State of Iowa 1920

CHILD LABOR

Analysis of Work Permits Issued During Biennium Ending June 30, 1920

Bulletin No. 4

Issued by the
Bureau of Labor Statistics
A. L. URICK, Commissioner
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The child labor statistics submitted for biennial period July 1, 1918 to June 30, 1920 are based on data given in the work permits issued, which, according to law, "shall give the name, sex, the date and place of birth and the residence of the child in whose name it is issued, describe the color of the hair and eyes, give his height and weight and shall contain a statement of the proof of age accepted, the school grade completed, shall describe the work for which the permit is issued; it shall further certify that the papers required for its issuance have been duly examined, approved and filed and that the person named therein has personally appeared before the officer issuing the permit and has been examined. A work permit shall be issued for every position obtained by a child between the ages of fourteen and sixteen years."

The law provides that no person under 14 years of age can be employed, with or without compensation, in any "mine, manufacturing establishment, factory, mill, shop, laundry, slaughter house or packing house, or in any store or mercantile establishment where more than eight persons are employed, or in the operation of any freight or passenger elevator, or livery stable or garage, place of amusement, or in the distribution or transmission of merchandise or messages." Children between 14 and 16 years of age may be employed in the above listed occupations for eight hours a day between 7 a. m. and 6 p. m. and not exceeding 48 hours per week and not exceeding 40 hours per week during part-time school term, provided a work permit is secured by the employer. This is issued by the local superintendent of schools or by a person authorized in writing by him or by the school board. Upon receipt of the employer's agreement (which states that the child will be employed at certain work and that the work permit will be returned to the issuing officer within two days after the child leaves the employment), the superintendent or issuing officer must determine whether the occupation is one in which the child is entitled to work, whether the child has an education equivalent to six yearly grades in reading, writing, spelling, English, language, geography and arithmetic; there is also required "a certificate signed by a medical inspector of schools or if there be no such inspector then by a physician appointed by the board of education certifying that the applicant for the work permit has reached the normal development of a child of its age and is in sufficiently sound health and physically able to perform the work for which the permit is sought;" and finally, evidence of age may be secured from four sources, taking precedence in the following order: (a) Certified transcript of birth record; (b) Passport or certificate of baptism; (c) School census record; (d) Where none of these are obtainable then a certificate from a medical inspector or physician appointed by the school board, that in his opinion the child is more than 14 years of age.

Among other provisions for protection of children in industry, the law also prohibits their employment under 16 years of age in work or occupations dangerous to life and limb or in which their health may be injured or their morals depraved, or in the handling of high explosives, or in or about mines during the school term, or in hotel, bowling alley, pool or billiard room. No female under 21 years of age can be employed in any occupation compelling constant standing. And no person under 18 years of age can deliver goods or messages between 10 p. m. and 5 a. m.

The street trade provision of the law applies only to cities having a population over 10,000. Boys under 11 years of age and girls under 18 years of age cannot engage in the street trades; boys between 11 and 16 years of age who regularly attend school may procure badges to engage in such work between the hours of 4 a. m. and 7:30 p. m. during the school term and until 8:30 p. m. during school vacations. The requirements concerning the issue of street trade badges are that the boy shall comply with all the requirements for issuance of work permits except the filing of an employers' agreement, and with the further exception that the school record required shall certify only that the boy is regularly attending school and that the work in which he wishes to engage will not interfere with his progress at school.

The above items give some of the most important provisions of the Iowa child labor law, and it will be noticed that without purposely making work permit requirements too stringent as to be prohibitive, the prevailing idea is to protect the child in the matter of health and education, and to check so far as possible

undue licence in employment of children for the benefit of parents or employers.

Only one change has been made in the child labor law since its enactment by the 36th General Assembly in 1915; that is the amendment to section 2477-c by the 38th General Assembly, whereby the hour limitation that children shall not be employed more than eight hours in any one day, exclusive of the noon hour intermission, nor more than forty-eight hours in any one week, is amended as follows: "provided that whenever in any organized school district there shall have been established a part-time school, department or class, no person under sixteen years of age shall be employed for more than forty hours in any one week."

During the first year of the operation of the law (July 4, 1915) to June 30, 1916), 1,522 work permits were issued; during the biennial period July 1, 1916 to June 30, 1918, 4,913 work permits were issued; and during the biennial period just completed, Tulv 1, 1918 to Tune 30, 1920, 7,469 permits were issued. shows a great increase in the employment of child labor. However, active enforcement of the law has resulted in improved conditions for employment of children, and mere increase in number of permits issued should not be misinterpreted as indicating laxity in law enforcement or a graver child labor situation. As indicated in our 1919 Manufactures Statistics, there has been a considerable growth in number of men, women and children employes in factories, in fact, the growth of employment in Iowa industries has been steady during the biennial period. and the number of children in industry has increased along with adult employes. But it is reasonable to assume that, because of the needs of the family during the period of high prices for necessities of life, there has been a much larger number of children between 14 and 16 years of age who entered industry to be self-supporting or to help the family purse; and the industries, on account of the higher wage demands of adult employes, have undoubtedly employed minors under sixteen where such an arrangement would apparently lead to economy without too obvious a sacrifice of efficiency.

The Iowa child labor situation is thus controlled by provisions for a minimum age of fourteen for entrance into certain stipulated industries or occupations; for a certain minimum

amount of education; for physical examination by a physician to determine physical ability to perform the work contemplated, and the normal development is supposed to have been reached by the child; and a careful method of ascertaining evidence of age of the child. Although the law provides for physical examination of children desiring work permits by a medical inspector of schools or if there be no such inspector then by a physician appointed by the school board, there is no provision of law authorizing school boards to expend money in payment for physicians' services. The board may legally hire and pay for services of dentists and nurses, but in case of physicians are directed to hire under the provisions of the child labor law but they have no authority to pay for services. As a result of this condition there is practically no compliance with this requirement of the child labor law.

There is a tendency to make child labor requirements more stringent than as provided in the laws of most of the states, as will be shown in the following data taken from report of a committee appointed by the U. S. Childrens' Bureau, December, 1919, to formulate standards of normal development and sound health for the use of physicians in examining children entering employment and children at work. The suggested standards and requirements for physicial examination in relation to issuance of work permits are given in greater detail and with wider scope than observed in general practice so far, and the following quoted excerpts show the drift of thought on the subject:

"The age minimum for entrance into industry should not be younger than sixteen years, so that the child will be protected from the strain of industry during the period of pubescence; and no child under eighteen years of age shall be permitted to go to work who is not of normal development for his age, of sound health and physically fit for the work at which he is to be employed. Physical fitness of children entering industry should be determined by means of a thorough physical examination of the nude body; and all employed children up to the age of eighteen should have at least a yearly physical examination made by a public medical officer duly appointed for this purpose, such examinations to take place either in the certificate issuing office or in the establishment in which the child is employed.

"A certificate should be refused to children who do not come up to the following minimum standards of height and weight for specified age, which are based on the most reliable experience and present day practice:

		Age	Weight (in clothing)*	Height
4	years years		80 lbs. 85 lbs.	58 inches 58 inches
6	years		90 Ibs.	59 inches

Note-*When children are weighed stripped, not more than five pounds should be allowed for clothing.

Special Note: While the committee recognizes that girls of sixteen are lighter in weight than boys of like age, it presents but one standard. This is for the purpose of giving greater protection to girls who are to be regarded as more vulnerable at this period. Certificates should be refused to children who do not show unmistakable signs of adolescence.

"Certificates should be refused permanently to all children who have the following defects, such as: (1) Cardiac disease, with broken compensation. (2) Pulmonary tuberculosis or other evidence of serious pulmonary disease. (3) Active glandular tuberculosis. (4) Active tuberculosis or syphilitic disease of joint bones. (5) Irremediable defective vision. (6) Total deafness. (7) Trachoma. (8) Serious Orthopedic defects. (9) Malnutrition equivalent to grade four in the Dunfermline scale. (10) Chorea. (11) Syphilides. (12) Hyperthyroidism. All children who are permanently refused employment certificate because of the above physical defects should be referred to some appropriate person or agency for whatever medical or other assistance is needed.

"Certificates should be refused to all children pending correction of all serious remediable defects, such as: (1) Defective vision subject to correction by glasses. (2) Contagious eye and skin disease. (3) Defective teeth; extraction or treatment and prophylactic care needed. (4) Malnutrition equivalent to grade hree of the Dunfermline scale. (5) Untreated hernia. (6) Diseased tonsils. (7) Defective nasal breathing requiring correction, causing complete occlusion of the nostrils. As soon as proper medical treatment has been secured for the child, the employment certificate may be issued. All children who, because of their physical condition, or because of their family or

previous history, show a tendency to weakness or disease of any organ, should be excluded from occupations which would tend to aggravate that tendency."

If the standards of Iowa and most of the other states be compared with the above quoted standards as proposed by the committee of the United States Children's Bureau, a great disparity is evident between laws now enforced and the changes proposed.

ANALYSIS OF TABULATIONS.

Height and weight measurements of children, so far as this Bureau was able to ascertain, were made without removal of shoes or clothing, and therefore the shoes give an error in net height of from ¾ to 1 inch for boys and from 1½ to 2 inches for girls. For the average weight of clothes, Bowditch in the 8th annual report of the State Board of Health of Massachusetts gives, as the weight of clothes of boys at 14 years, 8.09 pounds; of boys at 15 years of age, 8.08 pounds; of girls at 14 years, 7.54 pounds; of girls at 15 years, 7.85 pounds. The committee of the U. S. Children's Bureau suggests that when children are weighed stripped, not more than five pounds should be allowed for clothing. If such allowances are kept in mind while comparing heights and weights of boys and girls as submitted in the following tables, the information will not mislead as to respective net development of the sexes.

The statistics which follow were secured from 7,469 work permits issued during the biennial period to 4,832 boys and 2,637 girls, and these have been tabulated and classified so as to show the number, by age, school grade, height and weight, for twenty-nine cities of the state besides a few towns combined into a miscellaneous group. The number of boys and girls divided into half-year and yearly groups, is as follows:

			Age	Boys	Girls
14	to	141/2	years	1,223	574
			years	1,292 1,322	731 679
$\frac{15}{15\frac{1}{2}}$		16	yearsyears_	995	653
14	to	15	years	2,515	1,305
	to		years	2,317	1,332
	Tot	ol ·	14 to 16 years	4,832	2,637

The two following tables are a summary of the school grade classification of boys and girls to whom work permits were issued. For the sixth, seventh and eighth grades, there are "B" and "A" divisions: the "B" grade is the first half and the "A" grade the last half of the school year. In all analytical and general tables which follow, the classification "Ungraded" includes all reports in which school grade was not reported, also a number for which school grade was under sixth-B, to whom work permits were issued because in some instances the children were plainly subnormal and their staying in school could have served no good purpose.

SUMMARY OF SCHOOL GRADE CLASSIFICATION.

Age	Un- graded	6th-B Grade	6th-A Grade	7th-B Grade	7th-A Grade	8th-B Grade	8th-A Grade	1st High	2nd High	3rd High	4th High	Totals
Boys— 14 to 14½ years— 14½ to 15 years— 15 to 15½ years— 15½ to 16 years—	79 58 49 46	33 28 23 6	196 188 181 144	122 102 100 62	244 250 231 159	122 122 134 76	279 294 299 231	127 200 239 180	19 46 61 70	2 4 5 18	3	1,223 1,292 1,322 995
14 to 15 years	137 95	61 29	384 325	224 162	494 390	244 210	573 530	327 419	65 131	6 23	3	2,515 $2,317$
Boys, total	232	90	709	386	884	454	1,103	746	196	29	3	4,832
Girls— 14 to 14½ years— 14½ to 15 years— 15 to 15½ years— 15½ to 16 years—	30 33 26 23	14 14 11 8	84 72 76 69	33 54 34 29	108 107 96 75	70 52 77 49	162 209 178 167	59 150 127 138	13 34 45 72	1 6 8 20	1 3	574 731 679 653
14 to 15 years	63 49	28 19	156 145	87 63	215 171	122 126	371 345	209 265	47 117	7 28	4	1,305 1,332
Girls, total	112	47	301	150	386	248	716	474	164	35	4	2,637
Grand total, both sexes	344	137	1,010	536	1,270	702	1,819	1,220	360	64	7	7,469

NUMBER AND PERCENTAGE OF BOYS AND GIRLS ACCORDING TO GRADE CLASSIFICATION, FOR AGES 14, 15, AND 14 TO 16 YEARS.

	Age 14 to	o 15 Years	Age 15 to	o 16 Years		otal) o 16 Years
Boys and Girls by School Grade	Number	Per Cent	Number	Per Cent	Number	Per Cent
Boys, total number of	2,515	100.00%	2,317	100.00%	4,832	100.00%
Boys, Ungraded 6th-B grade	137 61	$\frac{5.45}{2.43}$	95 29	$\frac{4.10}{1.25}$	232 90	$\frac{4.80}{1.86}$
" 6th-A grade " " 7th-B grade " " 7th-A grade "	384 224 494	$15.27 \\ 8.91 \\ 19.64$	325 162 390	14.03 7.00	709 386	14.67 7.99
" 8th-B grade	244 573	9.70 22.78	210 530	16.83 9.06 22.87	884 454 1,103	18.29 9.40 22.83
" 1st high " 2nd high	327 65	$\frac{13.00}{2.58}$	419 131	18.08 5.65	746 196	15.44 4.06
" 3rd high	6	0.24	23	$\frac{1.00}{0.13}$	29 3	$0.60 \\ 0.06$
Girls, total number of	1,305	100.00%	1,332	100.00%	2,637	100.00%
Girls, Ungraded	63	4.83	49	3.68	112	4.25
oth-b grade	28	2.15	19	1.43	47	1.78
" 6th-A grade	156 87	$\frac{11.95}{6.67}$	145 63	10.89 4.73	301 150	11.41
" 7th-A grade	215	16.47	171	12.84	386	$\frac{5.69}{14.64}$
" 8th-B grade	122	9.35	126	9.46	248	9.40
" 8th-A grade	371	28.43	345	25.90	716	27.15
" 1st high	209	16.01	265	19.89	474	17.98
" 2nd high	47	3.60	117	8.78	164	6.22
" 3rd high	7	0.54	28	2.10	35	1.33
" 4th high			4	0.30	4	0.15

It will be noticed in both of the analytical summaries given above, that the "B" division, or first half of the school year, contains a much smaller number of percentage of boys and girls than does the "A", or second half year of the sixth, seventh and eighth grades. This is equally true in the half-year and whole year groups of children. Of boys 14 to 141/2 years of age, 33 were in 6th-B and 196 in 6th-A grade; 122 were in 7th-B and 244 in 7th-A grade; 122 in 8th-B and 279 in 8th-A grade; 127 were in first high, 19 in second and 2 in third high. Boys and girls, for each of the half and whole year divisions, can be read off in the same manner. A glance at the table and summary leads to the impression that the majority of children requesting work permits have waited until the end of their school grade. Furthermore, the Iowa compulsory education law requires that children must go to school until sixteen years of age, unless the child is over the age of fourteen and regularly employed, or has educational qualifications equal to those of pupils who have completed the eighth grade; or who is excused for sufficient reasons by any court of record or judge thereof; or while attending religious service or receiving religious instructions.

The summary for boys and girls fourteen and fifteen years of age, giving the percentages for each school grade division, shows clearly the difference between the half grades. Of boys 14 to 15 years of age, 2.43% were in 6th-B and 15.27% in 6th-A grade; 8.91% were in 7th-B and 19.64% in 7th-A grade; 9.70% were in 8th-B and 22.78% in 8th-A grade; 13% were in first year high, 2.58% in second high, and 0.24% in third year high. Of girls for age 14 to 15 years, 2.15% were in 6th-B and 11.95% in 6th-A grade; 6.67% were in 7th-B and 16.47% in 7th-A grade; 9.35% were in 8th-B and 28.43% in 8th-A grade; 16.01% were in first year high, 3.60% in second high, and 0.54% in third high. Similar comparison can be made for both boys and girls in age 15 to 16 years, and for the two years, 14 to 16 combined. The comparison shows that for both sexes the last half of the school year includes several times as many children as the first half; and of special interest, the percentage of girls in the higher grades exceeds the percentage of boys for the same grade. Using the totals given for the two-year period 14 to 16, in 6th-A there were 14.67% of boys and 11.41% of girls; in 7th-A grade there were 18.29 of boys and 14.64% of girls; in 8th-A grade there were 22.83% of boys and 27.15% of girls; in first year high, 15.44% of boys and 17.99% of girls; in second year high, 4.06% of boys and 6.22% of girls. It is obvious that the girls who enter industry have the advantage, though not in great degree, over the boys in the matter of education.

This is also brought out in comparison of boys and girls as to retarded school grade. In the table which follows, it is shown that of children from 14 to 14½ years of age, 996 or 81.43% of the boys of that age were of retarded grade, and 471 or 82.05% of the girls were of retarded grade; of children from 14½ to 15 years, 76.15% of the boys were of retarded grade and 69.49% of the girls were of retarded grade; or children 15 to 15½ years, 91.30% of the boys and 88.11% of the girls were retarded; for age 15½ to 16 years, 86.23% of the boys and 81.91% of the girls were retarded; and for the total, all ages, 83.71% of the boys and 80.13% of the girls were of retarded grade. It therefore is shown that though the percentage of girls exceeds the boys in age 14 to 14½ years, there is a noticeable change in favor of the girls from age 14½ on to sixteen. The following analysis of retarded school grade is self-explanatory.

NUMBER AND PER CENT OF CHILDREN OF RETARDED SCHOOL GRADE, BY AGE AND SEX: FROM WORK PERMITS ISSUED JULY 1, 1918 TO JUNE 30, 1920.

	14 to 14½	14½ to 15	15 to 15½	15½ to 16	Total for All
	Years	Years	Years	Years	Ages
Boys					
Total number receiving work permitsNumber of retarded school gradePercentage of retarded grade	1,223	1,292	1,322	995	4,832
	996	984	1,207	858	4,045
	81.43%	76.15%	91.30%	86.23%	83.71%
Girls—					
Total number receiving work permitsNumber of retarded school gradePercentage of retarded grade	574	731	679	653	2,637
	471	508	599	535	2,113
	82.05%	69.49%	88.11%	81.91%	80.13%

In the two tables following, the average heights and weights of Iowa boys and girls to whom work permits were issued, for the given ages, are compared with standards and averages compiled by the following:

Bowditch, from observation of 4,327 boys and 3,681 girls in Boston public schools; Dr. W. Stephenson, averages from British and American Statistics; Frankel and Dublin, for the Metropolitan Life Insurance Company, from observations of 8,020 boys and 6,472 girls in New York City and up-state cities; and the United States Labor Statistics standards. The second comparative table of half-year ages between fourteen and sixteen, contrasts the averages of the Iowa Bureau of Labor with figures recently published by Baldwin, in charge of the Iowa Child Welfare Research Station at Iowa City, Iowa.

In both of these analyses, the Iowa Bureau of Labor figures compare favorably with the other authorities quoted. For age 14 to 15, the Iowa averages 62.15 inches for boys and 62.29 inches for girls, exceed the other standards; for age 15 to 16, the Iowa average 62.83 inches for boys ranks second, being exceeded by Bowditch average of 63.0 inches; and the Iowa average 62.69 inches for girls of this age stands first and considerably higher than the other standards.

Regarding weight, for age 14 to 15 years the Iowa average of 103.05 pounds for boys ranks highest but one, being slightly exceeded by the Frankel and Dublin figure (103.38 pounds) for New York City boys; the Iowa average weight of 106.17 pounds for girls exceeds all of the other standards quoted. For age 15 to 16, the Iowa average of 108.32 pounds for boys ranks third from the highest, Bowditch giving 110.8 pounds and Frankel and Dublin 109.69 pounds; the Iowa weight is above the average of those quoted, however. The weight of Iowa girls, on the other hand, ranks highest of the standards given.

A comparison of the "height-weight coefficients" (the number of pounds per inch), is of equal interest. For age 14 to 15, for boys the Iowa coefficient 1.66 is second to the Frankel and Dublin coefficient 1.68 for New York City boys; for girls age 14 to 15 the Iowa coefficient 1.70 is almost the same as the Frankel and Dublin coefficient (1.71) for New York City girls. For age 15 to 16, the Iowa coefficient 1.72 for boys ranks third out of the six

standards quoted, while the coefficient 1.75 for girls shares first place with the Frankel and Dublin figure, which is 1.75 for New York City girls.

A general view of the situation shows that the average development of Iowa boys who are given work permits when between 14 and 15 years of age, compares strongly and most favorably with other standards representing the nation and other localities in the United States; for age 15 to 16, the Iowa boys show a development just above the average of the standards given. The comparison for girls is more favorable than in the case of the boys, the Iowa girls showing a development as high as any other standard quoted. In the matter of height, both boys and girls of ages 14 to 15 and 15 to 16 either lead or are close to the highest standard; it is in the weight the change occurs; both boys and girls rank high in age 14 to 15, but in age 15 to 16, the Iowa boys take third place while the Iowa girls continue to hold first rank.

In the second comparison, the Bureau of Labor figures represent averages for work permit children, and the Baldwin figures represent what his investigations to date give as the normal development of children. In the table, the development of work permit boys age 14 to 14½ and 14½ to 15 years, exceeds the normal given by Baldwin, but for ages 15 to 15½ and 15½ to 16, the heights, weights and coefficients all are less than Baldwin's norms for boys of those ages. With reference to girls, those between 14 to 14½ and 14½ to 15 years who received work permits exceed Baldwin's norms, but not so much as do the boys of similar ages; and the work permit girls of age 15 to 15½ and 15½ to 16 show a decline from the Baldwin norms, which is more pronounced for the last half of the 15 year group.

In other words, the boys and girls who are 14 but under 15 years of age, and who received work permits, are taller and heavier than the normal development given by Baldwin, but from the age 15 up to 16, the work permit children do not reach the normal average height and weight, with the further difference that boys from 15 to 16 years of age are more below the normal than are the girls.

This information clearly indicates that the boys and girls who begin working at 14 years of age are usually larger and of more than average or normal development for children of their age; such fact is probably an incentive and an influence for securing employment in spite of youth. The fact that work permit children below age 15 are above normal, and those above age 15 are below normal development, may be explained in part by change of attitude of employers to children below and above the age fifteen. When the child applicant for work is 14 or 141/2 years, the employer considers as most important the physical development, and the under-developed child has not an equal chance with the strong, husky boy and girl; later at the age 15 and 15½, the employer, being assured of such age, will consider the age as a satisfactory safeguard and not criticize so closely on the basis of height or weight. Thus the child below normal development, who was refused work at age 14 or 141/2, may more readily secure employment when 15 or 151/2, his age counteracting largely the effect of subnormal height or weight.

HEIGHTS AND WEIGHTS OF IOWA BOYS AND GIRLS RECEIVING WORK PERMITS FROM JULY 1, 1918 TO JUNE 30, 1920, COMPARED WITH OTHER STANDARD HEIGHTS AND WEIGHTS.

	Average Hei by Age Cl		Average Weig by Age Cla		Number o Per	
Authority	14 to 15 Years	15 to 16 Years	14 to 15 Years	15 to 16 Years	Age 14 to 15 Years	Age 15 to 1 Years
Boys-	·					
owa Bureau of Labor, Obs. 4,727 boys Bowditch: (Observations of 4,327 boys in Boston public	62.15	62.83	103.05	108.32	1.66	1.72
schools)	61.0	63.0	99.3	110.8	1.63	1.76
Or. Wm. Stephenson; averages from British and American Statistics	59.60	62.27	93.46	104.90	1.56	1.61
Frankel and Dublin, for Met. Life Ins. Co. Obs. 5,393 boys, New York City	61.55	62.74	103.38	101.69	1.68	1.75
Obs. 2,627 boys, N. Y. Up-state cities	60.90	62.17	98.60	105.09	1.62	1.69
J. S. Labor Statistics	59.90	62.30	94.90	107.10	1.58	1.71
Girls—	62.29	62.69	106.17	109.68	1.70	1.75
owa Bureau of Labor, Obs. of 2,577 girls	02.29	02.09	100.11	103.00	1.10	1.10
schools)	60.0	61.4	100.3	108.4	1.67	1.71
or. Wm. Stephenson; averages from British and American Statistics	59.87	61.01	97.56	105.44	1.63	1.73
rankel and Dublin, for Met. Life Ins. Co.	61.19	61.59	104.54	107.57	1.71	1.75
Obs. of 4,650 girls, New York City	61.46	61.59	104.54	106.90	1.66	1.71
Obs. of 1,822 girls, N. Y. Up-state cities	59.90	61.10	98.40	106.10	1.60	1.73

AVERAGE HEIGHTS AND WEIGHTS OF IOWA BOYS AND GIRLS RECEIVING WORK PERMITS FROM JULY 1, 1918 TO JUNE 30, 1920.

Compared, by Half Years, With Measuring Scale for Normal Physical Development as Adopted by B. T. Baldwin, in Charge of Iowa Child Welfare Research Station.

	Age 1	4 to 14½	Years	Age 1	4½ to 15	Years	Age 1	5 to 151/2	Years	Age 1	5½ to 16	Years
	Height in inches	Weight in pounds	Pounds per inch	Height in inches	Weight in pounds	Pounds per inch	Height in inches	Weight in pounds	Pounds per inch	Height in inches	Weight in pounds	Pounds per inch
Boys— owa Bureau of Labor— (4,727 boys)	61.52	101.65	1.65	62.83	104.04	1.66	62.86	100.31	1.60	62.16	108.37	1.74
Baldwin: Iowa Child Welfare Research Station	61.0	94.9	1.56	62.2	98.9	1.59	63.7	104.9	1.65	65.1	115.9	1.78
towa Bureau of Labor— (2,577 girls) Baldwin: Iowa Child Welfare Re-	62.07	105.24	1.69	62.45	107.72	1.72	62.68	110.01	1.75	62.91	112.35	1.79
search Station	61.3	102.3	1.67	62.5	105.8	1.69	62.6	110.3	1.76	63.3	115.3	1.8

TABLE SHOWING HOW MANY WORK PERMITS WERE ISSUED DURING BIENNIAL PERIOD JULY 1, 1918 TO JULY 1, 1920.

Classified by City or Town, Fiscal Year, and Sex.

		l Year to July 1, 1919	July 1, 1919 t	l Year o July 1, 192
City or Town		1		
4	Boys	Girls	Boys	Girls
Ames			1	
tlantie	2		2	
AudubonBoone	35	8	3	5
Buffalo	3		3	,
Burlington	91	51	108	7-
ledar Rapids	139	36	157	6
lenterville	6	*******	2 2	
Charles City	3	1	16	
linton	46	17	52	14
Souncil Bluffs	53	20	88	13
Pavenportes Moines	308	142	205	8
es Moines	496 91	282	805 15	50 18
ubuque		9		
airfield	10 29	15	11 46	1
ort Dodge	9	13	35	3:
rinnell	10	1	10	
uttenberg			2	;
dependence			1	5
owa City	19	10	3 1	
eokuk	47	12	72	2:
a Porte City	8	8	8	:
ansing		**********	1	
arengoarshalltown	7		10 19	
ason City	68	7	124	3
ontrose			1	
uscatine	155	161	156	15'
ewton	35	5	13	
elweinskaloosa	8 5		10	
ttumwa	97	15	106	29
ella	8	10	8	11
ed Oak				
oland	4 2	9		
hellsburg	5			
nenandoah	7	10	17	1
oux City	236	121	324	186
bencer	3 2	3		
iptonoledo	23	9	2	
Vashington	9	2	11	10
aterloo	91	31	128	5
Vebster City	2		1	
Vilton Junction			4	
Totals	2,176	1,089	2,691	1,611

Increase in number of work permits issued to boys during last fiscal year, 525; and to girls, 522, for same period.

Number of Children with School Grade completed when work permit was issued, by Sex, Age and Locality.

PART I—AGES FROM 14 TO 14½ YEARS.

	-							Воу	S										Girls	,				
Locality	Ungraded	6th-B grade	6th-A grade	7th-B grade	7th-A grade	8th-B grade	8th-A grade	1st high	2nd high	3rd high	4th high	Totals	Ungraded	6th-B grade	6th-A grade	7th-B grade	7th-A grade	8th-B grade	8th-A grade	1st high	2nd high	3rd high	4th high	Totals
Totals Boone Burlington Cedar Rapids Clarinda Clinton Council Bluffs Davenport Des Moines Dubuque Fairfield Fort Dodge	1 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	3 3 11	1 9 16 1 7 6 13 46 5	122 	11 15 2 9 8 16 59 4 1	122 6 	1 15 22 1 5 9 31 57 20 3 1	127 12 7 3 2 6 49 7	19 2 1 1 1 6 2	1		1223 2 77 86 5 24 53 107 321 52 5 17	30 1 	14	3 1 	2 1 1 4 14 1	108 1 7 5 1 4 11 24 15	1 2 3 5 18 25		59 1 3 2 6 15 8	13 2 5 1			57 2 1 1 4 14 14 8
Fort Madison Grinnell. Iowa City Keokuk Laporte City Marengo Marshalltown Muscatine Newton	1 3 1 3 5 2	2	2 	3 1 1	3 2 1 10 1 3 3 10 13 3	1 1 3 1 2 8	1 8 1 1 3 11 9 4	1 12 8				11 4 31 7 10 49 56 11	6		2	1	1		1 2	1		1		17
Oskaloosa Ottumwa Pella Shenandoah Sioux City Poledo Washington Waterloo Miscellaneous	14	1	2 34 5	3 18 1	1 6 2 36 3 4 13 2	7 6	5 3 4 36 2 2 18 4	11 -1 4	1	1		3 43 6 6 159 5 8 50 7	7	1	1 1 1 10	7	9 1 1 3 4	7	1 5 3 14 1 1 4 2	8	1			6

^{*}Including Buffalo, 1 boy seventh A, 3 boys eighth A, 1 girl eighth A; Centerville, 1 boy seventh B, 1 girl sixth A; Kellogg, 1 boy eighth A; Red Oak, 1 girl eighth A; Roland, 1 girl first year high school; Sharpsburg, 1 boy seventh A, 3 girls seventh, 1 girl first year high school; Tipton, 1 girl seventh A.

Number of Children with School Grade completed when work permit was issued, by Sex, Age and Locality.

PART II—AGES 14 1/2 TO 15 YEARS.

								Воз	7.5				_						Girls	9				
Locality	Ungraded	6th-B grade	6th-A grade	7th-B grade	7th-A grade	8th-B grade	Sth-A grade	1st high	2nd high	3rd high	4th high	Totals	Ungraded	6th-B grade	6th-A grade	7th-B grade	7th-A grade	8th-B grade	8th-A grade	1st high	2nd high	3rd high	4th high	Totals
Totals	2 2		1 5 16 	8 8 8	250 1 4 9 3 4 3	122 5 5 1	294 2 20 28 7 4	200 3 7 4 1 9	1 3	4		1292 7 52 73 5 33 27	33 1 1 1	2	72 1 2 2 1 1 2	54	107 5 2	52	209 12 9 2	150 6 8 7	34 2 5	3		7
Daven,ort ses Moines ubuque 'airfield 'ort Dodge 'ort Madison	9 3 1 6	1 13	18 39 5	18 36 4	32 56 6 4 5	22 36 7	39 66 27 2	16 76 8	17	2		150 350 60 5 21 7	11 1 1	3 1 1 2	5 16 6	3 27 2 	3 24 13 2 3	5 26 4	25 46 24 	8 55 13 2	12 1	2		2
irinnell. owa City eokuk aporte City farengo farengo farshalltown		2	3 9	1	3 2 8 1 2	3 1 3 1	3 2	1 5 1	1			8 40 4 5			1	i	2 1	1	1 2 3	3 3 1				
lason City luscatine	1 1		18 3 1	1 -1 	9 26 1	2 7	12 12 3	11 6 5 1	9 5			51 75 14 3	2 8 	3	14			4	3 20 2	2 11				
ttumwa ella henandoah ioux City oledo ashington	3 1 8 1	1	9 34 4	7	12 1 2 34 1 4	14	9 2 4 32 2	7 1 1 19 2	3 	1		49 4 10 150 9 8	 4 1	2	7	9	5 1 17 3	5	5 2 1 26 2 1	16 1	1 4			4
Vaterloo Miscellaneous	4	3	1 2	8	9	5	6	8	1			45 12			4	1	4	1	5	7 4	1 .			4

^{*}Including Ames, 1 boy eighth A; Atlantic, 2 boys sixth A; Audubon, 1 boy first year high school; Buffalo, 2 boys eighth A; 2 girls eighth A; Centerville, 1 boy seventh B, 1 boy seventh A, 1 boy eighth B; Independence, 1 girl first year high school; Oelwein, 1 boy first year high school; Roland, 1 boy seventh A, 1 girl seventh A, 1 girl eighth A, 2 girls first year high school; Spencer 1 boy seventh A. Tipton 1 girl first year high school.

Number of Children with School Grade completed when work permit was issued, by Sex, Age and Locality.

PART III—AGES 15 TO 15½ YEARS.

	_							Boy	8									(Girls					
Locality	Ungraded	6th-B grade	6th-A grade	7th-B grade	7th-A grade	8th-B grade	8th-A grade	1st high	2nd high	3rd high	4th high	Totals	Ungraded	6th-B grade	6th-A grade	7th-B grade	7th-A grade	8th-B grade	8th-A grade	1st high	2nd high	3rd high	4th high	Totals
T'otals. Boone Burlington Cedar Rapids Clarinda Clinton Council Bluffs Davenport Des Moines Dubuque Fairfield Fort Dodge Fort Madison Grinnell Iowa City Keokuk Laporte City Marengo	1 3 1 13 2 	1 1 11 2	13 6 5 14 36 4 3 3 2	100 4 9 1 1 2 21 35 4 4	7 9 2 4 7 29 53 12 2 1 3	134 11 6 1 2 3 12 45 15 2 3 1	299 5 7 24 1 7 10 41 77 17 1 2 4 1 1	239 6 7 7 1 1 11 23 81 10 1 4 3 2 2 5	61 1 1 1 3 3 20 4			1322 12 43 69 7 24 45 144 371 68 9 20 12 4 6 23 8	26 1 2 	11 1 2 3 3 3	76 2 1 3 2 2 1 5 16 1	34 1 7 1 2 10 2 		77 3 7 9 1 1 9 16 9	178 1 14 10 6 4 29 52 4 3 1	127 6 11 4 3 	45 2 2 2 2 2 2 4 26	1	1	678 18 45 45 38 4 12 73 199 26 2 14
Marshalltown Mason City Muscatine Newton	6 5	2	1 3 23 1	2	9 18 3	3 2	9 19 1	2 11 11 2	6 8 2	2 1		3 46 92 11 4	1 2 5	1	21	3	3	5	4 17	10	5	4	1	7
Oskaloosa Ottumwa Pella Shenandoah Sioux City Toledo	1 6	2	9 2 32 1	7	16 1 2 32 2	7	10 1 1 38 1	7 1 24 2	1 3	2		60 3 7 154 6	1 1 3	1	5 2 1 11 11	4	5 2 1 13 1	9	2 2 18	2 1 16 1	1 1	2		7
Washington Waterloo *Miscellaneous	2	1	1 4 2	2	7 2	7 3	1 16	12	3			3 54 10					5 4	3 2 1	7	4 3	2	1		2

^{*}Including Atlantic, 1 girl, seventh A; Audubon, 1 boy, eighth A, 1 boy sixth A; Buffalo, 1 girl, eighth A; Centerville, 1 boy seventh A; Independence, 1 boy, ungraded; Lansing, 1 boy, first year high school; Red Oak, 1 girl seventh A; Roland, 1 boy, seventh A, 1 girl seventh A, 3 girls first year high school; Sharpsburg, 1 boy, ungraded; Shellburg, 1 boy eighth A; Spencer, 2 boys eighth B; Tipton, 1 girl seventh A.

Number of Children with School Grade completed when work permit was issued, by Sex, Age and Locality.

PART IV—AGES 15½ TO 16 YEARS.

								Boy	8										Girls	9		-		
Locality	Ungraded	6th-B grade	6th-A grade	7th-B grade	7th-A grade	8th-B grade	8th-A grade	1st high	2nd high	3rd high	4th high	Totals	Ungraded	6th-B grade	6th-A grade	7th-B grade	7th-A grade	8th-B grade	8th-A grade	1st high	2nd high	3rd high	4th high	Totals
Totals Boone Burlington Cedar Rapids Clarinda Clinton Council Bluffs Davenport	5 1	1 2	5 5 11	62 7 1 3 2 9	159 2 4 10 4 2 18	76 1 4 	231 7 10 9 8 8 8 26	180 6 3 13 13	70 2 3 	18	3	995 15 31 65 2 22 24 88	23	8	69 4 1	29 	75 3 5 1 2	1 1 7	167 5 3 6	138 5 7 5 5 4 2 11	72 2 2 2 1 5	20	3	65 1 1 2
Des Moines Dubuque Fairfield Fort Dodge Fort Madison Grinnell Iowa City Keokuk	2 3 1 1	1	3	13 1 1	33 3 1 2 8	24 1 7 2	52 11 3 2 1	70 14 1 1 2 2	1 1	3	1	273 22 2 20 15 3 4 15	8 1 3	2	7 4 -2 1	7 2 		22 4 		57 6 1 3 1 2	36	10	1	21
Laporte City	6 3		24	6	9 20 2	10 2	9 14 5 2	11 5 6 1	1 6 5 2 1	2 4 1		2 1 46 91 18 5	1 1 		23	4	2 8	3 1	3 11 1	3 7 1	3 10	1 4		1
Ottumwa Pella Shenandoah Sioux City Toledo Washington Waterloo **Miscellaneous	3		11 4 1 1 11 11 2	6 1 2	1 15 11 2	8	11 1 32 1 11	16 2 17	7	3 1	1	46 3 2 95 4 3 69	 4 1		3 15 3	1 2 2	1 7 8	1 7 1	1 3 19 1 16 2	1 5 10 	1 3	2 1	1	

^{*}Including Audubon, 1 boy sixth A; Charles City, 1 boy eighth A, 1 boy seventh A; Guttenberg, 1 boy eighth A, 1 boy first year high school, 1 girl seventh A, 1 girl eighth A; Independence, 1 girl first year high school; Montrose, 1 boy eighth A; Red Oak, 1 girl eighth A; Roland, 1 boy eighth A; Tipton, 1 boy sixth A, 1 boy seventh A.

Number of Children with School Grade completed when work permit was issued, by Sex, Age and Locality.

PART V—AGES 14 TO 15 YEARS.

	-							Воу	S										Girls					
Locality	Ungraded	6th-B grade	6th-A grade	7th-B grade	7th-A grade	8th-B grade	8th-A grade	1st high	2nd high	3rd high	4th high	Totals	Ungraded	6th-B grade	6th-A grade	7th-B grade	7th-A grade	Sth-B grade	Sth-A grade	1st high	2nd high	3rd high	4th high	Totals
Totals	18 6 2 14 1 3	4 7 5 4 24 	384 2 14 32 1 13 11 31 85 10 	224 19 16 1 10 33 83 7 2	494 1 15 24 5 13 11 48 115 10 5 8 8 5 3 18	244 17 11 1 12 43 72 15 3 4 2 6 2	573 35 50 1 12 13 70 123 47 3 2 2 16 1	327 3 19 11 1 12 6 22 125 15 1 1 1 1	65 2 2 1 3 2 23 2	3		2,515 9 129 159 10 57 80 257 671 112 10 38 18 13 12 71 8	63 2 2 3 2 21 2 2 1	28 2 9 4 -1 3	156 3 5 5 2 1 6 9 37 10 -4	87 6 1 7 41 3 1	215 6 9 5 	122 	371 16 20 5 2 7 3 40 79 53 	209 7 11 9 -1 2 14 70 21 2 4 3 1	47 2 5 6 17 1	3		1,300 35 66 36 11 12 22 100 366 151
Marshalltown. Mason City. Muscatine. Newton. Oskaloosa. Ottumwa. Pella. Shenandoah. Sioux City. Toledo. Washington. Waterloo. Waterloo. Miscellaneous.	1 3 9 2 1 2 9	1 1 2 2 2 3		2 4 1 2 7 25 9 1	3 19 39 4 1 18 3 2 70 4 8 22 5	3 21 11 1	5 23 21 7 14 5 8 68 4 2 24 7	1 23 14 5 1 11 1 1 30	11 6 	2		16 100 131 25 6 92 10 16 309 14 16 95	2 14 11 1 1	5	1 2 35 7 1 1 17 2 5	6	1 2 33 1 5 1 26 1 4 7 5	10 1 1 12 4	2 7 35 2 6 7 4 40 3 2 9 5	6 17 2 24 1 8 6	1 6 1 1 1 4	1 		24 16 2 1 15 3

The items of the miscellaneous column can be found in Parts I and II, of Table No. 1.

Number of Children with School Grade completed when work permit was issued, by Sex, Age and Locality.

PART VI—AGES 15 TO 16 YEARS.

	-							Воу	S				!						Girls	1				
Locality	Ungraded	6th-B grade	6th-A grade	7th-B grade	7th-A grade	8th-B grade	8th-A grade	1st high	2nd high	3rd high	4th high	Totals	Ungraded	6th-B grade	6th-A grade	7th-B grade	7th-A grade	8th-B grade	8th-A grade	1st high	2nd high	3rd high	4th high	Totals
Totals	1 3 1 27 4	1 1 3 12 	1	162 6 16 2 4 4 30 48 4 1 4	390 2 11 19 2 8 9 47 86 15 3 11	210 12 10 1 3 4 18 69 16 2 10 2 1 1 2	530 12 17 33 1 15 18 67 129 28 1 5 6 2	419 12 10 20 1 23 38 151 14 1 5 4 2 4 7	131 3 4 1 5 6 47 4 1 1 1 2	3	3 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2,317 27 74 134 9 46 69 232 644 90 11 40 27 7 10 38 10 5	49 1 2 1 3 13 4 3 2	19 2 2 2 1 7 5	2 1 7 2 3 1 9 23 4	63 3 9 1 1 -7 17 4 -3 2	9 7 1 3 17 48 6 1 2 6	126 3 8 10 1 16 38 13 1 1	6 17 16 5 43 95 31	265 11 18 9 	117 4 4 2 	28	1 1	1,332 27 64 63 5 20 10 128 416 73 2 16 222 1
Marsh alltown. Mason City_ Muscatine. Newton Oskaloosa Ottunwa Pella Shenandoah Sioux City Toledo.	8 6 2 	3	47 1 2	8	18 38 5 1 21 2 2 47 2	13 4 10	18 33 6 2 21 2 2 70 1	2 22 16 8 3 8	12 13 4 1 5	4 5 1 1 5 1		92 183 29 9 106 6 9 249 10	2 3 5 	1	7 2 4 26 1	7	2 11 1 9 2 2 2 20 1	8 1 1 1 16	7 28 1 6 3 3 37	3 17 1 4 2 5 26 1	3 15 2 4	1 8 	1	221
Washington	4	1	15 4	4	18	12 3	2 27 4	29 2	9	3	1	6 123 19	1		3	2	13 5	3	23	8	6	2		6

The items of the miscellaneous column can be found in Parts III and IV, of Table No. 1.

Number of Children with School Grade completed when work permit was issued, by Sex, Age and Locality.

PART VII—AGES 14 TO 16 YEARS.

								Воу	8										Girl	3				
Locality	Ungraded	eth-B grade	6th-A grade	7th-B grade	7th-A grade	8th-B grade	Sth-A grade	1st high	2nd high	3rd high	4th high	Totals	Ungraded	6th-B grade	6th-A grade	7th-B grade	7th-A grade	8th-B grade	8th-A grade	1st high	2nd high	3rd high	4th high	Totals
Totals Boone Burlington Cedar Rapids Clarinda Clinton Council Bluffs Davenport Des Moines Dubuque Fairfield Fort Dodge Fort Madison Grinnell Iowa City Keokuk Laporte City Marengo	11 7 7 3 15 5 5 45 10 10 12 18 1 1 3 1 9 1 1	90 -4 8 -1 8 4 36 	709 3 21 62 2 24 21 56 156 15 3 11 9 1 3 23 3	386 -25 32 2 5 14 63 131 11 1 6	884 3 26 43 7 21 20 95 201 25 8 11 19 5 6 25 8	29 21 2 3 16 61 141 31 2 13 5 3 8 2	1,103 15 52 83 2 27 31 137 252 75 4 8 8 8 2 2 3 2 12 2 27 25 2 25 2 27 25 2 25 2 25 2 2	746 15 29 31 2 14 19 60 276 29 1 6 4 3 5	196 5 6 2 4 5 8 70 6 	1 6	3	4,832 36 203 293 199 103 149 489 1,315 202 21 78 45 20 22 109 18 8	112 2 4 1 	47 4 2 1 16 7	301 5 6 12 4 4 7 18 60 14 6 2	9 10 1 1 1 1 4 58 7 4 4	386 6 18 12 1 5 4 31 96 34 1 1 2	248 3 11 12 1 -5 26 82 42 -2 1	716 22 37 21 2 13 8 83 174 84 	474 18 29 18 	164 6 7 	35	1 1	2,637 600 124 98 98 311 33 230 784 22 48 2 13 34 8
Marchallown Mason City Museatine Newton Oskaloosa Ottumwa Pella Shenandoah Sioux City Toledo Washinston Waterloo Miscellaneous	3 21 10 10 1 2 15 2 1 31	1 3 1 2 5	2 3 12 79 7 3 43 1 5 104 6 3 21 7	2 4 9 2 21 	3 37 77 9 2 39 5 4 117 6 8 40 9	13 13 38 23 4	5 41 54 13 2 35 7 10 138 5 4 51	3 45 30 13 4 19 1 2 70 4 3 41 4	23 19 4 1 10 3 11 2 1	5 1 1 7	1	17 19 192 314 54 15 198 16 25 558 24 22 218 38	2 5 19 	3	1 2 79 14 3 5 43 1 2 8 1	13 2 1 22 3	1 4 44 2 14 3 2 46 2 4 20 10	18 2 2 1 28 3 7 1	2 14 63 3 12 10 7 77 77 3 3 32 8	9 34 1 4 4 5 5 5 8 2	1 3 8	1 9 2 4	1	6 39 307 8 51 23 25 300 9 13 97 30

The items of the miscellaneous column can be found in Parts I, II, III and IV. of Table No. 1.

TABLE NO. 2—HEIGHTS AND WEIGHTS, IOWA CHILDREN.

Correlation Between Heights and Weights of Iowa Boys and Girls, Heights in Inches, Weights in 5-lb. Groups.

PART I—BOYS 14 TO 15 YEARS.

(Pounds)

	1	_			1	-	-			_			(LUI	_	1		1		-	1	1								
Height in Inches	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 to 94	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	175 to 179	to	to	190 to 194	Total cases	Avera weigh
		1 2	1 10 5 5 2 5 1	1 2 1 1 9 16 14 22 10 8 1 1 1	2 5 5 16 8 35 17 19 8 4	1 1 4 2 13 16 38 55 50 26 14 4	1 2 2 2 7 14 30 39 61 33 43 17	1 1 1 2 3 5 3 16 34 59 44 50 38	4 1 2 16 51 41 65 47	1 1 4 6 14 25 42 36	1 2 3 10 12 28 52	2 1 8 9 38 38 33	1 1 8 4 15 13	10 4	1 4 4	3 2												2 3 3 4 4 10 25 29 72 65 153 185 289 207 321 256	93.5 83.1 79.5 87.0 78.5 89.0 75.1 84.4 88.1 83.4 87.0 99.1 99.2 97.3
			1				8 2 2 	33 10 2 2 2	36 6 10 3 1 1	48 22 15 4	64 26 14 5 4 2 1 1	51 25 17 6 3 1 3	26 21 18 10 9 5 5 1	13 15 26 10 6	9 16 9 13 8 8 8 2 4 1	3 7 11 7 11 5 1	1 2 5 7 3 4 1 1	1 3 1 1 1	2 2 2	2							2	304 154 137 72 51 35 16 8 3 1	118.9 116.5 118.9 125.7 131.1 134.6 128.9 122.5 105.3 112.0 130.0
Total cases	1	14	32	90	124	229	264	304	289	219	227	197	137	90	79	50	28	11	8	8	4			2		1	2	2410	102.8

TABLE NO. 2-HEIGHTS AND WEIGHTS, IOWA CHILDREN.

Correlation Between Heights and Weights of Iowa Boys and Girls, Heights in Inches, Weights in 5-lb. Groups.

PART II—BOYS 15 TO 16 YEARS.

(Pounds)

Height in Inches	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 to 94	to	to	to	to	115 to 119		to	to	to	to	to	to	to	to	to	to	175 to 179	to	to	to	Total cases	Averag
							1																					1	92.00
							1	1																				2	93.00
	7					4	1																					2 6	91.50 82.50
	.1.			1						1						2,7,7,7												2	90.00
							2																					2	91.50
		2	2	2	2	2		1	1																			12	79.71
		1	2	9	12	7	3	2	3		1																	15 33	80.70 85.68
		1	2	5	1	5	9	7	1		1																	29	86.59
3		1	1	9	20	20	23	16	6	4	1																10° 10° 14° 10°	101	87.86
)				7	10 16	22 30	23 36	23 57	10	3	10	5	5	1		1												104 242	93,26 97,69
) 	700000	1		2	3	16	31	40	22	15	23	9	8	3	2	1				. 4					7.77			183	100.10
2					4	10	25	57	47	27	37	23	20	6	2	1	1											260	104.44
					1	5	8	17	54	49	45	27	21	12	5				2									246	110.31
			1	1		3	4	11	35	54	53	24	40 34	20 26	14	12	3	1										294 180	111,12 118,23
}				1	1	2	4	2	6	15	23	36	28	34	21	17	13	7	9			7					1	208	127.41
							1			6	9	9	20	19	12	11	6	3	2			3	1					102	126,60
}					1	1		1		1	5	6	15	10	17	11	6	3	2	1	1		1					82	128.82
)								1				3	3	1	8	8	8	4	1									43	132.53 127.84
					1		2				4	1	1	C	2	4	5	3	1	1								20	128.28
										1					2		1	2	1		1							8	138.88
																	1			-								1	142.00
Total cases	1	5	10	34	73	133	175	251	239	217	244	189	195	14	107	87	48	28	18	4	2	6	2			-	1	2,218	109.29

CHILD LABOR

TABLE NO. 2—HEIGHTS AND WEIGHTS, IOWA CHILDREN.

relation Between Heights and Weights of Iowa Boys and Girls, Heights in Inches, Weights in 5-lb. Groups.

PART III—GIRLS 14 TO 15 YEARS.

													(Pot	inds))														
ight n hes	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 to 94	95 to 99	100 to 104	105 to 109	110 to 114	115 to 119	120 to 124	125 to 129	130 to 134	135 to 139	to	to	150 to 154	155 to 159	160 to 164	165 to 169	170 to 174	175 to 179	180 to 184	185 to 189	190 to 194	Total cases	Averag weight
							1																					1	92.00
	2	1	3		2 3 2 4 7 7 6 5 3 1	3 1 2 2 10 26 9 9 5 4 1	1 2 2 1 1 1 1 1 1 1 2 3 1 7 1 9 1 1	1 1 1 3 6 31 32 32 32 30 12 5 1	3 1 3 1 3 6 6 20 17 49 33 28 12 8 1	1 1 1 4 15 16 32 43 29 7 8	1 2 2 8 17 31 19 28 15 10 7 7 2	5 4 10 22 29 27 9 9 3 3 3	4 5 12 18 10 11 5 3 1	1 2 5 7 7 13 10 7 5 3 3 3 1	3 5 6 7 1 1 1 1	5 3 4 1 1	1 1 1 3 4 2 2	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	2 2 2 1 1	1 1 1 1 1 1	1 1	1				1	i	3 3 6 8 13 111 25 60 143 138 224 212 184 87 56 19 11 6	105.83 102.16 92.83 81.00 95.23 87.27 92.54 96.47 101.93 106.12 109.51 111.02 116.11 116.86 119.89 116.36 120.17
ases	2	1	4	18	33	72	100	155	185	157	143	123	71	58	38	14	12	7	9	4	2	2				1	1	1,212	105.81

TABLE NO. 2—HEIGHTS AND WEIGHTS, IOWA CHILDREN.

Correlation Between Heights and Weights of Iowa Boys and Girls, Heights in Inches, Weights in 5-lb. Groups.

PART IV—GIRLS 15 TO 16 YEARS.

(Pounds)

Height in Inches	60 to 64	65 to 69	70 to 74	75 to 79	80 to 84	85 to 89	90 to 94	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	to	185 to 189	to	Total	Averag
						1				1																		1 2	98.00 95.00
			1		1			1	2	1			1															3 3 4	103.56 106.56 95.25
	l		2	1 8	1	6	4 3	3 8	5 5	2	1 1 5	1																6 23 45	85.17 95.20 94.90
					11 7	9 9 7	10 8 20	30 23 27	24 27 42	11 28 33	17 20 21	6 14 19	5 10 24	3 8	1 13	1 1 3	1		1									130 153 225	102.23 104.30 100.93
				1	3 2	5	4 7	24 16	41 42 12	31 25 12	43 33	23 35 21	24 15	18 12	12 16 15	4 4	2		2						1			234 216 131	107.28 112.27 115.66
					2		1	2	10	5 2	13 6	12	10	9	7 3	1 6	2	2 2	1			1	1			40 00 00 00		81 40	119.60 127.50
									2	2		2	2 2 1	4	1	2	2	2	1									12 14 6	126.67 139.04 122.58
Total cases		2 00 00 00	-		27		-		-	-	-		114	-		-		12	-	1	3	2	-		-	3	-	1,330	135.00

Heights and Weights of Boys and Girls Granted Work Permits July 1, 1918, to July 1, 1920, by Locality.

PART I-AGES 14 TO 141/2 YEARS.

		Во	ys			Gi	rls	
Locality	Number of children	Average height (inches)	Average weight (pounds)	No. of pounds per inch	Number of children	Average height (inches)	Average weight (pounds)	No. of pounds per inch
The State	1,192	61.52	101.65	1.65	532	62.07	105.24	1.6
Boone	2	63.50	136.50	2.12	7	60.86	107.28	1.7
Burlington	$\frac{2}{75}$	61.99	102.80	1.51	27	61.35	104.00	1.6
edar Rapids	76	60.75	99.93	1.64	18	62.03	109.80	1.7
linton	20	61.98	104.35	1.68	4	60.63	94.50	1.5
Council Bluffs	50	61.11	102.78	1.68	15	61.97	104.33	1.6
Clarinda	6	63.17	102.50	1.62	1	62.00	104.00	1.6
Davenport	113	61.61	99.41	1.61	44	61.78	105.48	1.7
Des Moines	304	61,12	101.62	1.64	136	60.92	104.93	1.6
Oubuque	49	61.65	104.03	1.69	78	62.09	103.05	1.6
Fairfield	5	56.80	87.80	1.55		02.00		
Fort Dodge	17	60.65	103.41	1.71	3	63.33	120.67	1.9
Fort Madison	9	62.56	102.67	1.64	8	63.31	107.38	1.6
Frinnell	4	64.38	98.75	1.53	U	00.01	101.00	1.1
owa City	4	64.00	100.00	1.56	3	63.33	111.00	1.7
Keokuk	31	63.00	99.58	1.61	5	65.40	117.30	1.8
Marshalltown	10	61.60	104.30	1.69	2	63.00	109.50	1.
Mason City	46	61.52	104.39	1.70	11	60.60	92.50	1.
Muscatine	57	63.21	103.60	1.67	74	62.61	105.68	1.0
	9	62.00	98.45	1.59	1	63.00	122.00	1.5
Newton	44	62.26	101.91	1.63	3	60.50	120.33	1.8
Pella	6	63.58	106.83	1.68	7	61.29	96.00	1.
Shenandoah	5	63.60	117.00	1.84	4	63.50	116.50	1.8
	160	62.00	100.53	1.61	58	64.07	107.42	1.
Sioux City		62.00	100.53	1.71	4	61.75	101.50	1.
Washington	5	62.20	104.66	1.69	12	63.33	119.54	1.
Waterloo *Miscellaneous	50 34	62.87	104.00	1.69	7	62.85	94.93	1.5

^{*}Includes 7 boys from Marengo, 5 boys from Toledo, 4 boys from Laporte City, 3 boys each from Buffalo, Oskaloosa and Shellsburg, and one boy each from Ames, Atlantic, Centerville, Kellogg, Oelwein, Roland, Sharpsburg, Spencer and Wilton Junction.

^{*}Includes 2 girls each from Roland and Laporte City and Toledo, and 1 girl from Tipton.

Heights and Weights of Boys and Girls Granted Work Permits July 1.
1918, to July 1, 1920, by Locality.

PART II-AGES 141/2 TO 15 YEARS.

		Во	ys			G	irls	
Locality	Number of children	Average height (inches)	Average weight (pounds)	No. of pounds per inch	Number of children	Average height (inches)	Average weight (pounds)	No. of pounds per inch
The State	1,274	62.83	104.04	1.66	691	62.45	107.72	1.7
Boone	8	61.56	98.87	1.61	24	62.10	111.87	1.8
Burlington	49	60.94	90.24	1.48	32	62.26	111.62	1.7
Cedar Rapids	80	62.10	105.95	1.70	24	62.77	114.41	1.8
Minton	36	62.27	103.93	1.66	6	62.16	106.00	1.7
Council Bluffs	28	62.58	106.90	1.71	9	62.11	110.66	1.4
Clarinda	4	66.62	108.50	1.73	3	57.33	90.66	1.5
Davenport	153	61.20	99.75	1.62	57	62.81	105.38	1.6
Des Moines	343	63.32	102.34	1.61	194	62.18	107.38	1.7
Dubuque	54	62.03	102.02	1.64	62	62.15	103.11	1.6
Fairfield	6	64.25	106.83	1.66	02	02.10	100.11	2
Fort Dodge	24	61.33	105.14	1.71	8	62.37	114.32	1.8
Fort Madison	8	62.81	107.12	1.70	10	64.00	105.20	1.6
Frinnell	9	65.05	103.77	1.59	1	64.50	101.00	1.5
owa City	8	63.00	109.62	1.74	6	64.67	103.33	1.5
Keokuk	40	63.57	105.61	1.64	8	63.75	106.93	1.6
Marshalltown	6	65.08	103.50	1.59	1	63.50	111.50	1.7
Mason City	48	62.68	109.56	1.74	5	60.60	114.00	1.8
Muscatine	73	62.13	103.04	1.65	88	62.30	103.39	1.6
Newton	11	62.22	111.77	1.79	3	61.33	125.66	2.0
Ottumwa	48	62.57	106.77	1.70	17	66.29	106.35	1.6
Pella	4	64.25	106.25	1.65	4	61.87	95.25	1.5
Shenandoah	10	63.75	119.90	1.88	2	65.50	104.50	1.5
Sioux City	137	62.57	104.37	1.66	93	64.99	110.60	1.7
Washington	9	63.50	112.33	1.76	4	59.87	104.50	1.7
Waterloo	45	63.27	109.75	1.73	15	62.83	108.36	1.7
Miscellaneous	33	63.81	110.41	1.72	15	62.40	111.26	1.8

^{*}Includes 8 boys from Toledo, 5 boys from Marengo, 4 boys each from Laporte City and Oelwein, 3 boys each from Oskaloosa and Wilton Junction, 2 boys from Buffalo and 1 boy each from Atlantic, Audubon, Centerville and Shellsburg.

^{*}Includes 4 girls from Toledo, 2 girls from Laporte City and Buffalo, 3 girls from Roland, 1 each from Guttenberg, Independence, Tipton and Red Oak.

Heights and Weights of Boys and Girls Granted Work Permits July 1, 1918, to July 1, 1920, by Locality.

PART III-AGES 15 TO 151/2 YEARS.

		Во	ys			Gi	rls	
Locality	Number of children	Average height (inches)	Average weight (pounds)	No. of pounds per inch	Number of children	Average height (inches)	Average weight (pounds)	No. of pounds per inch
The State	1,228	62.86	100.31	1.60	674	62.68	110.01	1.7
Boone	13	65.15	119.54	1.83	13	62.00	114.69	1.6
Burlington	43	60.64	103.33	1.70	42	62.86	104.45	1.6
Cedar Rapids	68	61.82	105.14	1.70	34	62.43	108.63	1.7
Clinton	24	62.79	111.85	1.78	10	62.70	101.25	1.6
Council Bluffs	42	62.68	104.52	1.69	6	62.25	105.67	1.6
Clarinda	5	60.95	118.60	1.95	2	61.25	99.50	1.6
Davenport	141	61.59	103.31	1.68	62	63.42	108.02	1.7
Des Moines	313	62.33	107.77	1.73	184	62.69	111.11	1.7
Dubuque	60	62.73	102.30	1.63	63	62.29	106.68	1.7
Fairfield	6	62.92	99.67	1.58	27	62.50	112.50	1.8
Fort Dodge	15	62.40	108.01	1.73		63.14	109.74	1.7
Fort Madison	12	62.54	110.21	1.72	12	60.17	109.25	1.7
Grinnell	3	62.15	114.63	1.83	-			
Iowa City	5	63.20	99.30	1.56	4	63.00	112.25	1.7
Keokuk	22	64.09	112.77	1.75	10	63.75	117.20	1.8
Marshalltown	2	63.50	91.50	1.44	1	64.00	115.00	1.7
Mason City	46	62.84	110.24	1.75	8	62.50	117.25	1.8
Muscatine	88	63.01	107.28	1.72	76	61.50	108.32	1.7
Newton	10	64.10	103.20	1.61	2	64.50	139.50	2.1
Ottumwa	64	62.98	108.02	1.71	10	64.50	114.05	1.7
Pella	2	64.00	107.50	1.68	5	60.30	99.40	1.6
Shenandoah	8	64.36	115.88	1.80	4	60.38	107.50	1.7
Sioux City	146	63.87	109.46	1.73	81	63.46	115.02	1.8
Washington	2	66.00	124.00	1.88	3	61.33	93.00	1.5
Waterloo	54	63.93	117.37	1.84	21	62.81	117.28	1.8
*Miscellaneous	34	62.28	103.30	1.66	12	65.41	106.50	1.7

^{*}Includes 7 boys from Toledo, 6 boys from Laporte City, 4 boys from Marengo, 3 boys from Oskaloosa, 2 boys each from Audubon, Spencer and Oelwein, 1 boy each from Buffalo, Centerville, Independence, Lansing, Roland and Shellsburg, Sharpsburg and Atlantic.

^{*}Includes 3 girls each from Roland and Toledo, 2 girls from Laporte City and 1 girl each from Guttenberg, Tipton, Atlantic and Buffalo.

Heights and Weights of Boys and Girls Granted Work Permits July 1, 1918, to July 1, 1920, by Locality.

PART IV-AGES 151/2 to 16 YEARS.

		Во	ys			Gi	rls	
Locality	Number of children	Average height (inches)	Average weight (pounds)	No. of pounds ver inch	Number of children	Average height (inches)	Average weight (pounds)	No. of pounds per inch
The State	1.033	62.16	108.37	1.74	680	62.91	112.35	1.79
Boone	15	64.00	116.35	1.81	15	62.53	112.33	1.79
Burlington	32	64.89	108.67	1.67	24	63.01	101.83	1.6
Cedar Rapids	71	62.44	107.57	1.73	26	62,55	112.09	1.7
Clinton	23	63.82	112.43	1.76	11	63.40	113.22	1.7
Council Bluffs	21	62.85	113.18	1.80	8	61.56	108.63	1.7
Clarinda	2	62.00	107.50	1.73	1	65.00	117.00	1.8
Davenport	102	62.34	103.87	1.66	59	62.64	107.03	1.7
Des Moines	270	63.76	102.54	1.60	215	63.12	111.64	1.7
Dubuque	27	C2.11	105.66	1.70	43	64.71	106.95	1.6
Fairfield	3	65.16	120.00	1.84	10	01.11	100.00	1.0
Fort Dodge	18	62.72	107.02	1.70	15	63.40	109.60	1.7
Fort Madison	15	66.86	111.63	1.66	8	62.37	109.68	1.7
Grinnell	3	63.33	113.66	1.79	1	65.00	117.00	1.8
lowa City	5	66.20	117.60	1.76	î	63.00	115.00	1.8
Keokuk	25	63,30	110.24	1.73	10	65.00	109.55	1.6
Marshalltown	1	58.00	90.00	1.55	1	63.00	75.00	1.1
Mason City	43	61.70	108.67	1.59	16	63.18	113.03	1.7
Muscatine	85	62.94	107.84	1.71	79	62.38	116.12	1.8
Newton	18	62.22	113.88	1.83	2	62.00	125.00	2.0
Ottumwa	46	63.69	112.44	1.76	14	63.67	114.85	1.8
Pella	4	63.75	96.00	1.50	3	63.83	102.66	1.6
Shenandoah	1	64.00	114.00	1.78	15	61.90	107.20	1.7
Sioux City	105	64.48	107.29	1.66	66	63.34	111.87	1.7
Washington	2	64.00	114.00	1.78	00	00.01	111.01	1.1
Waterloo	67	64.22	118.95	1.85	36	62,36	111.35	1.7
Miscellaneous	29	63.72	112.50	1.71	11	63.68	113.00	1.7

^{*}Includes 5 boys from Oskaloosa, 4 boys from Toledo, 3 boys each from Webster City and Centerville, 2 boys each from Charles City, Tipton, Guttenberg, Laporte City and Oelwein, 1 each from Audubon, Marengo, Montrose and Roland.

^{*}Includes 4 girls from Laporte City, 3 girls from Wilton Junction, 1 girl each from Guttenberg, Independence, Red Oak and Roland.

Heights and Weights of Boys and Girls Granted Work Permits July 1, 1918, to July 1, 1920, by Locality.

PART V-AGES 14 TO 15 YEARS.

		Во	ys			Gir	rls	
Locality	Number of children	Average height (inches)	Average weight (pounds)	No. of pounds per inch	Number of children	Average height (inches)	Average weight (pounds)	No. of pounds per inch
The State	2,466	62.15	103.05	1.66	1,223	62.29	106.17	1.7
Boone	10	61.95	106.40	1.71	31	62.01	110.80	1.7
Burlington	124	62.39	101.07	1.61	59	63.37	107.35	1.6
Cedar Rapids	156	61.46	103.08	1 67	42	62.45	112.67	1.8
Clinton	56	62.16	104.08	1.67	10	61.55	101.40	1.6
Council Bluffs	78	61.60	104.26	1.69	24	62.02	106.70	1.7
Clarinda	10	62.95	105.05	1.50	4	53.50	94.00	1.7
Davenport	266	61.37	99.61	1.56	101	62.26	105.41	1.6
Des Moines	647	62.28	101.54	1.62	330	61.96	106.37	1.7
Dubuque	103	61.85	102.99	1.66	140	62.11	102.33	1.6
Fairfield	11	60.81	98.18	1.61	110	02.11	105.00	1.0
Fort Dodge	41	63.48	104.42	1.64	11	62.63	116.04	1.8
Fort Madison	17	62.67	104.76	1.67	18	63.69	111.72	1.7
Grinnell	13	64.76	102.23	1.57	1	64.50	101.00	1.5
Iowa City	12	63.33	106.41	1.68	9	64.22	107.00	1.6
Keokuk	71	62.90	102.97	1.63	13	63.61	110.92	1.7
Marshalltown	16	62.90	104.00	1.65	3	63.16	110.16	1.7
Mason City	94	62.11	107.03	1.73	16	60.59	99.21	1.6
Muscatine	130	62.06	103.33	1.66	162	62.44	104.44	1.6
Newton	20	62.12	115.77	1.86	4	61.75	124.75	2.0
Ottumwa	92	62.42	104.51	1.67	20	63.95	113.45	1.7
Pella	10	63.85	106.60	1.66	11	61.50	95.72	1.5
Shenandoah	15	63.70	119.00	1.86	6	64.17	112.17	1.7
Sioux City	297	62.58	102.30	1.66	151	62.77	109.50	1.7
Washington	14	63.03	110.28	1.74	8	60.81	103.00	1.6
Waterloo	95	62.60	107.07	1.71	27	63.01	113.33	1.7
*Miscellaneous	67	63.23	107.80	1.70	22	63.09	108.50	1.7

^{*}Includes 13 boys from Toledo, 12 boys from Marengo, 8 boys from Laporte City, 6 boys from Oskaloosa, 5 boys each from Oelwein and Buffalo, 4 boys from Shellsburg and Wilton Junction, 2 boys each from Centerville and Atlantic, 1 each from Ames, Audubon, Kellogg, Roland, Sharpsburg and Spencer.

^{*}Includes 6 girls from Toledo, 5 girls from Roland, 4 girls from La Porte City, 2 girls each from Buffalo and Tipton, 1 girl each from Guttenberg, Independence and Red Oak.

Heights and Weights of Boys and Girls Granted Work Permits July 1, 1918, to July 1, 1920, by Locality.

TABLE VI-AGES 15 TO 16 YEARS.

Locality	Boys				Girls			
	Number of children	Average height (inches)	Average weight (pounds)	No. of pounds per inch	Number of children	Average height (inches)	Average weight (pounds)	No. of pounds per inch
The State	2,261	62.83	108.32	1.72	1,354	62.69	109.68	1.7
Boone	28	64.33	114.33	1.78	28	62.29	108.74	1.7
Burlington	75	62.45	105.60	1.69	66	62.92	103.50	1.6
Cedar Rapids	139	62.13	106.38	1.71	60	62.48	110.30	1.7
Clinton	47	63.29	112.14	1.77	21	63.07	112.29	1.7
Council Bluffs	63	62.08	107.41	1.73	14	61.85	107.36	1.7
Clarinda	7	66.00	123.50	1.87	3	62.50	105.33	1.6
Davenport	243	61.91	103.46	1.67	121	62.21	107.51	1.7
Des Moines	583	63.21	105.72	1.67	399	62.92	111.40	1.7
Dubuque	87	62.54	103.33	1.65	106	63.31	106.78	1.7
rairfield	9	61.44	106.33	1.73	2	62.50	112.50	1.8
Fort Dodge	33	62.53	107.51	1.72	22	63.32	109.47	1.7
ort Madison	27	63.41	107.30	1.74	20	63.15	109.43	1.7
rinneil	6	62.92	115.67	1.84	1	65.00	117.00	1.8
owa City	10	65.00	108.60	1.67	5	61.00	112.80	1.7
eokuk	47	63.88	111.64	1.75	20	64.38	113.38	1.7
farshalltown	3	61.66	91.00	1.49	2	62.50	95.00	1.4
lason City	89	62.29	109.48	1.76	24	62.88	114.44	1.8
fuscatine	173	63.40	112.73	1.76	155	62.61	107.83	1.7
ewton	28	63.28	110.14	1.74	4	63.25	132.00	2.0
ttumwa	110	63.28	109.87	1.73	24	64.02	116.60	1.8
ella	6	63.83	99.83	1.56	8	61.62	100.62	1.6
henandoah	9	64.33	115.66	1.78	19	61.57	107.26	1.7
ioux City	251	63.55	112.53	1.77	147	63.40	113.64	1.7
Vashington	4	65,00	119.00	1.83	3	61.33	93.00	1.5
Vaterloo	121	64.09	118.24	1.84	57	62.52	113.54	1.8
Miscellaneous	63	60.19	105.72	1.71	23	63.40	107.92	1.7

^{*}Includes 11 boys from Toledo. 8 boys each from Laporte City and Oskaloosa, 5 boys from Marengo. 4 boys each from Centerville and Oelwein, 3 boys each from Audubon and Webster City, 2 boys each from Charles City, Guttenberg, Roland, Spencer and Tipton, 1 boy each from Independence, Montrose, Sharpsburg, Shellsburg, Atlantic, Buffalo and Lansing.

^{*}Includes 6 girls from Laporte City, 4 girls from Roland, 3 girls each from Toledo and Wilton Junction, 2 girls from Guttenberg, 1 girl each from Atlantic, Buffalo, Independence, Red Oak and Tipton.

Heights and Weights of Boys and Girls Granted Work Permits July 1, 1918, to July 1, 1920, by Locality.

PART VII—AGES 14 TO 16 YEARS.

Locality	Boys				Girls			
	Number of children	Average height (inches)	Average weight (pounds)	No. of pounds per inch	Number of children	Average height (inches)	Average weight (pounds)	No. of pounds per inch
The State	4,727	62.23	103.37	1.66	2,577	62.63	108.02	1.73
AmesAtlantie	1 3	64.00 59.33	107.50 114.66	1.66	1	63.00	110.00	1.79
AudubonBoone	38	63.12 63.85	119.22 114.81	1.88 1.79	59	62.08	108.15	1.74
Buffalo	6	63.16	96.50	1.52	3	65.00	120.33	1.85
Burlington	199	61.91	102.78	1.66	125	62.41	105.32	1.68
Cedar Rapids	295	61.77	104.63	1.69	102	62.47	110.98	1.76
Centerville	6	63.75	108.33	1.69				
Charles CityClarinda	$\frac{2}{17}$	65.75 62.23	120.75 109.32	1.84 1.75	7	60.21	98.85	1.30
Clinton	103	62.68	107.75	1.73	31	62.61	108.77	1.73
Council Bluffs	141	61.81	105.67	1.70	38	61.96	106.94	1.72
Davenport	509	61.62	101.44	1.64	222	62.19	106.57	1.71
Des Moines	1,230	62.72	103.52	1.65	729	62.49	109.12	1.74
Dubuque	190	62.11	103.67	1.66	246	62.23	104.25	1.67
Fairfield Fort Dodge	20 74	62.13 61.72	101.40 105.81	$\frac{1.63}{1.71}$	33	$62.50 \\ 63.15$	$\frac{112.50}{111.66}$	$\frac{1.80}{1.76}$
Fort Madison	44	63.12	108.59	1.72	38	63.35	110.51	1.74
Grinnell.	19	64.23	105.57	1.64	2.	64.75	109.00	1.68
Guttenburg	2	64.00	126.00	1.96	3	62.50	111.00	1.77
Independence	1	63.50	102.50	1.61	2	64.75	112.00	1.72
Iowa City	22	64.09	107.40	1.67	14	63.78	109.07	1.70
Kellogg Keokuk	118	$59.00 \\ 63.29$	$78.00 \\ 102.52$	1.32 1.61	33	64.07	112.39	1 75
Laporte City	16	67.53	118.96	1.76	10	62.30	101.30	1.75
Lansing	1	62.00	90.00	1.45	10	02.00	101.00	1.02
Marengo	17	62.52	104.05	1.66				
Marshalltown	19	62.71	101.94	1.62	5	63.30	104.10	1.64
Mason City	183	62.20	108.22	1.73	40	61.96	108.35	1.74
Montrose Muscatine	303	$60.00 \\ 64.72$	115.00 109.31	1.91 1.69	317	62.43	106.41	1.70
Newton	48	61.76	108.32	1.75	8	62.50	128.37	2.05
Oelwein	9	61.88	102.66	1.65				
Oskaloosa	14	62.71	104.35	1.66				
Ottumwa	202	62.83	107.40	1.70	44	63.98	115.17	1.80
Pella	16	63.84	104.06	1.63	19	61.55	97.78	1.58
Red OakRoland	4	62.50	103.25	1.65	2 9	62.50 63.00	107.50 106.33	1.72
Sharpsburg	2	64.00	102.50	1.60	9	00.00	100.00	1.00
Shellsburg	5	63.90	101.80	1.59				
Shenandoah	24	63.93	117.75	1.84	25	62.03	111.46	1.79
Sioux City	548	62.93	106.93	1.69	298	62.92	110.44	1.75
Spencer	3 2	$56.00 \\ 64.00$	102.33 108.50	1.82 1.69	3	60.66	105.66	1.74
Toledo	24	63.66	113.79	1.78	9	62.55	109.77	1.75
Washington	18	63.47	112.22	1.76	11	61.04	100.27	1.64
Waterloo	216	63.43	105.74	1.66	84	60.31	108.71	1.80
Webster City	3	69.00	129.00	1.86				
Wilton Junction	4	64.12	107.77	1.67	3	66.00	116.66	1.7



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