

success, and an object of pride to the State, is a task which requires patient labor and inquiry, and the exercise of the soundest judgment. It is to be hoped in this, they will receive the aid of their fellow citizens, and that in no case will they allow the Iowa State Agricultural College to become a last resort for men who have failed in other walks of life, and are now anxious that the State should provide them with comfortable places for the rest of their natural lives.

Respectfully submitted.

S. S. FARWELL,
JOHN A. KASSON,
L. W. STUART,

REPORT OF THE SECRETARY


OF THE

IOWA STATE AGRICULTURAL SOCIETY,

TO THE

TWELFTH GENERAL ASSEMBLY

1868.

DES MOINES: 

F. W. PALMER, STATE PRINTER,
1868.

SECRETARY'S REPORT.

To the Honorable, the General Assembly of the State of Iowa :

The Board of Directors of the Iowa State Agricultural Society, in accordance with the provisions of Section 1793, of the Revision, have the honor to present the following report :

The law distinctly recites, as one of the items of this report "a general view of the condition of agriculture throughout the State." The sources of information, from which this general view is compiled is various; among them may be mentioned,

1. *The reports of the several County and District Agricultural Societies.*

In the past year forty-five of these organizations, representing almost every part of Iowa, have reported, stating more or less fully and intelligently, the average yield of the several crops; the supposed causes of increase or decrease; gain or loss by the introduction of new seeds, or new implements of husbandry; the condition of the various classes of stock; the state of fruit culture; the advantages of the county or district, as to coal, timber, manufacturing, &c.; their wants, as to mills, markets, fuel, machinery, stock, fruit, &c., together with a history of the Annual Fair, as reflecting the "condition of agriculture."

2. *Correspondence.* The Board has organized regular standing committees of its own members, on cattle, sheep, mules, swine, horses, grains, groves, implements, grapes and small fruits; and sorghum. These committees send annually circulars, into each county, to persons whom, they have reason to believe, are interested in the subject especially assigned them. Thus very many of the people are brought into near relation with the Board, and feel that it is an active, living principle, laboring to advance the great cause of agriculture, and cheerfully contribute to its vitality and power. The reports of these several committees, condensed from the replies of our own

farmers, and fresh from their experience and observation, will be found a very fair index of the actual condition of the subject considered.

3. *Railroad statistics.* A system has been inaugurated, by which the movements of freights, both eastward and westward, on the great lines of transportation in the State, are obtained from the obliging officers of the several roads. These statistics are highly interesting and valuable, as exhibiting what we sell, and what we buy; and they may be studied with profit, by every one who regards our material prosperity. They do not exhibit, of course, all that is produced, or all that is purchased; but they do show by a comparative statement of the figures of one year with another, whether there has been an increase or decrease of any particular product, or of any demand for materials from abroad. These ideas will be illustrated in another portion of this report.

4. *The annual exhibition.* Here are presented the best samples of cereals, vegetables and fruits; the evidences of improvement in horses, cattle, sheep, and swine; the results of inventive genius, in the shape of implements, tools, and machinery; and these are no mean index of the general condition of agriculture, throughout the State. Here also are collected the most successful stock-growers, horticulturists, representatives of the mechanic arts, and general farmers, who, by frequent interchange of opinion, furnish a good idea of the present state of the art and science of farming.

5. *The monthly reports of the National Department of Agriculture, render valuable assistance.* Besides its own large corps of correspondents in every part of the State, who communicate regularly with the Department, and furnish statistics of all the crops; it has access to the monthly reports of the score of meteorological observers, under the direction of the Smithsonian Institute; and the commissioner is thus enabled to make estimates which are usually well attested by the results. From these various sources, then, and others not necessary to specify, the Board prepares the "general view of the condition of agriculture throughout the State."

In general, there is abundant reason to be grateful to Almighty God for a year of prosperity and progress. Favorable seasons have been vouchsafed, and any losses to the crops, from a Spring

unusually backward, have been more than compensated by a harvest-time of genial skies and sunshine, and a Fall of unprecedented mildness and duration. The insect enemies of the products of the field have, with rare exception, left the crops to mature, thus filling the granaries with food, and the heart with gladness. The canker worm, the potato beetle, the chinch bug, &c., held in such terror in anticipation, have well-nigh ceased their depredations. The grasshopper came in devouring hosts; but too late to injure any essential product, and their operations were confined to quite a limited area. There were no prolonged rains or excessive droughts to retard the work of the farm or injure the growing crops, to any great degree. Peace reigned; storms withheld their destructive agency; health, wide-spread and vivifying, quickened all pulses; and everywhere there has been, to careful husbandry, and intelligent effort, a remunerative return. Internal commerce, by the extension of railroads, has vastly increased. Waste places have been made glad by cultivation; emigration has poured in, in unwonted numbers; labor is becoming more and more dignified, and there is a steadily increasing interest in all that pertains to agricultural science. Almost every household rejoices in the perusal of some periodical devoted to agriculture; political, literary, and sometimes religious journals have an agricultural column; farmers' clubs, for the discussion of subjects pertaining to the science, have been multiplied, and books on every conceivable branch of farming form no inconsiderable portion of the reading of the people. The general use of agricultural machinery to economize time and labor, attests the mental activity of the present era. No sooner is a new implement presented, claiming superiority, than thousands are ready to test its merits. Should any claim excellence for a new breed of cattle, or other stock, at once will be found many eager to experiment with it. Thus, money, tact, and brains are becoming the capital of the farmer in the management of his business, as they are, and have been the capital of the merchant, the banker and the manufacturer. Agriculturists contemplate with pride, even amidst discouragements and failures, the steps already taken to establish an institution, where the leading object shall be, without excluding other scientific and classical studies, to teach such branches of learning as are related to agriculture and the mechanic arts. They boast of the spacious buildings

so nearly completed; they rejoice at the liberality of Congress and the State Legislature in funding and endowing such a college; and they look forward with buoyant anticipations, for its usefulness and influence. Not many years ago all these things would have been the subject of sneers, ridicule and contempt.

The following table indicates the meteorological condition for eleven months of 1867, and since the numerous observers are fairly distributed over the State, it may be safely received as an index of the temperature, rains, &c., which have influenced the crops:

| 1867. | HIGHEST TEMPERATURE | LOWEST TEMPERATURE | AVERAGE. | AVERAGE DEPTH OF RAIN AND SNOW IN INCHES. |
|--------------------------------|------------------------|-----------------------|----------|--|
| January..... | 30° | 30° | 14° .5 | 1.59 |
| February..... | 68 | 26 | 24 | 4.23 |
| March..... | 51 | 26 | 21 .5 | 2.59 |
| April and May..... | 76 | 10 | 44 .1 | 2.16 |
| July..... | 94 | 47 | 70 .9 | 7.69 |
| July and August continued..... | 99 | 43 | 72 .7 | 4.37 |
| September..... | 90 | 36 | 63 .6 | 3.62 |
| October..... | 84 | 17 | 51 .4 | 2.36 |
| Total..... | | | | 28.61 |

A few comments on this table may not be inappropriate. The total depth of rain and melted snow was 28.61 inches for the time specified, or 2.86 inches per month. Though the quantity of water was not so great as an ordinary average, we were spared the drouth which caused so much distress in other quarters. Beside, the reports from fifty counties record the magnificent weather for harvesting the wheat, rye, oats, barley and hay crops; and still later the unparalleled mildness of the months of October and November, assuring the maturity of the corn and sorghum, and affording time for their successful gathering and manufacture. The terms "excessively wet," when applied to the Spring, and "excessively dry," when applied to the Summer and Autumn, are only relative, and all may find cause of congratulation and thankfulness in the very favorable conditions of the weather for planting, growing, cultivating, securing and marketing the various crops.

CATTLE.

It will be remembered that Congress passed an Act, some time ago, prohibiting the importation of cattle, on account of the infectious nature of the rinderpest, which caused such immense losses in Europe. The supply of the United States has therefore come from our own herds. The almost entire disappearance of the disease suggests the propriety of a modification of the law, that importers of blooded animals may avail themselves of the advantages of the experience of European breeders. Iowa has made but slow advance in the improvement of cattle. It is time that most of the counties boast of the possession of Durham, Devon or Ayrshire stock; but their distribution and use, are confined to a very few persons. Their superiority is generally admitted; but the idea as to their rearing, care, crossing with native stock, &c., &c., are very crude. Beside, the prices demanded and obtained for blooded procreative animals, seem enormous, in comparison with that of the common stock. There is a great lack of the proper appreciation of the importance of improved breeds. Many are satisfied with present attainments; some declaim against "blood and pedigrees;" while many, convinced of the necessity of improvement, do not invest in it, because they have not the requisite shelter, and other appliances for caring for them. A few figures will illustrate how great a source of wealth our cattle are:

The total number, of all ages, is 956,169, an increase of 54,338 in two years; pounds of butter, 19,192,727, an increase of 5,654,511 pounds; cheese, 1,403,864 pounds, an increase of 403,126 pounds; for the same period. Suppose that the cattle generally were of improved breeds, that they were well sheltered and provided with adequate tame pasturage, &c., not only would their value be vastly increased, but the product in butter and cheese would be greatly enhanced. The establishment of dairies on the associated plan, in many counties, is an encouraging omen. The cheese produced is excellent, and has a foreign as well as a home reputation; the investment is remunerative to both dairymen and farmers, and there is no substantial reason why such factories should not be largely increased in number. Cattle form an important element in the commerce

of the State, as the following table will show. They indicate the numbers carried eastward, by the several railroads specified :

| | 1864. | 1865. | 1866. | 1867. |
|--|--------|--------|--------|--------|
| Burlington and Missouri River R. R. | 23,220 | 31,063 | 31,808 | 24,518 |
| Chicago, Rock Island and Pacific | 22,472 | 21,591 | 21,500 | 20,021 |
| Dubuque and Sioux City | 8,250 | 7,680 | 4,500 | 2,350 |
| Chicago & Northwestern | | 19,265 | 19,698 | 14,375 |
| Cedar Falls & Minnesota | | 2,400 | 990 | ..... |
| Dubuque Southwestern | | | 216 | 180 |
| C. B. & Q. (not received from B. & M.) | | | | 3,392 |
| Totals | 65,942 | 81,909 | 78,212 | 64,846 |

Total received at Chicago in 1867, 326,826. Thus from these partial sources, Iowa furnished nearly one-fifth of all the receipts at Chicago.

HOGS.

It is a subject of congratulation that the hog cholera, so called, has mostly disappeared. For some years past this disease destroyed annually, thousands of swine, and damaged the farmer to an incalculable amount. There were all kinds of boasted "specifics" for it, and some ingenious persons reaped a handsome fortune from the sale of patent remedies for its prevention and cure. In spite of all these empirics, the disease has ceased to be a matter of alarm. What the disease is, and upon what its development depends, are entirely unknown. When the losses of hundreds of thousands of dollars are repeated more frequently, a commission costing as many cents, will be organized, which, by careful recorded observation, minute dissections, records of time, place and surroundings, will ascertain its true character, and furnish an adequate remedy and means of prevention.

Improved breeds are highly popular, and the introduction of Chester White, Magerie, Suffolk, Poland, and other varieties, is very general. Since this stock is the principal medium of converting the corn crop into cash, any suggestion to improve the quality is seized upon with avidity, and the farmer who has not abandoned the common, and adopted the improved breed, must prove a rare exception. Yet with all this, the quality sent to eastern markets, is not such as to excite especial pride. The report of the standing committee, and the abstracts of the severa

county societies hereto appended, will assist to form a general idea of the condition of this branch of farming. By the census of 1863, there were 1,743,865 hogs of all ages; in 1865, 1,037,117; and in 1867, 1,620,089, or an increase over the preceding two years of 582,972. The subjoined tables indicate the number of hogs carried east, through the sources named:

| | 1864. | 1865. | 1866. | 1867. |
|---|---------|---------|---------|---------|
| Burlington & Missouri River R. R. | 148,246 | 45,442 | 90,510 | 115,400 |
| Chicago, Rock Island & Pacific R. R. | 84,600 | 44,220 | 54,181 | 131,892 |
| Dubuque & Sioux City and South Western R. R. | 89,715 | 18,480 | 9,750 | 43,800 |
| Chicago & North Western Railway | | 41,340 | 66,075 | 64,470 |
| Cedar Falls & Minnesota R. R. | | 2,320 | 1,200 | ..... |
| Dubuque South Western R. R. | | | 3,900 | 3,000 |
| Chicago, Burlington & Quincy, from Burlington, (not received from B. & M.) | | | | 15,093 |
| Totals | 250,561 | 151,703 | 214,916 | 334,365 |

Received at Chicago, 1,672,494 live hogs; proportion furnished by Iowa, one-fifth.

These figures are by no means a fair statement of the entire product. It does not exhibit what is consumed at home, nor what is exported eastward in the shape of lard, dressed hogs, &c.; what is carried to St. Louis and other markets, from the western part of the State, by the Missouri River; what is taken west to the mining regions by the Pacific Railroad, &c. In 1865, from but a few transportation lines, there were carried eastward 10,882,631 pounds of lard, dressed hogs and pork; in 1866, 17,273,384 pounds, being an excess of 6,391,253 pounds. The subjoined table shows the exports of this product for the year 1867, through the sources named:

| 1867. | Dressed Hogs. (pounds.) | Pork. (pounds.) | Lard. (pounds.) |
|--|----------------------------|--------------------|--------------------|
| Burlington & Missouri River R. R. | 245,140 | 3,116,683 | 1,274,208 |
| Chicago & North Western Railway | 5,811,510 | 3,677,190 | ..... |
| Chicago, Rock Island & Pacific R. R. | 5,063,230 | ..... | 1,405,190 |
| Chicago, Burlington & Quincy (not received from B. & M. R. R.) | | 571,733 | ..... |

Being a total of 21,164,884 pounds of this product, or an excess of 3,891,000 pounds over the exportations, through the same sources in 1866. Received at Chicago, 9,837,362 pounds of lard; sent from Iowa eastward by two roads only, 2,677,398 pounds—or in the proportion of one-fourth.

SHEEP.

The great fluctuation in the price of wool, for a series of years, is proverbial. The fluctuation in the extent of sheep-raising, is not less remarkable. This idea can not be better illustrated, than by comparing the exports and imports of Iowa, from limited sources, for the years named:

| | EXPORTS. | IMPORTS. |
|-------------|----------|----------|
| 1863..... | 6,289 | 70,118 |
| 1864..... | 16,585 | 159,519 |
| 1865..... | 20,755 | 33,116 |
| 1866..... | 52,589 | 5,972 |
| 1867..... | 30,461 | 4,368 |
| Totals..... | 126,679 | 273,093 |

The immense numbers imported in 1864, faintly revealed by the above figures, show that sheep-raising had almost amounted to a mania. The demand for woolen goods, arising out of the war, created and maintained enormous prices. The prairies affording gratuitous pasturage; the impression that ordinary diseases could not exist in sheep, on Iowa soil; the extension of railroad lines, affording easy means of transportation; the high prices paid here, and other considerations, brought at that period the importation to its maximum quantity, being ten times as great as that carried east. Two years later, the figures were reversed, our people exporting ten times as many sheep as they imported. The present year, the movements of sheep, eastward and westward, are scarcely worthy of notice, when compared with the immense figures reached in other kinds of stock. The following comparative tables may be studied with profit:

| | 1866. | | 1867. | |
|--|----------|----------|----------|----------|
| | Exports. | Imports. | Exports. | Imports. |
| Burlington & Missouri River R. R..... | 29,921 | 180 | 19,154 | ..... |
| Chicago & North Western Railway..... | 9,593 | 5,310 | 5,104 | 1,551 |
| Chicago, Rock Island & Pacific..... | 11,320 | 47 | 5,089 | 2,183 |
| Chicago, Burlington & Quincy, (not received from B. & M.)..... | 1,755 | 435 | 1,144 | 335 |
| Totals..... | 53,589 | 5,972 | 30,461 | 4,368 |

EXPORTS OF WOOL, 1867.

| | |
|---|-------------------|
| Chicago, Rock Island & Pacific R. R..... | 731,430 pounds. |
| Dubuque & Sioux City R. R..... | 267,749 pounds. |
| Dubuque South Western R. R..... | 28,955 pounds. |
| Chicago, Burlington & Quincy R. R., (not from B. & M. R. R.)..... | 83,559 pounds. |
| Chicago, Burlington & Quincy R. R., (from Keokuk, &c.)..... | 64,216 pounds. |
| B. & M. R. R. R..... | 910,238 pounds. |
| Total..... | 2,086,147 pounds. |

By the census we have the following figures:

| | |
|---------------------------------------|-----------|
| Number of sheep in 1863..... | 599,938 |
| Number of sheep in 1865..... | 1,000,541 |
| Number of sheep in 1867..... | 1,598,226 |
| Number pounds wool shorn in 1862..... | 1,429,209 |
| Number pounds wool shorn in 1864..... | 2,813,620 |
| Number pounds wool shorn in 1866..... | 5,323,385 |

At the same ratio of increase, there are now over two millions of sheep, and the wool product of this year will nearly reach eight million pounds. Yet, in the face of this array of figures, most of the counties report discouragements and failures. The price of wool is so low that sheep-busbandry is not considered remunerative. Foot-rot, scab, grub and other maladies have decimated the flocks; "fancy prices" for full-blood are not paid with so great alacrity; and the fond expectations of hundreds of farmers have failed of realization. Many who thought to make it a specialty have abandoned the business. There are perhaps adequate causes for this condition of things,—as the absence of shelter; the want of tame pasturage; the deceptions practiced by dishonest foreign importers; the introduction of diseased sheep in defiance of law; the want of experience, care and knowledge in the management of the flocks; the want of skill in preparing the fleece for market; and the loss from the hordes of worthless dogs that infest the State. The latter cause demands a passing remark. In 1864, the loss by dogs and wolves was \$126,148; in 1866, it was only \$88,267. This decrease is very gratifying, and if the losses in 1867, with the great

increase of the number of sheep, should fall anywhere short of \$100,000 for a single year, no *reasonable* person can find any just cause of complaint. Forsooth, that sum would endow, for all time to come, several professorships in the Agricultural College; but, then the owners of the dogs would be deprived of much innocent amusement, which can be enjoyed at the trifling cost of \$100,000 a year!

In this connection, it may not be inappropriate to notice as an indication of general prosperity, the satisfactory increase in the number of woolen factories. But a few years ago, Iowa was entirely dependent on foreign States and countries for the supply of woolen goods. She paid a heavy tribute to eastern manufacturers and others; paying, first, the transportation of wool to the eastern seaboard, second, the expenses of a half dozen "middle men," and, third, its transportation back again in the shape of textile fabrics. In many places, this state of things has changed, very many counties have mills, supplied with the best machinery which manufacture cloths, jeans, blankets, flannels, cassimeres, &c., of superior quality. Some specimens of these, from the factory of Joseph Shields, Davenport, were at the Paris Universal Exposition, and though they did not receive any official recognition, they have been the subject of inquiry, and have called the attention of European manufacturers to our skill and capacity in this respect. In 1862, the value of manufactures was \$2,751,805; in 1866, it was \$15,957,599, and in 1867 it will not be less than \$25,000,000. How much of these "general manufactures" is woolen goods, it is quite impossible to determine; but, in the absence of manufactures of implements, &c., it must comprise a large proportion of them.

The fact, that fabrics produced at home, from our own wool, are cheaper, better, and more elegant than those purchased abroad, is the smallest item of advantage of their manufacture. These factories, located among us, give regular employment to hundreds of people, quicken the pulses of trade, encourage home productions, convince the people of the practicability of manufacturing our own raw material into economic uses, discourage idleness, promote thrift, enterprise, ingenuity and skill, and give a feeling of independence, not to be estimated by dollars and cents.

WHEAT.

The reports of county officers are uniformly favorable. The product in bushels is unparalleled, and the quality unsurpassed. The grain has been spared depredations by insects, and the seasons were favorable for seeding and maturing the crops; beside, the remarkably fine weather in harvest gave opportunity for its preservation in the best possible condition.

In 1862, 1,149,837 acres yielded 8,795,321 bushels, an average of 8 bushels.

In 1864, 964,452 acres yielded 8,284,565 bushels, an average of 9 bushels.

In 1866, 1,057,330 acres yielded 14,635,590 bushels, an average of 14 bushels.

The exports for the years and by the sources named are as follows: From the sources below, 1865, 3,331,769 bushels; in 1866, 4,740,440 bushels; in 1867, by the
 Burlington & Missouri River Railroad. 145,545 bushels.
 Chicago & North Western Railway.....2,743,531 bushels.
 Chicago, Rock Island & Pacific Railroad.....1,787,436 bushels.
 Dubuque & Sioux City Railroad.....1,574,146 bushels.
 Dubuque South Western Railroad..... 170,073 bushels.
 C. B. & Q. (not received from B. & M.)..... 118,897 bushels.

Total.....6,539,628 bushels.

Received in Chicago, 18,090,868; and Iowa maintains her proportion of one-third, as in 1866.

It may not be improper here to advert to the opinion of Mr. Dodge, of the Agricultural Department, on the subject of wheat growing. He says Western wheat culture is "ruinous" in impoverishment of soil, in deterioration of seed, in overrunning the country with weeds, in promoting a false and wasting system of political economy. * * The prevalent mode of operating involves, first: a partial breaking of the soil, rendering sowing irregular in position and depth, and drilling difficult and imperfect, giving weeds quite as good a chance as the wheat. * * Year after year wheat follows wheat, and weeds increase, while the yield of grain diminishes. * * One witness of impoverishment only is needed—the soil itself. First, thirty-five bushels

per acre is the boast of the farmer; then the yield drops to twenty-five, to twenty, to fifteen, and finally, to ten and eight. * * The same causes that deplete the soil, produce degeneracy in the seed. * * The weed nuisance is stupendous. * * The average yield of wheat in England is stated at twenty-eight bushels per acre, never less than twenty-six, unless in a year of unusually bad harvests. The average in this country is less than half of the lowest of these figures. Why is it? * * Mainly for want of a suitable rotation of crops, of a more careful husbandry of resources, of fertilization, of a more thorough and careful culture." Mr. Stokes, Acting Commissioner of Agriculture, adds to the above thoughts a word of "warning in view of the reckless waste and improvidence which is stripping the fairest fields of their wealth of fertility." He urges "a systematic rotation, some attention to fertilization, greater care in the selection of seeds, better tillage, and more thorough culture." One result of the want of these things, "is the removal westward year by year, of the center of wheat production, thus adding transportation and other charges to its ultimate cost, threatening to make difficult the future supply of our population, and to render export impossible."

We do not deny the present large profits of the wheat crop, certainly on new soil, but we are at this point to be cautioned. With good crops can we hope for a continuance of high prices? Not unless there be wide-spread failures in this or in other countries. The demand of the country is almost a fixed quantity, an average of five bushels to each inhabitant, and that which passes through Chicago, drawn from Wisconsin, Minnesota, Iowa, Illinois, Michigan and Indiana, though set down at twenty million in flour and wheat, can be grown on a much less area than is generally supposed. With a good crop Iowa alone can raise wheat sufficient for the whole country. We have one hundred counties. We can name ten prairie counties in Iowa with five million of acres, which at even ten bushels to the acre, would produce wheat enough for our home consumption, and a large amount of wheat and flour than passed through Chicago in 1867.

These facts will justify our cautious look out for cheap wheat. Diversify agriculture, and regard grasses and animals which promise good profits, and leave wheat raising to our young pioneers on virgin soil and to farmers to close proximity to railroads.

CORN.

In 1862, 1,733,503 acres produced 63,883,916 bushels, average 37 bushels.

In 1864, 1,727,777 acres produced 48,471,183 bushels, average 28 bushels.

In 1866, 1,992,326 acres produced 56,928,958 bushels, average 29 bushels.

In 1867, 2,000,000 acres produced 70,000,000 bushels, average 35 bushels.

The shipments by railroad, are but a small portion of this immense product, as will be seen by the figures below:

| | BU. IN 1866. | BU. IN 1867. |
|--|--------------|--------------|
| Burlington & Missouri River Railroad..... | 178,771 | 784,764 |
| Chicago & North Western Railway | 403,761 | 48,439 |
| Chicago Rock Island & Pacific Railroad..... | 650,547 | 232,140 |
| Dubuque South Western Railroad..... | 58,847 | 5,867 |
| Dubuque & Sioux City Railroad..... | 8,548 | 1,006 |
| C. B. & Q. R. R., (not received from B. & M.)..... | 11,496 | 629,630 |
| Total..... | 1,311,911 | 1,701,860 |

Chicago received 23,018,827 bushels.

Without specifying particularly, the other grain crops, as oats, rye, barley, &c., were highly productive, and give additional evidence of the prosperity of the year. The exports have been unusually large, and the following tables may be studied with profit:

| | OATS. (BUSHELS.) | RYE & BARLEY. (BUSHELS.) | OTHER GRAINS AND SEEDS. |
|---|---------------------|-----------------------------|----------------------------|
| Burlington & Missouri River R. R..... | ..... | ..... | 5,996,081 lbs. |
| Chicago & Northwestern Railway..... | 123,336 | 71,762 | ..... |
| C. R. I. & P. R. R..... | 290,306 | 475,831 | ..... |
| Dubuque & Sioux City R. R..... | 53,965 | 19,336 | ..... |
| Dubuque Southwestern R. R..... | 138,848 | 9,978 | ..... |
| C. B. & Q. R. R. from Keokuk..... | ..... | ..... | 82,712 bush. |
| C. B. & Q. R. R., (not received from B. & M.)..... | 2,334 | 45,358 | 154,354 lbs. |
| Total..... | 617,689 | 621,505 | ..... |

SORGHUM.

In 1858 there were 5,606 acres, yielding 416,776 gallons, or 74 gallons per acre.

In 1862 there were 37,607 acres, yielding 3,012,396 gallons, or 92 gallons per acre.

In 1864 there were 21,452 acres, yielding 1,443,604 gallons, or 67 gallons per acre.

In 1866 there were 25,796 acres, yielding 2,090,557 gallons, or 81 gallons per acre.

The product of sugar in 1862 was 21,469 pounds, or one pound of sugar to 140 gallons.

The product of sugar in 1864 was 8,386 pounds, or one pound of sugar to 172 gallons.

The product of sugar in 1866 was 14,697 pounds, or one pound of sugar to 143 gallons.

It may be affirmed with safety that the products of sugar are rather the result of accident than of any well digested and established system of its extraction from the sirup. Many eminent cultivators and manufacturers deny that sugar of good quality, and in paying quantities, can be made from the Northern cane. So doubters declared in Louisiana, years ago, about the Southern cane. But the above tables show that it really exists in the sirup, and if so it can be crystalized by mechanical, chemical or other means, as soon as the same may be determined. A gallon of sirup should furnish five pounds of merchantable sugar, and leave a half gallon of excellent sirup. Suppose this amount should be reached—and it is believed it can be—the product of 1866 should have yielded 10,452,785 pounds of sugar; and that of 1867 should have been a large increase over those figures. It is difficult to estimate the value of such a yield, when attained. It would be a direct saving, counting sugar at 15 cents per pound, of \$2,250,000 a year, with the present product, to Iowa alone. There is no good reason why efforts to reach these figures, and exceed them, should be abandoned; on the contrary, the results already obtained should stimulate inquiry and examination, until experience shall demonstrate the practicability of supplying our people with sugar from this source, and furnishing large quantities for export.

Notwithstanding the lateness of the Spring, and other discouragements attending the crop, the product of 1867 will approximate 3,000,000 gallons. Twenty-two counties report but "little raised;" two, "below an average;" three, "extra;" ten state the crop averaging 125 gallons per acre; one, "played out;" and one, "none

raised." This county, however, reported in 1866, 1,423 gallons. Again, Lee county reports but little raised—while the product was 60,763 gallons, or 100 gallons per acre; and Muscatine reporting the same, furnished 53,072 gallons—or in the former, two gallons to each inhabitant, and in the latter, over two and a half gallons.

People are not generally aware of the extent of the crop, and do not appreciate its value. With the experience of the past, there are abundant causes of more enlightened efforts to establish this crop as a staple Western product. It is not more liable to failure than corn. There are impediments in the way of its successful cultivation—as bad seed, and worse tillage; mixing with other crops; careless manufacture; illy-adapted machinery; and hundreds of deceptions and impositions, in the vaunted patent rights for making sugar. All these may be removed by patient industry and attention. There are now well established processes, within easy reach of every one, for refining the sirup. There are, beyond question, means and methods for crystalizing the sugar. Past disappointments and failures should not only not discourage, but should stimulate research and experiment, until the success of manufacturing sugar shall be perfect. Below will be found the averages of corn, wheat, oats, rye, barley; the estimates of sorghum; the most prominent wants, and the number of woolen factories, in the several counties reporting.

TABLE

SHOWING THE AVERAGE OF CORN, WHEAT, OATS, RYE, BARLEY,—ESTIMATE OF SORGHUM,—MOST PROMINENT WANTS, AND NUMBER OF WOOLEN FACTORIES IN THE SEVERAL COUNTIES REPORTING.

| COUNTIES. | CORN. | WHEAT. | OATS. | RYE. | BARLEY. | SORGHUM. | WANTS. | WOOLEN FACTORIES. |
|------------------|-------------|-------------|-------------|-------------|------------|--------------------|--|-------------------|
| Alamakee . . . | Large c'p | 20 bush.. | Abund't. | Little r'd | Little r'd | Little r'd | ..... | 1 |
| Adams . . . | 40 bush. | 18 bush.. | Little r'd | Little r'd | Little r'd | Below av. | ..... | 1 |
| Appanoose . . | 30 bush. | 12 bush.. | 35 bush.. | ..... | None r'd | 100 galls. | Merchant mill, cattle . . . | 1 |
| Adair . . . | below av. | 23 bush.. | Extra . . . | ..... | 40 bush.. | Extra . . . | More agriculturists . . . | 1 |
| Bremer . . . | 50 bush.. | 16 bush.. | Extra . . . | Little r'd | 35 bush.. | ..... | Farming imp., woolen factories . . | 1 |
| Boone . . . | 40 bush.. | 17½ bush. | 45 bush.. | 15 bush.. | 35 bush.. | 200 galls. | ..... | 1 |
| Butler . . . | 35 bush.. | 15 bush.. | 50 bush.. | Little r'd | Little r'd | 125 galls. | ..... | 1 |
| Benton . . . | 45 bush.. | 18 bush.. | 65 bush.. | 22 bush.. | Little r'd | 86 galls. | ..... | 1 |
| Black Hawk . . | Extra . . . | Extra . . . | Little r'd | ..... | Little r'd | ..... | ..... | 1 |
| Clayton . . . | 35 bush.. | 15 bush.. | 50 bush.. | Little r'd | 25 bush.. | Little r'd | ..... | 1 |
| Cedar . . . | 50 bush.. | 18 bush.. | ..... | 15 bush.. | 18 bush.. | Little r'd | ..... | 1 |
| Clinton . . . | 40 bush.. | 12 bush.. | 40 bush.. | Little r'd | 20 bush.. | Little r'd | Woolen manuf., agr. works, pork packing establishments . . . | 1 |
| Clarke . . . | 25 bush.. | 10 bush.. | 35 bush.. | None r'd | None r'd | 60 galls. | More settlers . . . | 1 |
| Cedar Valley . . | Extra . . . | Extra . . . | Good . . . | Little r'd | Little r'd | play'd out. | ..... | 1 |
| Crawford . . . | 30 bush.. | 20 bush.. | Good c'p. | None r'd | None r'd | None r'd | Coal, stone, timber, fuel, manuf., mills . . . | 1 |
| Chickasaw . . . | 45 bush.. | 8 bush.. | 60 bush.. | ..... | 30 bush.. | Little r'd | ..... | 1 |
| Cerro Gordo . . | 50 bush.. | 12 bush.. | 45 bush.. | None r'd | Little r'd | ..... | ..... | 1 |
| Davis . . . | Half crop | Extra . . . | Full av.. | Little r'd | ..... | Little r'd | ..... | 1 |
| Franklin . . . | 35 bush.. | 50 bush.. | 50 bush.. | None r'd | Little r'd | Supply is ½ dem'd. | ..... | 1 |
| Fayette . . . | 45 bush.. | 12 bush.. | 50 bush.. | None r'd | 40 bush.. | Little r'd | Wagon maker, flour mills . . . | 2 |
| Guthrie . . . | Half crop | 20 bush.. | Full crop | None r'd | None r'd | Little r'd | ..... | 1 |
| Harrison . . . | 50 bush.. | 25 bush.. | Good . . . | None r'd | Little r'd | Little r'd | ..... | 1 |
| Monona . . . | 75 bush.. | 12 bush.. | 80 bush.. | Little r'd | 35 bush.. | Little r'd | ..... | 1 |
| Howard . . . | 30 bush.. | 9 bush.. | 45 bush.. | ..... | None r'd | 80 galls. | Grist mills and woolen factories . . | 1 |
| Humboldt . . . | 40 bush.. | 24 bush.. | 50 bush.. | Little r'd | 30 bush.. | 80 galls. | Carding machine, more mills . . . | 1 |
| Iowa . . . | 50 bush.. | 17 bush.. | 45 bush.. | Little r'd | Little r'd | 80 galls. | More mills . . . | 1 |
| Jackson . . . | 45 bush.. | 13 bush.. | 45 bush.. | ..... | ..... | ..... | ..... | 1 |
| Jefferson . . . | 20 bush.. | 8 bush.. | 20 bush.. | 20 bush.. | None r'd | Little r'd | ..... | 1 |
| Lee . . . | 45 bush.. | 16 bush.. | 60 bush.. | Little r'd | Good . . . | Little r'd | ..... | 1 |
| Mitchell . . . | 35 bush.. | 15 bush.. | 50 bush.. | 45 bush.. | ..... | ..... | Woolen and other factories . . . | 1 |
| Muscatine . . . | 40 bush.. | 10 bush.. | 50 bush.. | Full av. | Full av. | ..... | Coal mines . . . | 1 |
| Mahaska . . . | 20 bush.. | 20 bush.. | ..... | ..... | ..... | 72 galls. | ..... | 1 |
| Marshall . . . | 20 bush.. | 15 bush.. | 35 bush.. | 10 bush.. | ..... | Little r'd | Manufactories . . . | 1 |
| Madison . . . | av. yield. | 18 bush.. | 40 bush.. | Little r'd | Little r'd | ..... | Saw and flouring mills . . . | 1 |
| Monroe . . . | 40 bush.. | 13½ bush. | ..... | Extra . . . | ..... | Little r'd | Flouring mills, foundry, reapers and mowers . . . | 1 |
| Page . . . | 45 bush.. | 14 bush.. | 50 bush.. | Little r'd | Little r'd | Little r'd | Manufactories, limestone . . . | 1 |
| Polk . . . | 40 bush.. | 16 bush.. | 40 bush.. | Little r'd | Little r'd | Good c'p. | Stock, fruit, draining, land under cultivation . . . | 2 |
| Ringgold . . . | 30 bush.. | 20 bush.. | 35 bush.. | 25 bush.. | ..... | Little r'd | ..... | 1 |
| Tama . . . | 45 bush.. | 12 bush.. | 30 bush.. | 18 bush.. | 28 bush.. | Little r'd | ..... | 1 |
| Taylor . . . | 25 bush.. | 15 bush.. | 40 bush.. | 30 bush.. | ..... | 200 galls. | ..... | 1 |
| Union . . . | Extra . . . | Extra . . . | Extra . . . | ..... | ..... | Extra . . . | ..... | 1 |
| U. D. Ag. Soc. . | Av. crop. | 16½ bush. | 40 bush.. | ..... | ..... | Little r'd | ..... | 1 |
| U. Ag. Society . | 35 bush.. | 20 bush.. | ..... | Little r'd | ..... | Little r'd | ..... | 1 |
| Van Buren . . . | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 1 |

TABLE. — CONTINUED.

| COUNTY. | CORN. | WHEAT. | OATS. | RYE. | BARLEY. | SORGHUM. | WANTS. | WANTS. |
|------------|-----------|-----------|-----------|------------|------------|---------------|--------|--------|
| Washington | 50 bush. | 19 bush. | 45 bush. | 28 bush. | None r'd | 200 galls. | 1 | 1 |
| Wayne | 30 bush. | 12 bush. | 40 bush. | 15 bush. | None r'd | 200 galls. | 1 | 1 |
| Webster | Good c'p. | below av. | Extra. | Little r'd | Little r'd | Little r'd | 1 | 1 |
| Winnebago | 25 bush. | 10 bush. | 424 bush. | Little r'd | Little r'd | Little r'd | 1 | 1 |
| Warren | 60 bush. | 20 bush. | 40 bush. | Little r'd | Little r'd | None av. c'p. | 1 | 1 |

COUNTY SOCIETIES.

Forty-five of these organizations have submitted reports on the condition of agriculture in their several counties. Greatly condensed abstracts of these are hereto appended. There is evidence of increasing interest in these societies, and their influence is widening and deepening, to the benefit of progressive agriculture. The following table shows the number of members, receipts, &c., for the years indicated. The steady increase is especially gratifying, and should commend these societies to the fostering care of the Legislature. They should be encouraged to extend their influence until every citizen shall feel a personal influence in the cause of agriculture:

| | 1863. | 1865. | 1867. |
|-------------------------------------|----------|----------|----------|
| Number of societies reporting..... | 30 | 40 | 45 |
| Number of members..... | 7,143 | 9,270 | 11,373 |
| Receipts from all sources..... | \$15,275 | \$20,248 | \$25,477 |
| Amount paid in premiums (1867)..... | | | 18,180 |

Thus for \$25,477 received, there were paid back in premiums \$18,180, leaving but \$7,297 for expenses of fitting up grounds, and a hundred items that are indispensable to the management of a fair; or \$162 for each society, to meet its current expenses. From this showing it is evident that very many gratuitous services are rendered by persons who should receive a liberal compensation.

The subjoined table shows name of county or district society, name and address of person reporting, number of members, receipts, and amount awarded:

| COUNTY SOCIETY. | PERSON REPORTING. | P. O. ADDRESS. | NO. OF MEMBERS. | RECEIPTS. | AMOUNT AWARDED. |
|-----------------|-------------------|----------------|-----------------|-----------|-----------------|
| Alamakee | D. W. Adams | Waukon | 27 | 27 00 | 35 00 |
| Adams | John Bixby | Quincy | 236 | 353 65 | 192 00 |
| Appanoose | D. L. Strickler | Centerville | 41 | 76 00 | 79 00 |
| Adair | W. B. Hall | Pontareille | 232 | 609 60 | 272 00 |
| Bremer | W. A. Stow | Waverly | 180 | 832 00 | 400 50 |
| Boone | J. N. Kidder | Boonsboro | 90 | 417 50 | 287 00 |
| Butler | Martin Bailey | Butler Center | 224 | 769 75 | 470 50 |
| Benton | W. McKirpatrick | Vinton | 238 | 493 30 | 232 00 |
| Black Hawk | R. A. Whitaker | Waterloo | 413 | 1,268 50 | 853 00 |
| Clayton | J. E. Corlett | Farmersburg | 600 | 1,725 00 | 1,000 00 |
| Cedar | S. L. Smith | Tipton | | | |
| Clinton | W. W. Sanborn | Lyons | | | |
| Clarke | M. B. Reese | Osceola | | | |

County Societies—Continued.

| COUNTY SOCIETY. | PERSONS REPORTING | P. O. ADDRESS. | NO. OF MEMBERS | RECEIPTS | AMOUNT AWARDED |
|--------------------|------------------------|---------------------|----------------|------------|----------------|
| Cedar Valley.... | H. C. Hunt..... | Cedar Falls..... | 215 | \$1,063.00 | \$ 600.00 |
| Crawford..... | S. T. Comfort..... | Denison..... | 215 | 216.00 | 177.25 |
| Chickasaw..... | L. T. Young..... | New Hampton..... | 73 | 94.00 | 100.00 |
| Cerro Gordo..... | T. G. Emsley..... | Mason City..... | 34 | 34.00 | 100.00 |
| Davis..... | M. H. Jones..... | Bloomfield..... | 187 | 483.85 | 243.00 |
| Franklin..... | George Beed..... | Hampton..... | 133 | 133.00 | 179.50 |
| Fayette..... | S. S. Almsworth..... | West Union..... | 187 | 464.25 | 323.00 |
| Guthrie..... | Jacob Gingrich..... | Guthrie Center..... | 93 | 120.30 | 208.00 |
| Harrison..... | Charles Oden..... | Magnolia..... | 217 | 328.00 | 358.75 |
| Howard..... | W. R. Mead..... | Cresco..... | 111 | 111.00 | 100.00 |
| Humboldt..... | Eber Stone..... | Lot's Creek..... | 44 | 43.00 | 57.00 |
| Ida..... | M. G. Aldrich..... | Ida..... | 15 | 15.00 | 12.00 |
| Iowa..... | Robert McKee..... | Marengo..... | 215 | 402.00 | 395.00 |
| Jackson..... | D. S. Haight..... | Maynoka..... | 290 | 721.00 | 610.00 |
| Jones..... | C. T. Lamson..... | Anamosa..... | 910 | 2,033.85 | 1,495.00 |
| Jefferson..... | John K. Shaffer..... | Fairfield..... | 373 | 923.00 | 904.50 |
| Lee..... | J. F. Edwards..... | Fort Madison..... | 217 | 1,569.50 | 941.00 |
| Mitchell..... | S. H. Franklin..... | Mitchell..... | 43 | 43.00 | 139.75 |
| Muscatine..... | R. H. McCampbell..... | Muscatine..... | 108 | 1,745.05 | 798.50 |
| Marion..... | L. H. Green..... | Okaloosa..... | 330 | 663.00 | 815.00 |
| Madison..... | M. Houston..... | Winterset..... | 180 | 231.00 | 143.00 |
| Monroe..... | Henry Miller..... | Albia..... | 244 | 480.40 | 432.00 |
| Page..... | S. H. Kridelbaugh..... | Clarinda..... | 93 | 101.20 | 130.00 |
| Polk..... | P. F. Bartle..... | Des Moines..... | 686 | 1,489.00 | 1,400.00 |
| Ringgold..... | N. B. Swan..... | Mt. Ayr..... | 83 | 85.00 | 85.00 |
| Tama..... | A. M. Batchelder..... | Iuka..... | 100 | 394.75 | 118.00 |
| Taylor..... | R. B. Kinross..... | Bedford..... | 80 | 80.00 | 123.00 |
| Union..... [Soc'y] | L. F. Bishop..... | Afton..... | 100 | 112.00 | 262.00 |
| Union Dist. Ag'l | Alonso Shaw..... | West Liberty..... | 526 | 1,387.65 | 815.00 |
| Union Ag'l Soc'y | Edwin Carter..... | Wheatland..... | 953 | 1,625.45 | 1,263.00 |
| Van Buren..... | Alex. Brown..... | Keosauqua..... | 562 | 1,448.00 | 601.00 |
| Washington..... | L. H. Holden..... | Washington..... | 460 | 1,440.00 | 729.50 |
| Wayne..... | W. F. Ellerton..... | Fordyce..... | 60 | 39.70 | 66.75 |
| Webster..... | Isaac Carme..... | Fort Dodge..... | 86 | 148.20 | 119.00 |
| Winnebago..... | George N. Holway..... | Decorah..... | 147 | 271.00 | 135.50 |
| Warren..... | A. H. Swan..... | Indianola..... | 220 | 404.00 | 270.00 |

THE SOCIETY'S EXHIBITION IN 1867.

The Fourteenth Annual Fair was held on the grounds of the Clinton County Society, situated between the cities of Clinton and Lyons. The local committee, having the preparation of the grounds in charge, added twelve acres to the original plat, giving an area of over thirty-five acres—inclosing the same with a substantial tight-board fence. They erected a fine-art hall in the shape of a Greek cross, 40×160 feet; a hall 30×125 feet for vegetables and farm products; another of similar dimensions for fruits and flowers;

a third, 30×90 feet, for a mechanical and power hall; commodious offices for the Secretary and Treasurer; and an amphitheater capable of seating six thousand people. They also provided ample stalls and pens for horses, sheep, swine, carriage-ways, wells of water, and all appurtenances necessary to secure the comfort and convenience of all. The improvements were very substantial, as well as highly ornamental, and reflect great credit upon the liberality and taste of the people among whom the Fair was located. Officers, visitors and exhibitors will long remember this Fair likewise, on account of the unbounded hospitality and kindness with which they were entertained and received.

The weather was generally propitious. Tuesday (the opening day) was very fine. The dust was becoming very annoying, but was allayed by a shower on Wednesday morning, giving a cool, delightful day. On Thursday it rained until 9 A. M., doubtless deterring many thousands from visiting the Fair; but after that hour the day proved perfectly magnificent for the business in hand. Friday there were frequent rains, and it was cold and disagreeable. The greatest number in attendance at any one time was twenty-five thousand.

The following table will indicate the number of entries for the several years specified:

| ENTRIES. | 1856. | 1857. | 1858. | 1859. | 1863. | 1864. | 1865. | 1866. | 1867. |
|--------------------|------------|--------------|--------------|--------------|--------------|------------|--------------|--------------|--------------|
| Cattle..... | 145 | 169 | 146 | 125 | 84 | 74 | 67 | 79 | 94 |
| Horses..... | 182 | 196 | 179 | 156 | 129 | 139 | 217 | 176 | 188 |
| Mules..... | 14 | 13 | 30 | 24 | 28 | 85 | 23 | 30 | 12 |
| Sheep..... | 32 | 10 | 36 | 37 | 78 | 197 | 77 | 159 | 118 |
| Swine..... | 27 | 19 | 26 | 35 | 47 | 52 | 40 | 37 | 48 |
| Agri. Implem'ts | 113 | 86 | 25 | 26 | 126 | 181 | 221 | 205 | 379 |
| Farm products. | 100 | 192 | 130 | 190 | 128 | 100 | 151 | 139 | 231 |
| Other classes..... | 247 | 444 | 473 | 673 | 487 | 303 | 480 | 519 | 706 |
| Totals..... | 956 | 1,129 | 1,044 | 1,269 | 1,107 | 992 | 1,276 | 1,334 | 1,796 |

The entries exceed in numbers the highest ever yet reached, by 462, and are nearly double those of the third annual fair; beside very many articles were on exhibition which arrived too late for regular entry. The display of implements and machinery was unprecedented, both in extent and variety. There were some classes that failed to a very great extent; for example, there were but eleven exhibitors of cereals. From the fact that the fair was located in a region famous for its immense resources of wheat, oats, rye, barley, etc., taken in connection with the liberal premiums

of the Society, a far different result was anticipated. If ten or twenty times the number of farmers had presented the products of their grain fields, it would not only have added to the interest of the fair, but would have awaked thought in the minds of the thousands of visitors, and in the future would be directed to that part of Iowa.

In the classes devoted to the ladies, there was not so general an exhibition as was desirable, and it arose from the impression that parties in the vicinity should not compete, but leave the premiums for their sisters at a distance. This was an unfortunate error, the almost entire dependence of the fair, in this direction, being upon those living nearest to it.

Complaint was made (and with some justice,) that the class of plants and flowers, not discriminating between regular florists and amateurs, gave the farmer immense advantage. It was contended that as the Society had a professional, and also a general list of fruits, so it should have had of plants and flowers. This circumstance prevented the floral exhibition from being a complete success, as it would otherwise have been.

In cattle, Durhams, Devons, and Olderneys were represented.

In sheep, Spanish Merino, Leicester, Southdowns and Cotswolds.

In swine, Suffolk, Chester White, Poland, Berkshire and Magee.

The classes of jacks and mules, though only twelve in number, were pronounced unsurpassed in excellence.

In horses there were but two thorough-bred stallions.

The fine-art hall was the center of attraction; its musical instruments, fine fabrics of woolen, linen and cotton, pictures, specimens of natural history, needle-work, painting, fine worked-metals, &c., made it a temple of beauty. To such a feast were the people invited; to such a feast they came; from such a feast they went away, amused, instructed, contented and happy.

Let it be written that there were no instances of disorderly conduct, but that the utmost harmony and good feeling marked the exhibition from its commencement to its conclusion.

The following table shows the receipts at the fairs in the several years indicated:

| 1856. | 1857. | 1858. | 1859. | 1860. | 1861. | 1862. | 1863. | 1864. | 1865. | 1866. | 1867. |
|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|-------|-------|
| \$3,002 | \$3,609 | \$2,843 | \$2,116 | \$3,728 | \$12,750 | \$4,454 | \$7,277 | \$4,021 | \$3,400 | | |

PAID IN PREMIUMS FOR THE SAME YEARS.

| | | | | | | | | | | | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--|
| \$1,854 | \$1,670 | \$1,013 | \$1,302 | \$2,307 | \$2,055 | \$2,844 | \$3,988 | \$3,510 | \$4,187 | \$3,696 | |
|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--|

RAILROAD STATISTICS.

The Society and the people of the State are under many obligations to the officers of the several railroad lines, for their kindness in furnishing statistics of the movements of freight eastward and westward. An inspection of these tables will illustrate, in the most forcible manner, the sources of wealth of the people, and the principal items brought from abroad, in exchange for their produce. The plan of collecting these figures was adopted five years ago, and beside receiving the commendation of the Society, it is an invaluable means of calling the attention of persons from abroad to the boundless fertility of our soil, and all things which conspire to render Iowa attractive to the immigrant.

Efforts have been made to procure statistics of exports by the Mississippi and Missouri rivers, by the Pacific and other roads, but without success. Immense quantities of grain, vegetables, and other products, are shipped South and West, through these great channels of trade, which if collected in tabular form, would reveal a commerce of vast magnitude and value.

As further indicative of a year of prosperity, the fact of the general extension of railroad lines, may be mentioned here. In 1863 there were 574 miles of railroad; ten years later were 793, and now 1,153 miles. The Des Moines Valley is about to push its way further north, and beyond the Capital; the Burlington & Missouri River, has crossed the Des Moines, and penetrated seventy-five miles beyond; the Chicago Rock Island & Pacific, has reached the Capital, and is hastening to the Missouri; the Chicago & North Western — the first to cross the State, forms an unbroken track between the cities of the eastern seaboard, and the base of the Rocky Mountains; the roads centering at Dubuque are being built rapidly westward; the McGregor, St. Paul & Minneapolis will soon unite us with Minnesota; the Cedar Rapids will, ere long, be in connection with St. Louis, by Burlington, and Carthage, Ills.; the Keokuk, St. Paul & Minnesota, is looking to the extreme north. The Iowa Central is promised to be complete in a year, running north and south and bringing Minneapolis, Cedar Falls, Oskaloosa and St. Louis into easy communication, and furnishing the farmer a choice of markets, between the East and the South. Without a prosperous

agriculture, these roads could not be so prosperous; and without railroad prosperity agriculture would not be so prosperous.

The subjoined tables indicate the receipts at Chicago, of the several items named.

| BUSHELS WHEAT. | BUSHELS CORN. | BUSHELS OATS. | BUSHELS RYE AND BARLEY. |
|----------------|---------------|---------------|-------------------------|
| 18,060,898 | 23,018,827 | 9,732,145 | 3,552,630 |
| LIVE HOGS. | POUNDS LARD. | CATTLE. | POUNDS CUT MEATS. |
| 1,672,494 | 9,897,362 | 336,836 | 11,667,264 |

And below are shown the shipments eastward, by the sources named before in other portions of this report:

| BUSHELS WHEAT. | BUSHELS CORN. | BUSHELS OATS. | BUSHELS RYE AND BARLEY. |
|----------------|---------------|---------------|-------------------------|
| 6,539,628 | 1,701,990 | 617,689 | 621,595 |
| LIVE HOGS. | POUNDS LARD. | CATTLE. | POUNDS CUT MEATS. |
| 334,265 | 2,679,398 | 64,846 | ..... |

LIBRARY.

The room in the capitol, assigned as the repository of the archives of the Society, is entirely inadequate to the purpose. The library is regularly increasing in the number of exchanges, periodicals, books, &c., received. The accumulation of the past are huddled together, without any show of system or order, and the present condition is a disgrace to the State. The wants of the Society demand a suite of large and well-furnished rooms, for the safe keeping of its records, and for the establishment of a complete agricultural museum. To this might be added, with profit, a collection of objects in natural history, representing the ornithology, entomology, &c., of the State. There should be deposited each year samples of cereals produced, cost of fruit, &c., and abundant room should be provided for drawings and paintings of fruit, flowers, plants, animals, &c. Contributions should be solicited, and could be readily and cheaply obtained, giving a perfect example, for each year, of all objects of interest and importance, building stone, clays, soils, plants, native woods, birds, reptiles, insects, &c. These economic uses should be recorded, the date and locality, whence obtained, the name of donor, and all other facts of practical or scientific value. In a few years, a museum would be collected,

useful to all persons, and attractive and instructive especially to the student of natural history. This might all be accomplished with but a small expenditure of money, provided that sufficient and suitable rooms were in readiness for the reception of contributions. Will the Legislature consider the propriety of affording aid in carrying out the design of a museum and cabinet as above indicated?

WANTS OF IOWA.

Chief among the wants of the State are artificial groves of timber, and a careful husbanding of our natural forests. The flocks and herds need groves for protection; the orchards and fields demand belts of trees to increase their fertility; the vigorous winters enforce the necessity of forests to modify their severity; our vast prairies call loudly for groves to give them salubrity—nay, more, to render them inhabitable; every branch of industry sends up its petition for trees.

In 1863, there were 8,360 acres of timber, and 4,786,866 acres of enclosed land, or the proportion of 1 to 572 acres. In 1865, 20,285 acres of timber, and 5,327,053 of enclosed land, or the proportion of 1 to 260, an increase of two hundred and fifty per cent in two years. In 1866, there were 48,774 acres of timber, and 8,263,174 acres of enclosed land, or a proportion of 1 to 170, a decrease which is by no means encouraging.

To show the vast importance of a more general cultivation of timber, a few figures are submitted showing the actual consumption for running the railroads of Iowa, without including any timber for building a single mile of new road. One cord of wood is consumed in carrying a train of cars forty miles. There are in active operation 1,152 miles of railroad; suppose that four trains per day pass over this distance, and that is a low estimate, and deducting sixty-five days for Sabbaths and impediments by storms, the distance traveled will be 1,382,400 miles, or a consumption of 34,560 cords of wood a year, or 115 cords per day; 300 ties require replacing every year per mile; or 345,600 ties for the State. The loss to bridges is \$250 per year per mile; the wear of building \$24 per year; and these items alone, fuel and repairs, on the roads now completed, foot up \$671,208 per year. Again the railroads in the United States consume 6,700,000 cords

of wood a year for fuel; in a word, wood pays more than half the entire internal revenue of the country.

The following table shows the importations of lumber, by the sources named. Of course it does not represent the entire quantity brought in during the year:

| | FT. B. M. | SHS. & L'TH. |
|---|-------------|--------------|
| Burlington & Missouri River R. R. | 13,149,087 | 23,393,000 |
| Chicago & North Western Railway..... | 52,150,995 | ..... |
| Chicago, Rock Island & Pacific R. R. | 30,994,000 | 30,997,000 |
| Dubuque Southwestern R. R. | 3,912,166 | 3,801,652 |
| Dubuque & Sioux City R. R. | 17,763,668 | 22,204,706 |
| C. B. & Q., to Burlington, (not to B. & M.) | 1,196,391 | 4,584,000 |
| Totals | 119,166,307 | 84,980,958 |

Did space admit, tables of similar character could be extended almost indefinitely. The figures above preach an eloquent sermon, and teach a great practical lesson. The necessity for these immense importations must be removed, as far as possible, by planting and growing our own timber. Could we show in figures what the annual consumption of wood is, in agricultural implements, wagons, furniture, and the numberless other items that Iowa must purchase from abroad, it would awaken serious thought, and should result in the cultivation of thousands of acres of timber. Without stopping to illustrate the profit of five acres of of grove, (for this is abundantly done in the documents hereto appended), to the farm and farmer let it be affirmed, that it is greater than any other product which can be raised. If then, there is a necessity for more timber, if groves are profitable to the present, and promise untold advantages to the future generations, why should not their cultivation be encouraged by appropriate legislation? The Assembly is respectfully referred to Kansas for an example in this regard. Its law giving a bounty of two dollars per acre for twenty-five years, to each person planting and protecting an acre of timber on prairie land, beside offering especial inducements to persons planting rows of trees along the roadside, etc., is worthy of speedy imitation in Iowa. What have been the results of this legislation in Kansas is not known, but they could not be otherwise than highly encouraging.

Respectfully submitted,

J. M. SHAFFER, *Secretary.*

FAIRFIELD, IOWA, January 8, 1893.

APPENDIX.

REPORT OF THE COMMITTEE ON THE SECRETARY'S REPORT; BEING ALSO A MEMORIAL TO THE GENERAL ASSEMBLY.

The undersigned to whom was referred the Annual Report of the Secretary, prepared for, and to be submitted to the General Assembly as required by law, beg leave to say that they have examined the same, and must unhesitatingly commend it to the favorable consideration of the Society.

This report is unusually full in its statistical tables, and abounds in valuable suggestions to every citizen of the State. The information contained in it — information too of a practical and desirable character—is of itself, worth to the State, ten-fold the amount of the annual appropriations in aid of the Agricultural Societies. No one can read the same without being impressed with the rapid increase of our wealth; the mighty responsibilities resting upon us as citizens and law makers. Nor can this report with the accompanying documents be perused without demonstrating the noble mission of the Society, and how surely it is fulfilling the same. In correspondence with the practical, thinking men of the State, having access to sources of information, procured by no other organization, the aggregate knowledge gained must necessarily, when disseminated by the press and otherwise, increase our just State pride, and give us higher views of our responsibilities, and the work being performed by this Society. To speak in detail of the several parts of the work, is quite unnecessary. It is best understood, and can only be thoroughly appreciated by a careful perusal. We commend it, therefore, to the favorable consideration of the Society, and recommend its adoption as our Annual Report to the General Assembly.

By the order of reference, your committee was instructed to call the attention of the General Assembly, especially to two points embraced in this report. These are on the necessity of

suitable departments for a library, &c., and the cultivation of timber. In addition to what is contained in the report itself, it seems to your committee, that little need be said. Let a few suggestions suffice.

AND FIRST—OF THE LIBRARY.

No higher duty devolves upon the legislator than to do all in his power to foster and encourage the great underlying element of our prosperity, which it is the object and purpose of this organization to promote. Enlightened nations are everywhere appreciating the truth more and more; and from the very nature of our institutions, it is more emphatically true in this than in any other country. Money thus judiciously expended is soon and constantly returned, with the largest usury. Those who represent this interest, and devise ways and means for its advancement and prosperity, deserve the most liberal patronage at the hands of the State. This is dictated by the highest and most important considerations which can be addressed to the intelligent legislator.

To properly do this work, and accomplish the high mission imposed, it is needed that their representative organization should add to its library—to its collections in the various fields properly to be gleaned by it, and that it should have a place in every respect suitable for such library and collections. The apartment now set apart for the purpose is utterly unfit for so important a design, and is a standing disgrace to the State. We ask for nothing extravagant; but do demand that Iowa, fully equal to her sisters in all those elements which ensure greatness and untold development, should not be behind them in all facilities for securing such development. And surely nothing would be more agreeable or gratifying to any citizen of the State, than to have a place, commodious and suitable, where our books and collections of every description, pertaining to agriculture, can be classed and arranged. Few things are more inviting than a visit to similar departments in other States, and to nothing do the officers of other societies point with more pride. We trust the day is not far distant when Iowa, too, can conduct her visitors and citizens to beautiful halls, full to overflowing with articles to attract and instruct. No occasion could be more appropriate, as it seems to us, than to now enter in earnest upon this work. We can not be mistaken in supposing

that very soon steps must be taken to erect a new capitol building; and we most respectfully, but urgently, suggest, in connection therewith, that the interests of this Society will not be overlooked; but that rooms, ample and sufficient, shall be provided to meet a want vastly more important than we have thus imperfectly set forth.

SECOND—TREE-PLANTING.

Each year demonstrates the necessity of increased attention to this subject. We need not advert to the fact that large portions of our State are destitute of timber—portions, too, of the richest character—the great draw-back to their development being this destitution. Gradually, but surely, our population is pushing into these rich fields. Without some encouragement, such, too, as the State might legitimately extend, their efforts in subduing the soil and bringing it into a proper State of cultivation must be attended with many hardships and delays. We suggest, therefore, that a bounty be extended to all persons who shall plant and cultivate for three or more years five or more acres of timber; or shall, along the public highways, set out and grow trees for ornament and use. A small expenditure in this way will contribute very greatly to the beauty of our prairies, and beyond doubt invite settlement. Many counties, in our judgment, now almost without settlement, if this encouragement shall be extended, would soon be filled with a thriving and industrious population, and thus add largely to the wealth and revenue of the State. Without some aid of this nature these same regions must for years remain wild and unoccupied. Giving aid and encouragement, as we do every year to other objects, it seems to us that the highest pecuniary, social and moral consideration demand adequate assistance, in the direction proposed. Seconding and indorsing as we do, therefore, most cordially and fully the suggestions contained in the Report of the Secretary on this subject, and recurring again to what is said on the subject of a library and cabinet, we recommend the adoption of the following resolutions:

First—That we urge upon the General Assembly the propriety and necessity of providing suitable apartments for our library, casts of fruits, paintings of animals, &c., and extending to our efforts in this behalf the most liberal aid and encouragement.

Second—That the subject of tree-planting, in view of the extent of our prairies, and the need of some active aid in this direction, demands at the hands of the General Assembly immediate attention, and that the encouragement extended should be most liberal, and worthy the representatives of a State now at its majority, giving every evidence of its future greatness and power.

Respectfully submitted.

GEORGE G. WRIGHT, }
S. F. SPOFFORD, } *Committee.*
S. B. HEWITT, JR., }

On motion, the report was unanimously adopted.

J. M. SHAFFER,
Secretary.

SIXTH BIENNIAL REPORT

OF THE

BOARD OF CURATORS

OF THE

State Historical Society,

TO THE

GOVERNOR OF IOWA.

DECEMBER, 1867.

DES MOINES: 

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