4	..	.....	..	..

SIDNEY—PRECIPITATION (INCHES).

1895	.....	.....	.67	3.45	3.08	8.38	5.22	5.61	1.29	.43	.80	.15	.	....	.....		.....
1896	.78	.78	3.99	2.81	7.68	5.53	9.49	4.03	3.16	4.38	1.17	.64	42.44	....	.....		.....
1897	.85	.85	2.35	5.82	2.63	3.55	2.25	2.80	.85	3.15	.26	1.94	27.25	....	.....		.....
1898	1.92	2.85	2.65	4.49	3.94	6.40	9.90	1.45	5.40	1.95	1.50	1.35	43.42	..	...	.....	

THURMAN—PRECIPITATION (INCHES).

1897	.....	....	....	....	....	....	1.50	2.42	1.59	4.30	.07	1.61	....	....	.....	...	.....
1898	1.36	1.72	1.74	3.79	5.01	7.62	12.88	1.17	3.05	2.60	.14	1.07	44.11	....	.....	..	.....
1899	.12	1.02	2.38	3.37	7.05	5.08	2.72	10.45	.78	4.64	.95	2.59	41.16	.	.....	....	...
1900	.80	2.53	.84	6.62	2.81	10.55	4.96	7.32	2.94	4.98	.10	.22	44.07	....	.....		.....
1901	.54	1.35	2.87	2.62	4.06	4.81	2.11	1.50	5.25	4.23	1.66	.88	31.76	....	.....		.....
1902	.75	.02	1.15	.83	4.61	9.66	8.80	8.72	4.46	4.47	2.71	4.31	50.49	....	.....	...	.....
Averages	.71	1.32	1.78	3.44	4.71	7.54	5.48	5.43	3.21	4.04	1.09	1.78	40.53	...	.....		.....

FREMONT COUNTY CROPS.

YEAR.	AVERAGE PER ACRE.						RAINFALL MAY 1ST TO SEPT 1ST.				
	Corn, bushels.	Wheat, bushels.	Oats, bushels.	Barley, bushels.	Potatoes, bushels.	Hay, tons.	May.	June.	July.	Aug.	Total.
1890	23	15	34	20	38	2.0					
1891	34	18	32	26	176	2.0					
1892	31	17	26	20	28	1.8					
1893	34	15	30	22	55	1.8					
1894	8	14	23	18	29	1.5					
1895	50	19	46	25	142	1.8	3.08	8.38	5.22	5.61	22.29
1896	48	16	32	28	42	1.9	7.08	5.53	9.49	4.03	24.73
1897	25	17	38	25	30	1.8	2.63	3.55	2.25	2.80	11.23
1898	28	16	33	25	67	1.8	5.01	7.62	12.88	1.17	26.68
1899	28	12	28	22	120	1.5	7.05	5.08	2.72	10.45	25.30
1900	35	16	30	28	90	1.8	2.81	10.55	4.96	7.32	25.64
1901	25	15	30	21	29	0.8	4.06	4.81	2.11	1.50	12.48
1902	38	18	35	28	150	2.0	4.61	9.66	8.80	8.72	32.09
Averages	31	16	30	23	74	1.6	.....	.....	.....	....	22.55

IOWA HORTICULTURE.

BY WESLEY GREENE, SECRETARY STATE HORTICULTURAL SOCIETY.

We learn from the Twelfth Census that Iowa produced 2.2 per cent. of the total value of the fruit crop in the United States in 1899, and was rated as eleventh in rank in the production of fruit among the fifty-two states and territories. The value of her orchard fruits, grapes and small fruits was $2,894,574; her vegetable products were valued at $7,508,856; the product from the forest, exclusive of the lumber industry, was $3,266,449; the nursery products were valued at $636,543 and those from the floral gardens at $320,407, while from the sale of nuts were realized $7,605, making a total of $14,634,443 derived from her horticultural industries in that year. The products from her vegetable gardens were equal in value to those received from her orchards, forests, nurseries and floral gardens. That you may get some idea of the location of the principal centers of production of the different fruits, I will name six counties having the largest acreage, or greatest number of plants, and the bushels or quarts of fruit produced, as given in the last census.

In the sale of forest products, excluding lumber from the sawmills, Iowa's rank is the thirteenth among the states. The counties selling the most cord wood, posts, railroad ties, etc., were: Clayton, $169, 420; Dubuque, $136,011; Allamakee, $118,250; Fayette, $117,392; Linn, $116,820; Winneshiek, $110,087.

In the number of grapevines Iowa's rank is the twelfth, with 2,072,101 vines and 7,403,900 pounds of fruit. The counties having the largest number of vines are:

Pottawattamie...	420,205	vines	and	728,500	pounds	of	grapes
Des Moines.....	204,396	"	"	619,800	"	"	"
Polk.....	106,143	"	"	481,200	"	"	"
Lee.....	76,184	"	"	227,800	"	"	"
Scott.....	66,181	"	"	210,000	"	"	"
Wapello	65,228	"	"	276,000	"	"	"

In blackberries Iowa is also twelfth in rank of production, with 1,719 acres and 1,966,070 quarts of berries. The six counties with the largest acreage are:

Des Moines	150	acres	and	224,480	quarts	of	berries
Lee.....	130	"	"	174,290	"	"	"
Van Buren.....	70	"	"	87,000	"	"	"
Wapello.....	65	"	"	72,120	"	"	"
Warren.....	65	"	"	70,580	"	"	"
Marion	60	"	"	64,300	"	"	"

In the production of raspberries Iowa is fifth in rank among the states, having produced 3,604,210 quarts from 3,394 acres. The six counties having the greatest number of acres in raspberries are:

Polk	371	acres and	375,750	quarts of berries		
Pottawattawie	285	" "	231,430	" "	"	
Linn	160	" "	181,940	" "	"	
Mahaska	100	" "	106,010	" "	"	
Dubuque	100	" "	105,820	" "	"	
Clayton	94	" "	101,190	" "	"	

In strawberries Iowa is eighteenth in rank with 2,335 acres and 3,144,320 quarts of berries. The most productive counties are:

Lee	160	acres and	297,360	quarts of berries		
Polk	159	" "	178,710	" "	"	
Wapello	110	" "	141,480	" "	"	
Des Moines	90	" "	103,370	" "	"	
Scott	80	" "	141,520	" "	"	
Linn	80	" "	120,230	" "	"	

In currants Iowa is the third in rank, with 1,017 acres and 1,226,560 quarts. New York is first and Michigan second. The six productive counties are:

Polk	36	acres and	43,580	quarts of currants		
Marion	30	" "	40,150	" "	"	
Pottawattamie	30	" "	34,290	" "	"	
Hardin	26	" "	26,780	" "	"	
Audubon	25	" "	26,310	" "	"	
Bremer	22	" "	26,410	" "	"	

In the acreage of gooseberries Iowa is the first in rank with 777 acres and 975,890 quarts, though Indiana produced more quarts of berries from 617 acres. The six counties having the largest number of acres in gooseberries are:

Polk	45	acres and	64,010	quarts of berries		
Wapello	30	" "	37,760	" "	"	
Pottawattamie	22	" "	22,250	" "	"	
Mahaska	20	" "	24,450	" "	"	
Davis	18	" "	30,760	" "	"	
Boone	17	" "	22,630	" "	"	

Of her tree fruits Iowa stands the lowest in pears; the thirty-first rank of production, with 104,046 bearing trees which produced 5,014 bushels of fruit in 1899. The counties having the greatest number of bearing trees are: Lee 20,241, Van Buren 6,349, Des Moines 5,470, Davis 3,515, Pottawattamie 3,232, and Jefferson 3,034.

Iowa is the twenty-eighth in rank in the number of bearing peach trees, having 516 145. The six counties with the greatest number of trees are: Fremont 89,107, Page 41,974, Lee 35,923, Des Moines 30,591, Van Buren 30,084, and Davis 23,568.

In the number of bearing cherry trees Iowa is fifth in rank, with 791,327 trees. Kansas is first, Pennsylvania second, Indiana third and Michigan fourth. The counties in Iowa having the greatest number of trees are: Pottawattamie 53,285, Polk 45,767, Des Moines 21,815, Taylor 17,316, Marion 16,568 and Lee 16,135.

In the number of plum trees Iowa is fourth, with 1,302,217 bearing trees, and probably produces more native plums than any other state in the Union. California is first, Oregon second, and Michigan third in the number of bearing trees. The six counties with the greatest number of trees are: Pottawattamie 79,078, Polk 43,990, Warren 26,729, Woodbury 27,717, Taylor 26,914, and Audubon 23,736.

In bearing apple trees Iowa is the thirteenth in rank and has 6,869,588 trees. Missouri is first, New York second, Illinois third, Ohio fourth, Kansas fifth, Pennsylvania sixth, Michigan seventh, Kentucky eighth, Indiana ninth, Virginia tenth, Tennessee eleventh, and Arkansas twelfth. The counties in Iowa having the greatest number of bearing trees are: Pottawattamie 292,835, Mills 299,733, Fremont 240,012, Page 192,407, Taylor 166,608, and Harrison 151,673.

I give the number of bearing trees and bushels of apples produced in each county from the census of 1885, 1890, 1895, and 1900. You will notice in the record the effects of the low temperature during the winters of 1884 to 1888, the decline in the number of bearing apple trees is quite marked from 1885 to 1895, but increased rapidly from 1895 to 1900. The most destructive winters to the apple orchards of the state were in 1856 and 1857, 1872 and 1873, 1884 to 1888 and 1899. The weather of 1899 was more destructive to nursery stock, young trees, grapevines and berry bushes than to the orchards, though many bearing trees were badly injured by it.

If we divide the state into four parts, with the northeast corner of Polk county as the center, we would have 21 counties in the southwest, 24 in the southeast, 25 in the northeast and 29 in the northwest. The distribution of bearing fruit trees would be about as follows in the different quarters of the state: Of the 6,869,588 bearing apple trees 2,900,000 would be in the southwest, 1,894,000 in the southeast, 1,133,000 in the northeast and 942,000 in the northwest part.

Plums, 1,302,271 bearing trees: 459,000 in the southwest, 323,000 in the southeast, 346,000 in the northwest and 173,000 in the northeast part.

Cherries, 791 327 bearing trees: 320,000 in the southwest, 280,000 in the southeast, 106,000 in the northwest and 94,000 in the northeast part.

Peaches, 516,145 bearing trees: 258,000 in the southwest, 250,000 in the southeast, 2,000 in the northeast and 5,000 in the northwest part.

Pears, 104,046 bearing trees: 63,900 in the southeast, 27,000 in the southwest, and 6,000 each in the other two parts. The center of pear culture still remains in the southeast, near Lee county, but with the other tree fruits it has moved to the southwest.

APPLES.

COUNTIES.	1885.		1890.		1895.		1900.	
	Bearing trees.	Bushels, 1884.	Bearing trees.	Bushels, 1889.	Bearing trees.	Bushels, 1894.	Bearing trees.	Bushels, 1899.
Adair	46,015	27,628	60,807	63,283	41,409	31,512	82,429	48,958
Adams	70,836	47,403	79,464	111,992	58,187	52,580	123,583	79,658
Allamakee	39,075	37,631	16,770	21,931	12,234	15,976	46,786	10,439
Appanoose	107,413	82,106	97,022	99,775	52,821	37,170	127,854	68,014
Audubon	8,725	3,619	12,526	6,692	15,856	13,604	71,502	24,383
Benton	83,788	42,833	37,205	89,897	27,330	43,534	50,081	28,522
Black Hawk	62,397	48,192	20,465	32,401	17,870	19,911	39,755	23,737
Boone	51,901	46,230	27,708	30,720	23,779	14,295	70,036	24,636
Bremer	25,184	21,782	6,892	10,226	9,588	8,207	34,681	14,901
Buchanan	21,430	14,102	10,251	13,238	7,409	12,903	25,773	14,666
Buena Vista	2,300	387	4,098	536	5,492	6,805	32,8 3	4,283
Butler	37,658	23,813	16,611	27,905	14,990	15,392	52,847	19,117
Calhoun	5,793	2,324	3,474	1,733	6,475	2,942	44,243	9,193
Carroll	13,425	8,785	13,038	6,681	9,590	12,437	51,520	15,726
Cass	53,230	30,284	57,409	63,572	55,570	35,472	08,048	52,727
Cedar	63,422	35,910	30,731	70,702	20,185	24,351	34,396	28,110
Cerro Gordo	9,706	4,640	8,242	2,505	4,239	10,291	46,299	10,125
Cherokee	3,957	885	4,877	222	5,348	3,763	27,519	9,041
Chickasaw	15,788	10,553	5,422	4,068	5,336	5,639	26,589	11,143
Clark	72,952	45,736	70,976	91,041	40,58	25,012	84,818	43,328
Clay	2,173	296	1,466	244	934	1,345	16,905	1,432
Clayton	56,665	44,852	29,459	38,013	30,041	38,882	81,964	27,389
Clinton	70,889	34,086	39,525	68,770	12,810	30,012	35,183	18,500
Crawford	12,494	7,850	10,624	6,121	11,298	8,478	51,416	17,990
Dallas	115,286	75,587	84,047	123,307	65,778	51,688	123,411	70,386
Davis	97,111	69,467	71,659	87,304	40,583	40,4 4	108,44	60,240
Decatur	87,702	53,625	98,502	107,794	59,304	33,010	101,855	44,015
Delaware	27,662	21,180	11,232	16,7 0	10,787	12,688	20,959	8,226
Des Moines	73,050	63,118	36,187	47,164	29,684	35,198	101,816	64,901
Dickinson	634	95	843	89	968	673	5,589	1,116
Dubuque	55,345	32,310	33,626	62,95	29,586	44,446	49,225	18,243
Emmet	510	87	1,425	609	1,757	1,307	7,855	1,864
Fayette	48,022	33,741	20,077	21,697	14,343	19,516	52,984	16,587
Floyd	22,07	13,833	4,735	4,430	6,824	9,171	63,060	7,213
Franklin	13,050	9,445	8,625	7 999	5,300	15,104	46,283	8,735
Fremont	94,125	86,929	126,177	217,978	67,797	88,283	240,012	85,150
Greene	31,815	19,401	23,240	19,251	10,648	15,630	59,078	22,422
Grundy	30,634	18,613	15,300	28,217	10,102	13,547	30,378	25,000
G thrie	63,045	38,909	50.856	63,096	35,972	28,066	125,715	47,510
Hamilton	12,835	7,024	8,410	5,321	8,009	4,523	22,059	7,589
Hancock	1,399	519	1,910	390	808	2,813	13,830	2,379
Hardin	29,183	19,690	18,133	21,985	14,775	21,996	46,779	20,229
Harrison	31,194	27,410	47,085	70,525	28,314	40,407	151,673	47,520
Henry	81,767	71,977	39,523	54,617	24,008	33,845	66,781	42,352
Howard	9,064	4,519	6,241	4,193	1,876	3,293	89,298	2,770
Humboldt	3,315	1,263	2,828	743	4,442	3,211	20,146	4,543
Ida	1,117	196	3,042	551	4,988	3,337	27,419	7,070
Iowa	68,357	39,091	32,877	58,166	26,515	24,086	53,936	29,733
Jackson	63,426	33,742	43,344	84,254	28,854	56,308	47,705	16,197
Jasper	107,292	218,402	66,504	118,389	32,542	36,479	85,625	61,468
Jefferson	85,000	64,041	39,453	55,186	19,602	24,896	76,547	50,544
Johnson	78,606	46,959	46,789	86 673	21,186	49,300	58,861	89,125
Jones	40,643	24,427	24,352	52,862	18 032	23,349	28,727	12,796
Keokuk	84,252	72,014	59,215	89,255	39,484	65,510	91,129	67,684
Kossuth	4,121	871	1,305	392	2,120	3,662	25,907	2,747
Lee	86,765	82,376	67,541	54,224	26,050	43,554	125,408	59,510
Linn	63,102	33,850	36,144	67,913	25,348	36,020	55,637	26,687
Louisa	49,331	49,464	19,980	32,794	12,277	22,746	39,724	45,467
Lucas	67,998	49,649	67,015	67,388	31,555	25,284	61,307	36,290
Lyon	467	86	744	117	1,168	286	13,348	630
Madison	143,080	121,892	95,932	129,128	66,854	49,007	118,198	82,314
Mahaska	128,951	101,704	85,009	146,024	33,244	82,942	125,055	57,915

APPLES—CONTINUED.

COUNTIES.	1885.		1890.		1895.		1900.	
	Bearing trees.	Bushels, 1884.	Bearing trees.	Bushels, 1889.	Bearing trees.	Bushels, 1894.	Bearing trees.	Bushels, 1899.
Marion	109,658	87,164	77,427	132,503	32,472	40,753	93,741	42,464
Marshall	63,587	46,144	38,494	92,201	32,082	27,737	68,227	41,547
Mills	94,355	105,831	128,601	226,642	85,584	102,742	202,733	111,600
Mitchell	12,151	5,702	3,965	2,390	3,285	5,101	18,568	2,859
Monona	12,285	9,173	9,243	5,560	13,993	9,429	60,622	22,043
Monroe	58,703	40,096	50,814	76,092	19,472	20,160	64,406	28,591
Montgomery	48,704	46,846	72,560	69,025	63,818	35,975	102,456	50,089
Muscatine	53,058	51,638	37,301	57,108	21,891	31,563	58,239	37,460
O'Brien	1,195	158	1,110	188	1,700	1,529	21,221	1,885
Osceola	1,037	7	882	182	124	245	6,210	396
Page	119,440	113,965	150,274	161,755	107,709	122,469	192,408	97,860
Palo Alto	1,066	193	2,310	409	3,221	2,427	26,008	1,855
Plymouth	3,471	571	916	153	3,935	2,359	21,701	3,120
Pocahontas	3,080	562	3,164	706	4,279	1,964	25,750	4,582
Polk	106,282	71,737	124,174	75,839	44,637	42,450	144,488	77,323
Pottawattamie	64,867	52,818	122,605	106,105	86,792	58,253	292,833	109,155
Poweshiek	65,909	44,658	87,580	79,537	27,226	28,895	69,663	38,064
Ringgold	60,458	47,704	71,384	87,466	41,007	44,489	116,008	46,115
Sac	10,663	5,032	9,869	2,973	18,883	11,354	57,889	19,680
Scott	85,900	43,120	38,65	52,52	23,300	47,073	50,867	38,015
Shelby	16,708	12,514	19,377	15,462	17,470	18,995	72,559	24,915
Sioux	1,204	35	2,078	196	1,822	3,472	15,651	1,920
Story	44,226	30,246	20,981	27,276	15,842	14,770	43,924	23,373
Tama	57,575	37,290	32,697	70,824	22,964	21,945	50,312	24,842
Taylor	101,122	79,449	123,912	151,111	76,474	117,070	166,239	78,702
Union	49,740	26,161	55,172	72,226	37,668	38,491	82,752	49,807
Van Buren	192, 07	79,307	60,607	60,148	33,283	27,085	105,761	51,605
Wapello	71,028	48,195	52,252	77,522	38,337	32,901	88,935	44,122
Warren	127,744	98,452	99,293	146,221	52,846	36,584	121,838	99,961
Washington	94,905	95,995	60,637	91,888	26,492	46,463	74,219	70,937
Wayne	107,314	56,654	105,609	134,937	70,930	45,180	97,291	56,230
Webster	14,564	10,497	4,354	2,808	2,040	2,914	40,904	12,700
Winnebago	985	262	1,193	81	417	724	14,653	774
Winneshiek	31,957	29,721	9,261	11,616	8,436	10,192	86,109	5,960
Woodbury	5,700	2,046	4,586	2,500	5,443	3,986	64,408	9,480
Worth	3,825	861	2,015	435	2,278	3,285	19,806	1,702
Wright	7,870	3,103	5,542	3,142	3,420	4,669	50,167	5,932
Total	4,833,696	4,113,591	3,640,588	5,040,352	2,397,763	2,590,884	6,869,588	3,129,862

TABLE OF CONTENTS.

APPENDIX—IOWA CLIMATE AND CROPS.