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LABOR USED FOR FIELD CROPS
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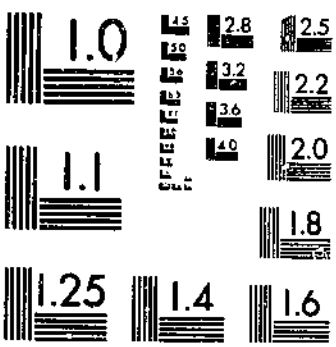
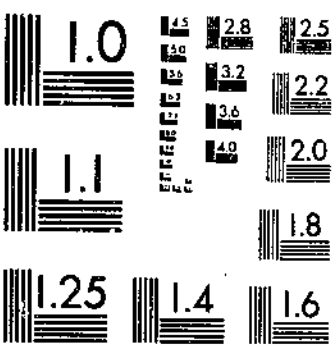


MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A



MICROCOPY RESOLUTION TEST CHART
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GUIDE TO TABLES

SOURCE OF BASIC DATA

State average man-hours per acre presented in this report were developed from data collected by State and Federal agencies and published in reports such as State Agricultural Experiment Station and Extension Service bulletins, and in studies of changes in farm practices, production inputs, and farm mechanization. The Productive Capacity Reports, prepared for each State in 1951, were particularly useful as a source of data on man-hours per acre. Some variation from the data in these reports exist because of different concepts and because additional information has become available since the reports were developed.

LABOR USED FOR FIELD CROPS

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INTRODUCTION

Labor is now a relatively expensive farm resource. Farm wage rates are more than four times as high as those paid before World War II. During the same period prices of farm machinery, including tractors, have approximately doubled and prices of motor supplies, including gasoline and other fuels, have increased about 50 percent. These diverse changes in cost rates have been a significant factor in the upsurge in substitution of machinery and other production inputs for labor during the last several years.

The amount and cost of the labor saved by adopting mechanical methods of performing farm work will continue to be an important consideration in farm planning. Data in this publication are expected to be useful to extension workers and others who are responsible for aiding farmers in this field. They indicate, for example, how much less labor is needed, on the average, to harvest corn for silage with a field forage harvester than with a stationary cutter.

Estimates of man-hours per acre in this report are used by the Agricultural Research Service in computing the total annual quantity of labor used on farms and in calculating yearly indexes of farm labor productivity by enterprises, for geographic divisions, and for the country as a whole. 2/ The total annual quantity of labor used is computed by applying average man-hours per acre of crops and per head or per unit of production of livestock to the official estimates of acres and numbers developed by the Crop Reporting Board of the Agricultural Estimates Division, Agricultural Marketing Service, United States Department of Agriculture. While the estimates of average man-hours per acre are made annually for geographic divisions only, for certain years they are developed for each State.

1/ Appreciation is extended to members of the farm-management staffs in the agricultural colleges and to the field personnel of the Production Economics Research Branch, Agricultural Research Service, who reviewed the preliminary estimates. Their suggestions were valuable in making the final estimates. Martin R. Cooper and Paul E. Strickler adjusted the data in the Bureau of Agricultural Economics report, F.M. 107, regarding haying practices to fit individual kinds of hay and to fit the year 1950.

2/ These data for 1910-48 were released in Gains in Productivity of Farm Labor, by Reuben W. Hecht and Glen T. Barton, U. S. Dept. Agr., Tech. Bull. 1020, 1950.

This publication contains tables showing State average man-hours per acre for most field crops for 1950. 3/ State average man-hours per acre shown in tables 3 to 39 are divided, for most crops, into preharvest work and harvesting. When applicable, man-hours for preharvest work were estimated for both irrigated and dryland conditions and weighted by the proportion of the crop grown under each, as indicated by the United States census for 1950. 4/ Preharvest work includes hauling and spreading manure and fertilizer, plowing and preparing the land, planting or seeding, cultivating, irrigating, and pest control such as spraying and dusting. Time for raising plants and for summer fallowing is included for crops and areas in which these practices are followed. For perennial crops, man-hours for preharvest include the annual share of establishing the stand plus the time spent each year in caring for the crop. In some instances, such as for alfalfa hay and seed, the preharvest work is apportioned between different uses of the crop.

Man-hours for harvest include time for the main harvesting operations and for hauling the crop to storage and to the local market or processing plant. Hours required per acre for harvesting by each important method, such as husking corn by hand and with machines, are shown separately. So far as possible, average man-hours for harvest were computed by weighting the time required with each method of harvest by the proportion of the crop harvested by each method. Sources of data on extent of harvesting methods are indicated in footnotes to the tables. As a further breakdown, in some instances, man-hours per acre were estimated for common types and sizes of machines, such as self-propelled and other types of grain combines and 1-row and 2-row mechanical cornpickers, and were weighted by the importance of each type and size. Data on number of machines were taken from "Farm Power and Farm Machines." 5/ Man-hours for harvesting small grain crops do not include time spent in removing straw from the acreage combined.

3/ For comparable estimates for 1939 see Labor Requirements for Crops and Livestock, by M. R. Cooper, and others. U. S. Dept. Agr., Bur. Agr. Econ., 1943 (F.M. 40, processed). State estimates of man-hours per acre were also made for 1944, but only the total man-hours spent on each crop were published. For these data see Farm Labor Requirements in the United States, 1939 and 1944, by Reuben W. Hecht. U. S. Dept. Agr., Bur. Agr. Econ., 1947 (F.M. 59, processed).

4/ Irrigated and nonirrigated acreages of crops are available from the Crop Reporting Board of the Agricultural Estimates Division, Agricultural Marketing Service, United States Department of Agriculture in a few States, but Census data were used because of availability from a greater number of States. The hours per acre nonirrigated and irrigated, when weighted by the percentage of each, will not equal the reported average in some instances because of rounding.

5/ United States Department of Agriculture, Bureau of Agricultural Economics. Farm Power and Farm Machines, 1953 (F.M. 101, processed).

Time per acre includes only the direct man-hours used in producing and harvesting the crop. Time spent in general overhead jobs or farm maintenance work is excluded. This kind of work includes such jobs as constructing and maintaining fences and buildings, repairing machinery and equipment, general land maintenance, and other miscellaneous work.

Total hours per acre are the sum of the man-hours for preharvest and for harvest on an acre actually seeded and harvested; that is, total hours per acre do not allow for preharvest work on acreages abandoned, grazed, and turned under. Yields shown are those reported for 1950 in the Crop Report for December 1951, 6/ and in more recent releases.

Also included in this publication are statistics on 5-year average man-hours per acre and related data for selected crops for 1910-53 (table 1). Man-hours per acre in this table are not strictly comparable with those in tables 3 to 39. Those in table 1 are computed by dividing total man-hours used for putting in and tending the entire crop, whether harvested or not, plus total man-hours used for harvesting by acres harvested. This method of calculation tends to increase hours per acre for crops that have a wide ratio between planted and harvested acres. For an individual crop, it tends to raise the hours per acre during years or periods in which there is considerable abandonment. For example, in 1951 and 1952 four man-hours were used per acre of wheat seeded and harvested. But hours per acre harvested for grain were 4.6 and 4.2 in 1951 and 1952, respectively. The higher figure in 1951 results from abandonment of more acreage that year. Preharvest work on the small percentage of the seeded acreage of wheat that is cut unripe for grain hay also is a factor in increasing man-hours per acre harvested, but its influence is relatively insignificant.

LABOR FOR FIELD CROPS, UNITED STATES, 1910-53

For most field crops, a good deal less labor is used per acre than was used in 1910-14 (table 1). The almost complete conversion from horses and mules to tractors, trucks, and other forms of mechanical power and associated machines is the main reason for the big drop. The greatest proportional decrease in man-hours per acre occurred on small grains and other crops similarly produced (table 2). The reduction in time spent per acre of corn has about matched that for small grains. Labor per acre of hay and sugar beets also has gone down substantially, with a reduction of 45 percent from 1910-14 to 1950-53. Decreases in hours per acre have occurred despite significant increases in yields of most crops. Because of large increases in yield, the time required to produce a bushel or a ton of product has fallen much more than the time per acre. Higher yields have resulted from changes in a variety of practices and methods.

6/ U. S. Dept. Agr., Bureau of Agricultural Economics. Annual Summary of Acreage, Yield, and Production of Principal Crops. December 1951. (Processed.)

Table 1.- Man-hours and yield per acre harvested and man-hours per unit of production for designated crops, United States, indicated periods, 1910-53 1/

Crop	1910-14	1915-19	1920-24	1925-29	1930-34	1935-39	1940-44	1945-49	1950-53 2/
All corn:									
Man-hours per acre	35.2	34.1	32.5	30.1	28.1	27.9	25.6	19.4	13.1
Yield-bushels	26.0	25.9	27.3	26.4	22.1	25.0	32.0	35.7	38.3
Man-hours per 100 bushels	135	132	119	114	127	112	80	54	34
Oats:									
Man-hours per acre	15.7	15.1	13.2	11.9	10.7	10.1	9.2	7.6	6.2
Yield-bushels	29.4	32.5	29.8	29.5	26.3	29.2	31.8	34.3	33.6
Man-hours per 100 bushels	53	46	44	40	41	35	29	22	18
Barley:									
Man-hours per acre	16.9	16.3	14.1	13.1	12.3	11.1	9.7	7.4	5.8
Yield-bushels	21.6	23.1	22.1	23.3	20.1	22.1	23.7	25.5	27.4
Man-hours per 100 bushels	78	71	64	56	61	50	41	29	21
Sorghums for grain:									
Man-hours per acre 3/			18.2	17.5	13.6	13.0	10.6	7.7	5.6
Yield-bushels			17.6	16.8	13.1	12.8	17.4	17.8	19.5
Man-hours per 100 bushels			103	104	104	102	61	43	29
Wheat:									
Man-hours per acre	15.2	13.6	12.4	10.5	9.4	8.9	7.4	5.6	4.4
Yield-bushels	14.4	13.9	13.8	14.1	13.5	13.2	17.1	16.9	17.1
Man-hours per 100 bushels	106	98	90	74	70	67	43	33	26
Buckwheat:									
Man-hours per acre	34.0	32.0	29.4	25.6	23.4	21.4	19.0	13.0	8.3
Yield-bushels	16.8	15.1	17.0	15.8	16.0	16.1	17.5	16.7	17.9
Man-hours per 100 bushels	202	212	173	162	146	133	109	78	46
Rice:									
Man-hours per acre	55.0	51.7	46.9	37.2	33.0	31.8	28.5	19.8	14.7
Yield-bushels	35.8	38.8	39.3	42.9	47.1	49.7	45.5	46.7	53.5
Man-hours per 100 bushels	154	133	119	87	70	64	63	42	27
Hay:									
Man-hours per acre	11.9	13.0	12.5	12.0	10.3	11.3	10.7	8.4	6.5
Yield-ton	1.15	1.25	1.22	1.22	1.08	1.24	1.35	1.35	1.41
Man-hours per ton	10.3	10.4	10.2	9.8	9.5	9.1	7.9	6.2	4.6
Sorghums for forage:									
Man-hours per acre					17.0	15.9	15.6	12.5	9.1
Yield-ton					1.19	1.25	1.51	1.36	1.23
Man-hours per ton					14.3	12.7	10.3	9.2	7.4
Sorghums for silage:									
Man-hours per acre					18.3	18.8	18.1	14.6	12.5
Yield-tons					4.04	4.91	6.06	6.04	8.07
Man-hours per ton					4.5	3.8	3.0	2.4	1.5
Potatoes:									
Man-hours per acre	76.0	73.8	75.2	73.1	67.9	69.7	68.3	68.6	67.6
Yield-bushels	99.7	94.8	107.6	114.0	107.6	117.2	136.8	196.5	248.0
Man-hours per 100 bushels	76	78	70	64	63	59	50	35	27
Sweetpotatoes									
Man-hours per acre	132	128	122	122	116	116	118	122	121
Yield-bushels	94.4	97.3	92.8	93.8	81.1	84.9	87.4	94.3	95.4
Man-hours per 100 bushels	140	132	131	130	143	137	135	129	127

- Continued -

Table 1.- Man-hours and yield per acre harvested and man-hours per unit of production for designated crops, United States, indicated periods, 1910-53 1/- Continued -

Crop	1910-14	1915-19	1920-24	1925-29	1930-34	1935-39	1940-44	1945-49	1950-53 2/
Dry beans:									
Man-hours per acre	47.2	42.0	33.1	29.8	28.3	27.5	24.9	21.2	19.1
Yield-pounds	778	645	667	655	714	855	898	1,015	1,229
Man-hours per cwt.	6.1	6.5	5.0	4.5	4.0	3.2	2.8	2.1	1.6
Dry field peas:									
Man-hours per acre					11.4	9.9	7.9	6.8	6.0
Yield-pounds					968	1,142	1,309	1,185	1,298
Man-hours per cwt.					1.18	0.87	0.60	0.57	0.46
Sugar beets:									
Man-hours per acre	128	125	111	109	104	97	98	87	71
Yield-tons	10.6	9.6	9.8	10.9	11.2	11.6	12.7	13.6	15.3
Man-hours per ton	12.1	13.0	11.3	10.0	9.3	8.4	7.7	6.4	4.6
Maple sirup:									
Man-hours per gallon		2.09	2.13	2.15	2.14	2.16	1.85	1.95	2.16
Cotton:									
Man-hours per acre	116	105	96	96	97	99	99	85	70
Yield-pounds	200.6	167.9	154.8	171.3	184.0	226.2	260.0	273.1	286.5
Man-hours per bale	276	299	296	268	252	209	182	149	117
Tobacco:									
Man-hours per acre 3/	356	353	353	370	370	415	436	456	467
Yield-pounds	816	803	773	772	784	886	1,026	1,176	1,276
Man-hours per 100 pounds	44	44	46	48	47	47	42	39	37
Soybeans:									
Man-hours per acre 3/				15.9	12.9	11.8	10.7	8.2	5.7
Yield-bushels				12.6	14.3	16.5	18.3	19.6	20.4
Man-hours per 100 bushels				126	90	64	58	42	28
Peanuts:									
Man-hours per acre 3/	69.1	68.0	66.8	67.1	65.6	66.3	61.7	48.5	39.1
Yield-pounds	796	741	680	733	671	741	699	685	915
Man-hours per 100 pounds	8.7	9.2	9.8	9.2	9.8	8.9	8.8	7.1	4.3
Flaxseed:									
Man-hours per acre	15.1	13.1	13.0	10.3	8.6	9.1	7.2	5.5	4.0
Yield-bushels	7.6	6.9	8.2	7.1	5.5	7.6	9.2	9.6	9.1
Man-hours per 100 bushels	199	190	159	145	156	120	78	57	44

1/ Man-hours per acre harvested, including preharvest work on acreages abandoned, grazed and turned under.
2/ Preliminary.
3/ Per acre planted and harvested.

Table 2.- Index numbers of man-hours per acre and per unit of production of designated crops, United States, indicated periods, 1910-53 1/

(1910-14 = 100)

Crop	1910-14	1915-19	1920-24	1925-29	1930-34	1935-39	1940-44	1945-49	1950-53 2/
All corn:									
Per acre	100	97	92	86	80	79	73	55	37
Per bushel	100	98	88	84	94	83	59	40	25
Oats:									
Per acre	100	96	84	76	68	64	59	48	39
Per bushel	100	87	83	75	77	66	55	42	34
Wheat:									
Per acre	100	89	82	69	62	59	49	37	29
Per bushel	100	92	85	70	66	63	41	31	25
Rice:									
Per acre	100	94	85	68	60	58	52	36	27
Per bushel	100	86	77	56	45	42	41	27	18
Hay:									
Per acre	100	109	105	101	87	95	90	71	55
Per ton	100	101	99	95	92	88	77	60	45
Potatoes:									
Per acre	100	97	99	96	89	92	90	90	89
Per bushel	100	103	92	84	83	78	66	46	36
Sugar beets:									
Per acre	100	98	87	85	81	76	77	68	55
Per ton	100	107	93	83	77	69	64	53	38
Cotton:									
Per acre	100	91	83	83	84	85	85	73	60
Per bale	100	108	107	97	91	76	66	54	42
Tobacco: 3/									
Per acre	100	99	99	104	104	117	122	128	131
Per pound	100	100	105	109	107	107	95	89	84

1/ Based on man-hours per acre harvested, including preharvest work on acreages abandoned, grazed, and turned under.

2/ Preliminary.

3/ Based on man-hours per acre planted and harvested.

Effects of factors that have resulted in fewer hours and in greater yields per acre have varied considerably among crops. Operations on some crops have been difficult to mechanize; on others they have been readily converted to machine methods. Yields of some crops have increased greatly; those of others less so. Yields and amount of labor used per acre are themselves interrelated. A change in yield of a crop that is handled largely with machines usually affects very little the amount of harvest labor used per acre, whereas for crops that are handled chiefly by hand the difference in labor used may be almost proportional to the change in yield.

A main reason for the big reduction in man-hours per acre of small grains is the almost complete change in method of harvest from the bind-shock-thresh and other time-consuming methods to the combine method. About half of the wheat, for example, was harvested with combines in 1938, the first year for which complete data are available. By 1950, this proportion had increased to almost 95 percent. In addition, in 1950 a significant part of the combining was done with small power-take-off and self-propelled combines. These machines are usually operated by one man, whereas the older mounted-motor combines required a 2-man crew. And as shown in table 7, it takes an average of only 1.6 hours to combine an acre of standing wheat compared with 7.7 hours to bind, shock, and thresh an acre. Preharvest work also has been lowered by speedier tractors and general use of larger plows, disks, seeders, and similar machines. Yields of nearly all small grains have risen, but the increases have affected the man-hours required per acre very little. However, greater yields have added to the reduction in man-hours per unit of production.

The lowering in man-hours per acre of corn has also resulted partly from a change in method of harvest. In 1913, about two-fifths of the corn for grain was cut, shocked and husked or snapped, much of it by hand, which takes time. In 1951, less than 5 percent was harvested in this way. At the same time the percentage harvested with the mechanical picker rose from 0 to 68 percent. Table 3 shows that on the average it takes only 2.6 hours to harvest an acre of corn with mechanical pickers, compared with 6.4 hours when picked by hand and 24.3 when cut, shocked, and husked.

Labor-saving methods of harvesting corn for silage also have gained favor rapidly. The percentage harvested with field forage harvesters more than doubled from 1948 to 1951. These harvesters take about 50 percent less labor than the older stationary-cutter method. The reduction in total hours per acre of corn harvested, in conjunction with the large increase in yield means that about one-fourth as many man-hours are now used per bushel as in 1910-14.

Tobacco is at the opposite end of the scale. It is chiefly harvested by hand and the significant increase in yield has resulted in more man-hours per acre. However, the increase in hours has been less than proportional to the increase in yield. Consequently, man-hours per 100 pounds of tobacco produced have been reduced somewhat.

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Other field crops are between these two extremes, with various combinations of changes in labor requirements, in yields, and in resulting man-hours per unit of production. Man-hours per acre of potatoes, for example, decreased only slightly--from 76 hours in 1910-14 to 68 hours in 1950-53. The drop would have been greater if the yield had not increased. The average yield of potatoes is now 2.5 times as high as before World War I. The combined effect of fewer hours and more bushels per acre has been to more than halve man-hours per bushel.

LABOR FOR FIELD CROPS, BY STATES, 1950

In the country as a whole, wheat and flaxseed take a little more than 2 hours per acre for work up to harvest. This is the smallest amount of time for any field crop, excluding the perennial hay and hay seeds (tables 3 to 39). These two crops are widely grown in western areas where large power units and machines are common. Other close-grown crops also take relatively little preharvest work. Of the crops commonly grown in rows, broomcorn (3.2 man-hours) and sorghums (4.4 hours) take the smallest amount of time for land preparation, planting, cultivating, and other preharvest work. Tobacco, with the immense amount of time involved in growing the plants in the plant bed, pulling and setting them in the field, cultivating, and other jobs before harvest, takes the greatest number of man-hours for preharvest work of any field crop. The United States average for all classes of tobacco is 164 hours per acre.

Conditions That Affect Labor Requirements

The proportion of a crop that is irrigated affects preharvest hours per acre. Irrigating takes considerable time but for most irrigated crops other extra work is involved. For example, a row crop grown under irrigation is usually cultivated more times than the same crop grown on dry land in the same general area. Almost twice as many man-hours are used for preharvest work on irrigated as on nonirrigated potatoes in Colorado and less than half of the difference is used for the actual irrigating (table 23). In the United States as a whole, the average amount of preharvest work on irrigated potatoes is 28 man-hours. This is slightly lower than for dryland potatoes because more time is spent on the latter in some Eastern States than is spent on irrigated potatoes in the West.

Alfalfa is widely grown in both dryland and irrigated areas. Relatively little time is used per year on dryland alfalfa before harvest because little care is necessary once the stand is established (table 11). Considerably more time is needed for irrigated alfalfa, much of which is used in applying the water. In the entire country, an average of 1.7 and 12.1 man-hours is spent annually per acre of dryland and irrigated alfalfa, respectively.

Methods of Harvest Affect Labor Used

The time required to harvest a crop depends largely on the method of harvesting. Man-hours used with different harvesting methods are shown in tables 3 to 39 for a number of the crops. For the country as a whole, it takes 6.4 man-hours to harvest an acre of corn from the standing stalk by hand (table 3). This is almost 2½ times as much labor as is needed when mechanical pickers are used. The cut, shock, and husk or shred method takes more than 9 times as many man-hours as are needed with mechanical pickers. The cut-shock method particularly is a combination of many methods or variations such as cutting by hand or cutting with binder.

Harvesting corn for silage with a field forage harvester cuts the number of man-hours required about half, as compared with the older stationary cutter method, which takes an average of 13 hours per acre with a yield of 6.3 tons.

The combines used for small grains in 1950 saved an average of about 5 man-hours per acre compared with the bind-shock-thresh method. Average man-hours per acre for harvesting wheat by all methods in 1950 varied from 1.5 in several Western States where nearly all was combined, to 7.6 in West Virginia where about a third of the acreage was combined (table 7). Similar differences exist for other crops that are harvested by these two methods.

The harvesting of sugar beets is an outstanding example of the saving in labor that can result from a change in method of harvesting. After World War II use of mechanical loaders of windrowed beets and mechanical harvesters that pulled, topped, and loaded the beets in one operation expanded rapidly. By 1950 few beets were loaded by hand and 61 percent were harvested with mechanical harvesters. Use of these harvesters saved about 20 hours per acre compared with the hand top and mechanically load method (table 27). Use of mechanical harvesters expanded to 87 percent of the acreage according to data for 1952. Thus, in 2 years there was an average saving of about 5 hours per acre of beets harvested. The gross savings in 1952 for all beets harvested amounted to more than 3 million man-hours. In addition, in 1952 the acreage was low--665,000 acres--compared with the 1942-51 average of 745,000 acres.

Cotton shows the greatest variation in labor used with different methods of harvesting. For the country as a whole an average of only 3.0 man-hours per acre were used with machine harvesting as compared with 46 for handpicking and 30 for handsnapping (table 30). In Texas and Oklahoma where much of the machine harvesting was done with strippers, hours per acre for machine harvesting were lower than in States where mechanical pickers were chiefly used. Average hours per acre for harvesting with all methods also is low in Oklahoma. There, in addition to the influence of the stripper, the low yield makes handpicking and handsnapping a less time-consuming job.

In California, the greatest percentage of cotton was harvested with machines (34 percent) 7/ yet average man-hours per acre for all methods of harvesting was relatively high because of the high yield. Various combinations of yields and methods of harvesting in other States that grow cotton result in a United States average of about 39 man-hours per acre for harvesting cotton by all methods. This figure is nearer the handpicking rate than any other because 71 percent of the cotton was still handpicked in 1950.

7/ This method of harvesting has expanded rapidly since 1950. Machine harvesting accounted for about 60 percent of the crop in California and for 22 percent of the crop in the entire country in 1953.

Table 3.- All corn: Labor used per acre, 1950

State	Man-hours per acre													Yield	
	Preharvest 1/			Harvest											
				For grain 2/					For silage 3/						
	Non-irrigated	Irrigated	All	From standing stalk: With mechanical picker	From standing stalk: By hand	Cut, shock and husk or shred	All methods	Field forage harvester	Stationary cutter	All methods	For fodder or feeding green	All	Total	Grain	Silage
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Bushels	Tons
Maine	15.0		15.0	2.6	5.8	22.5	8.0	8.5	15.8	13.4	4.8	12.1	27.1	34.0	10.0
New Hampshire	15.0		15.0	3.1	8.2	29.6	10.6	8.3	15.2	12.9	5.9	12.1	27.1	48.0	9.5
Vermont	15.0		15.0	3.1	8.2	29.6	10.5	8.5	15.3	13.4	5.9	13.0	28.0	48.0	10.0
Massachusetts	11.0		11.0	2.9	7.1	26.4	9.4	8.5	15.3	13.4	5.4	12.4	23.4	42.0	10.0
Rhode Island	11.0		11.0	2.9	7.3	27.0	9.5	8.3	15.2	12.9		12.4	23.4	43.0	9.5
Connecticut	10.2		10.2	3.0	7.8	27.9	9.9	8.7	14.4	13.9	5.2	13.1	23.3	45.0	10.5
New England	13.0		13.0	3.0	7.4	27.3	9.7	8.5	15.9	13.4	5.2	12.7	25.7	43.7	10.0
New York	8.7		8.7	3.0	7.6	29.5	9.1	8.5	15.7	12.9	4.9	11.2	19.9	45.0	10.0
New Jersey	8.2		8.2	3.1	8.7	34.4	9.7	8.3	15.2	11.9	8.2	10.2	18.4	54.0	9.5
Pennsylvania	8.7		8.7	2.9	7.9	23.4	8.6	8.3	15.2	12.7	7.0	9.3	16.0	46.5	9.5
Middle Atlantic	8.7		8.7	2.9	8.0	28.1	9.2	8.4	15.4	12.5	6.8	10.0	18.1	49.0	9.8
Ohio	6.5		6.5	3.0	8.3	26.1	9.1	7.4	13.4	10.2	7.3	9.2	12.7	52.0	9.5
Indiana	6.5		6.5	2.8	8.2	24.9	8.2	7.2	12.9	9.0	7.1	8.2	9.7	48.5	9.0
Illinois	6.5		6.5	2.8	8.2	24.6	8.8	7.4	13.4	9.2	6.7	8.9	9.4	51.0	9.5
Michigan	9.4		9.4	2.7	7.6	19.1	7.3	7.0	12.5	9.9	5.2	7.7	16.1	39.0	8.6
Wisconsin	11.5		11.5	2.9	7.8	13.1	6.2	7.1	12.7	10.2	4.7	8.1	19.6	46.0	9.7
E. N. Central	7.9		7.9	2.8	8.1	23.2	8.6	7.2	12.7	10.0	6.0	9.1	11.3	49.4	8.7
Minnesota	6.5		6.5	2.7	6.7	15.5	3.3	6.5	11.1	9.8	4.3	4.3	10.8	39.5	7.5
Iowa	6.5		6.5	2.7	8.2	16.1	3.3	7.6	14.0	9.4	4.8	5.3	8.8	49.5	10.0
Missouri	7.4		7.4	2.8	7.5	29.1	7.0	6.6	11.3	8.7	7.5	7.9	14.3	44.0	7.5
North Dakota	4.5		4.5	2.0	4.0	13.7	2.9	3.9	5.7	4.4	3.2	2.5	7.0	22.0	3.5
South Dakota	4.4		4.4	2.1	4.0		2.4	4.9	8.2	6.0	3.7	2.2	6.6	28.0	7.0
Nebraska	4.2	8.7	4.3	2.3	7.1	17.9	3.1	5.1	8.7	7.0	4.0	3.1	7.4	36.0	6.5
Kansas	4.2		4.2	2.5	6.0	22.3	4.8	5.1	8.7	6.5	4.3	4.8	9.0	35.0	6.5
W. N. Central	5.4	8.7	5.4	2.6	7.3	22.5	3.8	5.9	10.5	7.8	4.0	3.8	9.2	40.3	6.8
Delaware	14.0		14.0	2.7	6.5	26.3	10.0	8.1	14.6	11.3	7.1	10.0	24.0	38.0	9.0
Maryland	19.6		19.6	2.8	7.5	29.4	11.0	8.5	15.8	12.7	7.7	11.1	30.6	44.0	10.0
Virginia	28.5		28.5	2.8	11.5	32.6	16.3	9.4	21.0	17.2	10.1	16.1	44.4	46.0	10.5
West Virginia	30.0		30.0	2.6	9.0	27.6	17.8	9.2	20.3	13.4	9.7	13.7	43.7	37.0	10.0
North Carolina	21.0		21.0	2.4	8.2	24.3	9.1	9.8	22.5	21.1	8.1	9.1	30.1	33.0	11.5
South Carolina	20.5		20.5	2.1	5.7	17.2	5.7	7.5	14.4	13.0	5.9	5.6	28.1	21.5	6.0
Georgia	22.0		22.0	1.9	4.0	14.5	4.1	7.5	14.4	13.0	4.8	3.8	25.8	15.5	6.0
Florida	18.0		18.0	2.0	3.6	13.4	3.7	7.2	13.7	12.3	4.4	2.8	20.8	14.0	5.5
South Atlantic	21.3		21.3	2.5	5.8	27.7	7.8	8.8	13.6	15.7	5.6	7.4	29.2	27.7	9.7
Kentucky	17.0		17.0	2.6	9.2	27.1	10.9	8.9	19.6	16.4	8.7	10.9	25.9	37.0	9.5
Tennessee	22.0		22.0	2.4	9.1	24.3	9.5	8.7	18.9	14.5	7.9	9.3	31.3	32.7	9.0
Alabama	22.0		22.0	2.2	5.7	18.1	5.6	6.8	12.2	11.1	5.8	5.5	27.5	21.5	6.5
Mississippi	19.7		19.7	2.1	7.1	19.6	6.2	7.7	15.2	13.1	7.3	7.1	25.9	23.5	6.5
E. S. Central	19.9		19.9	2.4	7.8	25.3	7.9	8.6	18.2	14.6	6.3	7.8	27.7	28.3	8.6
Arkansas	19.7		19.7	2.1	7.1	19.3	7.5	7.7	14.2	13.2	6.1	6.5	28.2	23.5	6.5
Louisiana	19.6		19.6	2.1	6.5	17.3	6.9	7.0	13.0	11.2	5.7	5.8	25.3	21.0	5.0
Oklahoma	7.1		7.1	2.1	7.1	17.5	5.7	6.3	7.7	5.2	4.3	5.6	12.7	23.5	4.5
Texas	7.6	13.0	7.5	2.0	6.2	16.0	4.8	4.3	7.7	5.2	4.8	4.8	11.3	20.0	4.5
W. S. Central	11.3	13.0	11.3	2.0	6.7	17.6	5.5	4.8	9.3	7.7	5.2	5.4	15.7	21.5	4.8
Montana	5.0	13.0	5.4	2.3	4.5	17.8	5.0	4.5	7.2	4.9	4.7	2.0	7.6	25.0	5.0
Idaho	5.0	17.0	16.2	3.3	8.6	32.1	9.2	7.1	13.7	9.5	7.2	8.6	24.8	53.5	11.5
Wyoming	6.0	14.1	8.3	1.8	3.4	14.1	3.8	5.1	8.7	5.7	3.5	2.7	11.0	19.0	6.5
Colorado	5.0	13.0	7.5	2.1	4.4	17.9	3.8	5.7	10.2	6.4	4.8	3.9	11.4	24.5	8.0
New Mexico	5.0	11.0	7.0	1.9	3.0	13.5	3.5	4.7	7.7	5.2	3.9	3.3	10.9	16.5	5.5
Arizona	7.0	24.0	14.0	1.8	2.7	12.5	3.2	5.7	10.2	7.4	3.5	3.3	17.3	15.0	8.0
Utah	5.0	26.0	24.0	2.7	6.1	23.1	6.6	6.9	13.2	8.6	5.5	7.5	31.5	36.0	11.0
Nevada	7.5	20.3	20.0					6.5	12.2	7.4		7.4	27.4	-	10.0
Mountain	7.1	16.2	9.2	2.1	4.2	17.5	4.0	5.7	10.7	7.2	4.6	3.7	11.9	24.0	8.2
Washington	8.0	17.5	14.2	3.1	8.9	35.3	7.4	6.9	13.2	10.2	8.4	8.3	22.5	55.0	11.0
Oregon	8.0	17.5	10.3	2.7	7.1	27.8	6.0	5.9	10.7	8.0	6.8	6.3	16.6	41.5	8.5
California	7.0	18.9	15.2	2.4	6.5	28.9	5.6	6.9	13.2	9.0	6.4	6.8	22.0	38.0	11.0
Pacific	6.8	18.4	14.1	2.7	6.9	27.5	5.9	6.7	12.7	9.0	6.9	6.9	21.0	40.8	10.5
United States	9.9	13.3	9.9	2.5	7.4	24.3	6.2	6.8	13.0	9.9	5.0	5.3	15.1	38.0	8.3

1/ According to the 1950 census the following percentage of the total corn acreage was grown on farms on which the entire acreage of corn was irrigated: Nebraska, 7 percent; Texas, 1 percent; Montana, 8 percent; Idaho, 93 percent; Wyoming, 88 percent; Colorado, 31 percent; New Mexico, 32 percent; Arizona, 43 percent; Utah, 58 percent, Nevada, 98 percent; Washington, 65 percent; Oregon, 24 percent; and California, 66 percent.

2/ Proportion harvested by each method adapted from U. S. Department of Agriculture, Statistical Bulletin No. 129, "Harvesting Corn for Grain."

3/ Proportion harvested by each method adapted from U. S. Department of Agriculture, Statistical Bulletin No. 128, "Harvesting Silage Crops."

Table 4.- Oats: Labor used per acre, 1950

State	Man-hours per acre									Yield per acre
	Preharvest 1/			Harvest 2/					Total	
				Combined						
	Non-irrigated	Irrigated	All	As standing grain	From windrow	Threshed from shock, stack, etc.	Cut ripe and fed unthreshed	All methods		
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Bushels
Maine	7.0		7.0	1.7	2.6	9.6	6.2	4.7	11.7	48.0
New Hampshire	6.5		6.5	1.7	2.6	8.8	5.7	4.4	10.9	41.0
Vermont	7.4		7.4	1.7	2.6	8.2	5.3	4.2	11.6	35.0
Massachusetts	5.8		5.8	1.7	2.6	7.6	4.9	3.9	9.7	30.0
Rhode Island	5.8		5.8	1.7	2.6	7.7	5.0	4.0	9.8	31.0
Connecticut	4.9		4.9	1.7	2.6	8.2	5.3	4.2	9.1	35.0
New England	6.9		6.9	1.7	2.6	9.1	5.9	4.6	11.5	43.6
New York	5.0		5.0	1.6	2.5	9.1	5.9	4.4	9.4	43.0
New Jersey	4.4		4.4	1.6	2.5	8.6	5.6	2.4	6.8	39.0
Pennsylvania	5.7		5.7	1.6	2.5	8.5	5.5	4.1	9.8	38.0
Middle Atlantic	5.3		5.3	1.6	2.5	8.8	5.8	4.2	9.5	40.4
Ohio	3.0		3.0	1.7	2.5	7.2	4.7	2.2	5.2	36.0
Indiana	1.6		1.6	1.7	2.5	7.2	4.7	2.1	3.7	36.0
Illinois	1.7		1.7	1.5	2.2	7.7	5.0	2.1	3.8	41.0
Michigan	4.8		4.8	1.8	2.7	7.4	4.8	3.2	8.0	38.5
Wisconsin	4.0		4.0	1.6	2.4	8.5	5.5	3.9	9.9	48.5
E. N. Central	2.9		2.9	1.6	2.3	8.2	5.0	3.3	6.2	41.6
Minnesota	2.2		2.2	1.5	2.2	7.3	4.7	4.4	6.6	37.0
Iowa	1.5		1.5	1.7	2.5	7.7	5.0	3.6	5.1	41.5
Missouri	2.5		2.5	1.7	2.5	6.6	4.3	3.6	6.1	30.0
North Dakota	1.3		1.3	1.4	1.9	5.5	3.6	3.0	4.3	28.0
South Dakota	1.5		1.5	1.7	2.3	5.3	3.4	3.4	4.9	26.0
Nebraska	2.0		2.0	1.7	2.4	5.1	3.3	3.2	5.2	24.0
Kansas	2.2		2.2	1.6	2.0	4.8	3.1	2.2	4.4	21.0
W. N. Central	1.8		1.8	1.6	2.3	6.5	3.8	3.0	5.4	33.1
Delaware	6.0		6.0	1.6		7.4	4.8	2.2	8.2	28.0
Maryland	7.6		7.6	1.6	2.6	8.2	5.3	4.3	11.9	34.0
Virginia	9.5		9.5	1.6	2.5	7.9	5.1	4.2	13.7	31.5
West Virginia	13.0		13.0	1.7	2.3	11.0	7.0	7.4	20.4	30.0
North Carolina	6.0		6.0	1.7	2.5	7.5	4.9	2.9	8.9	28.5
South Carolina	5.9		5.9	1.7	2.5	7.4	4.8	3.1	9.0	27.5
Georgia	6.2		6.2	1.7	2.6	7.3	4.7	2.8	9.0	27.0
Florida	6.0		6.0	1.5		6.1	4.0	2.9	8.9	18.0
South Atlantic	6.5		6.5	1.7	2.5	8.0	4.9	3.2	9.7	28.1
Kentucky	3.5		3.5	1.6	2.4	6.8	4.4	3.9	7.4	23.0
Tennessee	3.5		3.5	1.7	2.6	7.0	4.6	3.6	7.1	25.0
Alabama	6.0		6.0	1.7	2.7	7.2	4.7	2.9	8.9	26.0
Mississippi	4.5		4.5	1.4	2.1	7.0	4.6	1.7	6.4	25.0
E. S. Central	4.4		4.4	1.6	2.3	7.0	4.6	3.1	7.5	24.9
Arkansas	4.5		4.5	1.5	2.2	7.4	4.8	3.2	7.7	28.0
Louisiana	4.2		4.2	1.4	2.1	6.6	4.3	2.7	6.9	21.5
Oklahoma	2.4		2.4	1.6	2.1	4.4	2.9	2.5	4.9	16.5
Texas	2.1		2.1	1.5	2.0	4.7	3.1	2.2	4.3	19.5
W. S. Central	2.5		2.5	1.5	2.0	4.9	3.3	2.3	4.8	19.5
Montana	1.5	10.0	4.5	1.4	1.9	8.0	5.2	4.6	9.1	37.0
Idaho	2.6	8.2	5.2	1.7	2.2	8.7	5.7	3.0	8.2	44.0
Wyoming	2.2	10.0	5.9	1.7	2.4	7.5	4.9	3.4	9.3	32.0
Colorado	2.0	10.0	5.6	1.4	1.9	6.9	4.5	3.5	9.1	26.0
New Mexico	2.0	10.0	5.4	1.5	2.0	6.6	4.3	3.4	8.8	23.0
Arizona	2.3	11.3	8.1	1.4			5.6	2.6	10.1	43.0
Utah	2.3	14.6	12.8	1.5		8.8	5.7	4.7	17.5	45.0
Nevada	2.3	14.0	13.1	1.6			5.4	2.3	15.4	40.0
Mountain	1.9	10.1	5.5	1.6	2.0	7.8	5.1	3.8	9.3	35.9
Washington	2.8	8.2	3.6	1.5	2.0	9.1	5.9	3.8	7.4	48.0
Oregon	3.0	8.2	3.7	1.4	1.9	6.8	4.4	1.9	5.6	25.0
California	1.5	7.0	2.1	1.5	1.9	7.5	4.9	1.9	4.0	32.0
Pacific	2.3	7.6	3.0	1.5	1.9	.4	5.1	2.4	5.4	32.5
United States	2.6	9.6	2.7	1.6	2.3	7.0	4.4	3.4	6.1	34.6

1/ According to the 1950 census the following percentage of the total acreage of oats was grown on farms on which the entire acreage of oats was irrigated: Montana, 35 percent; Idaho, 46 percent; Wyoming, 48 percent; Colorado, 45 percent; New Mexico, 44 percent; Arizona, 63 percent; Utah, 90 percent; Nevada, 94 percent; Washington, 15 percent; Oregon, 14 percent; and California, 11 percent.

2/ Proportion harvested by each method from BAE Report, F.M. 91, "Harvesting Small Grains and Soybeans and Methods of Saving Straw."

Table 5.- Barley: Labor used per acre, 1950

State	Man-hours per acre								Yield per acre
	Preharvest 1/			Harvest 2/				Total	
				Combined					
	Non-irrigated	Irrigated	All	As standing grain	From windrow	Threshed from shock, stack, etc.	All methods		
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Bushels
Maine	7.0		7.0	1.7		9.6	2.9	9.9	34.0
Vermont	7.4		7.4	1.7		8.6	2.4	9.8	26.0
New England	7.1		7.1	1.7		9.5	2.8	9.9	32.9
New York	5.0		5.0	1.6		10.2	4.0	9.0	34.0
New Jersey	4.2		4.2	1.6		10.0	2.8	7.0	32.0
Pennsylvania	4.4		4.4	1.6	2.4	11.2	3.7	8.1	35.5
Middle Atlantic	4.6		4.6	1.6	2.4	10.8	3.8	8.4	34.8
Ohio	3.2		3.2	1.7	2.5	7.9	2.4	5.6	28.0
Indiana	3.4		3.4	1.7	2.4	7.3	2.3	5.7	26.0
Illinois	3.5		3.5	1.5	2.2	7.4	2.2	5.7	28.0
Michigan	4.6		4.6	1.6	2.7	9.2	4.1	8.9	34.0
Wisconsin	4.0		4.0	1.6	2.4	10.1	5.0	9.0	41.0
E. N. Central	4.1		4.1	1.7	2.5	9.7	4.2	8.3	36.2
Minnesota	2.2		2.2	1.5	2.2	8.1	3.4	5.6	29.0
Iowa	1.4		1.4	1.6	2.5	8.4	2.9	4.3	32.0
Missouri	2.5		2.5	1.7	2.5	6.4	2.7	5.2	23.5
North Dakota	1.3		1.3	1.4	1.9	6.7	2.5	3.8	24.0
South Dakota	1.3		1.3	1.7	2.3	4.7	2.7	4.0	16.5
Nebraska	1.5	9.4	3.8	1.7	2.4	4.5	2.4	5.2	15.0
Kansas	1.5		1.5	1.6	2.0	4.7	1.7	3.2	14.5
W. N. Central	1.6	9.6	1.8	1.6	2.1	6.4	2.8	4.4	22.6
Delaware	5.0		5.0	1.6		10.4	2.9	7.9	28.0
Maryland	4.9		4.9	1.6		10.0	3.4	8.3	31.0
Virginia	9.5		9.5	1.6		10.8	5.9	15.4	30.5
West Virginia	13.0		13.0	1.7	3.0	11.0	3.7	16.7	29.0
North Carolina	6.8		6.8	1.7	2.5	9.5	3.5	9.5	25.5
South Carolina	5.9		5.9	1.7		7.6	2.6	8.5	20.0
Georgia	6.2		6.2	1.7		8.4	2.8	9.0	22.0
South Atlantic	7.1		7.1	1.7	2.7	10.5	4.2	11.3	28.9
Kentucky	3.5		3.5	1.6	2.4	9.6	3.8	7.3	23.0
Tennessee	3.5		3.5	1.7		8.7	2.4	5.9	17.0
E. S. Central	3.5		3.5	1.7	2.4	8.7	3.2	6.7	20.2
Arkansas	4.5		4.5	1.5		7.8	2.4	6.9	21.0
Oklahoma	2.3		2.3	1.6	2.0	5.1	1.7	4.0	13.5
Texas	2.0		2.0	1.5	2.0	4.4	1.6	3.6	13.0
W. S. Central	2.2		2.2	1.5	2.0	5.3	1.6	3.8	13.3
Montana	1.7	10.0	3.1	1.4	1.9	8.4	2.1	5.2	27.5
Idaho	1.3	8.8	4.0	1.7	2.3	9.8	2.1	6.1	35.0
Wyoming	2.2	10.0	6.3	1.7	2.4	9.3	3.0	9.3	28.0
Colorado	1.7	10.0	4.7	1.4	1.9	7.3	2.4	7.1	19.5
New Mexico	2.0	9.0	5.3	1.5	1.7	8.9	1.3	7.1	22.0
Arizona	2.3	10.0	9.9	1.4		14.1	1.9	11.8	50.0
Utah	2.3	14.0	11.9	1.5	2.1	12.1	3.2	15.1	44.0
Nevada	2.3	14.0	13.6	1.6	2.5	9.7	1.9	14.9	33.0
Mountain	1.8	10.4	5.0	1.5	2.0	8.6	2.3	7.3	29.8
Washington	1.7	6.8	2.7	1.5	1.9	9.2	1.8	4.5	34.5
Oregon	3.0	6.8	5.1	1.4	1.9	12.3	1.9	7.0	32.0
California	1.5	7.0	3.3	1.5	1.8	11.2	1.5	4.8	34.0
Pacific	1.7	7.3	3.5	1.5	1.8	11.2	1.8	5.1	33.8
United States	2.0	9.0	3.1	1.5	2.1	7.6	2.5	5.6	27.2

1/ According to the 1950 census the following percentage of the total barley acreage was grown on farms on which the entire acreage of barley was irrigated: Nebraska, 16 percent; Montana, 17 percent; Idaho, 32 percent; Wyoming, 53 percent; Colorado, 36 percent; New Mexico, 47 percent; Arizona, 99 percent; Utah, 82 percent; Nevada, 95 percent; Washington, 14 percent; Oregon, 30 percent; and California, 33 percent.

2/ Proportion harvested by each method from BAE Report, F.M. 91, "Harvesting Small Grains and Soybeans and Methods of Saving Straw."

Table 6.- Sorghums for grain: Labor used per acre, 1950

State	Man-hours per acre							Yield per acre
	Preharvest 1/			Harvest			Total	
	Non-irrigated	Irrigated	All	Combined as standing grain	Threshed from shock, stack, etc.	All methods		
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Bushels
Indiana	4.7		4.7	1.7	7.8	3.2	7.9	27.0
Missouri	6.3		6.3	1.7	6.9	4.3	10.6	20.5
South Dakota	3.7		3.7	1.7	5.1	2.2	5.9	12.5
Nebraska	3.6	7.4	3.6	1.7	6.2	2.2	5.8	25.0
Kansas	3.6	7.4	3.6	1.6	5.9	1.8	5.4	23.0
W. N. Central	3.6	7.4	3.7	1.6	6.0	1.9	5.6	22.7
North Carolina	14.7		14.7	1.7	9.1	2.4	17.1	30.0
South Carolina	14.4		14.4	1.7	7.8	2.3	16.7	19.0
S. Atlantic	14.6		14.6	1.7	8.7	2.4	17.0	27.2
Alabama	15.4		15.4	1.7	7.5	5.2	20.6	17.5
Arkansas	13.3		13.3	1.5	7.5	5.7	19.0	17.0
Louisiana	16.6		16.6	1.4	7.1	5.4	22.0	16.0
Oklahoma	3.5		3.5	1.6		1.6	5.1	18.5
Texas	3.5	11.0	4.2	1.5		1.5	5.7	23.0
W. S. Central	3.5	11.0	4.2	1.5	7.5	1.5	5.7	22.4
Colorado	3.8	9.8	4.0	1.4	6.6	1.7	5.7	12.0
New Mexico	4.2	11.0	4.7	1.5	7.3	1.8	6.5	19.0
Arizona	5.1	20.9	20.6	1.4	10.3	1.8	22.4	44.0
Mountain	4.1	17.8	6.6	1.5	7.6	1.8	8.4	21.0
California	5.6	13.2	11.1	1.5	9.8	1.9	13.0	41.0
United States	3.7	12.0	4.4	1.5	6.6	1.6	6.0	22.6

1/ According to the 1950 census the following percentage of the acreage of sorghum for all purposes except sirup was grown on farms on which the entire acreage of sorghum was irrigated: Nebraska, 1 percent; Kansas, 1 percent; Texas, 10 percent; Colorado, 4 percent; New Mexico, 7 percent; Arizona, 98 percent; and California, 72 percent. Some of the sorghum acreage is irrigated in Montana and Wyoming but the Crop Reporting Board does not estimate acreage harvested for grain in these States.

Table 7.- Wheat: Labor used per acre, 1950

State	Man-hours per acre								Yield per acre
	Preharvest 1/			Harvest 2/				Total	
				Combined					
	Non-irrigated	Irrigated	All	As standing grain	From windrow	Threshed from shock, stack, etc.	All methods		
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Bushels
New York	5.2		5.2	1.6	2.4	12.4	2.7	7.9	27.9
New Jersey	5.0		5.0	1.6	2.5	10.0	1.9	6.9	21.5
Pennsylvania	5.2		5.2	1.6	2.4	10.4	3.9	9.1	22.0
Middle Atlantic	5.2		5.2	1.6	2.4	10.7	3.4	8.6	23.8
Ohio	4.0		4.0	1.7	2.4	9.3	2.4	6.4	22.0
Indiana	1.6		1.6	1.7	2.5	8.9	2.0	3.6	21.0
Illinois	1.6		1.6	1.5	2.2	7.7	1.7	3.3	17.5
Michigan	4.8		4.8	1.8	2.6	10.5	3.2	7.9	20.0
Wisconsin	4.6		4.6	1.6	2.4	8.9	5.0	9.4	24.2
E. N. Central	3.0		3.0	1.6	2.5	9.5	2.3	5.3	21.9
Minnesota	3.0		3.0	1.5	2.2	6.9	3.3	6.3	16.7
Iowa	2.5		2.5	1.7	2.5	8.5	2.3	4.8	21.8
Missouri	2.7		2.7	1.7	2.5	8.1	2.6	5.3	17.5
North Dakota	1.5		1.5	1.4	1.9	5.8	2.2	3.7	13.9
South Dakota	1.4		1.4	1.7	2.3	4.3	2.3	3.7	10.0
Nebraska	1.9		1.9	1.7	2.5	9.8	2.1	4.0	21.8
Kansas	1.8		1.8	1.6	2.0	7.0	1.6	3.4	14.5
W. N. Central	1.8		1.8	1.6	2.0	6.3	2.0	3.8	15.0
Delaware	5.0		5.0	1.6	2.2	9.5	2.4	7.4	17.0
Maryland	5.0		5.0	1.4		9.4	4.2	9.2	18.5
Virginia	9.5		9.5	1.6		9.5	5.0	14.5	18.0
West Virginia	13.0		13.0	1.7		11.0	7.6	20.6	13.5
North Carolina	6.0		6.0	1.7	2.6	8.3	2.5	8.7	15.0
South Carolina	5.9		5.9	1.7	2.5	7.9	2.2	8.1	14.3
Georgia	6.2		6.2	1.7	2.3	7.1	2.0	8.2	12.5
South Atlantic	7.1		7.1	1.7	2.5	9.4	3.7	10.8	16.5
Kentucky	4.0		4.0	1.6	2.5	9.4	4.2	8.2	15.0
Tennessee	4.0		4.0	1.7	2.4	7.4	3.7	7.7	12.5
Alabama	6.0		6.0	1.7	2.3	9.0	2.2	8.2	15.5
Mississippi	4.5		4.5	1.4		11.8	1.8	6.1	20.0
E. S. Central	4.0		4.0	1.7	2.5	8.4	3.9	7.9	13.9
Arkansas	4.5		4.5	1.5		7.8	4.0	8.5	14.0
Oklahoma	2.3		2.3	1.6	2.0	5.1	1.6	3.9	9.0
Texas	2.0		2.0	1.5	2.0	4.1	1.6	3.6	6.0
W. S. Central	2.2		2.2	1.6	2.0	4.8	1.6	3.8	6.7
Montana	1.5	10.0	1.6	1.4	1.9	8.4	1.7	3.5	16.5
Idaho	1.5	8.6	2.7	1.7	2.3	11.5	2.1	4.8	27.6
Wyoming	2.2	10.5	2.9	1.7	2.4	9.0	2.1	5.0	18.3
Colorado	2.4	10.5	2.7	1.4	2.0	8.9	1.5	4.2	16.0
New Mexico	2.5	10.5	2.8	1.5	2.0	3.7	1.5	4.3	6.2
Arizona	2.3	10.0	9.2	1.4		10.5	1.5	10.7	35.0
Utah	2.4	14.0	4.9	1.5		7.9	1.9	6.3	19.2
Nevada	2.0	13.0	12.4	1.6		12.1	1.7	14.1	27.7
Mountain	1.9	10.3	2.4	1.5	2.0	9.0	1.7	4.1	19.0
Washington	1.5	8.6	1.6	1.5	2.0	10.6	1.6	3.2	26.6
Oregon	1.5	8.6	1.9	1.4	1.9	14.3	1.5	3.4	24.9
California	1.5	7.0	2.5	1.5		10.4	1.5	4.0	21.0
Pacific	1.5	7.8	1.3	1.5	1.9	11.2	1.6	3.4	25.3
United States	3.2	9.6	2.3	1.6	2.0	7.7	2.0	4.3	16.5

1/ According to the 1950 census the following percentage of the total wheat acreage was grown on farms on which the entire acreage of wheat was irrigated: Montana, 3 percent; Idaho, 17 percent; Wyoming, 8 percent; Colorado, 4 percent; New Mexico, 4 percent; Utah, 22 percent; Nevada, 97 percent; Washington, 1 percent; Oregon, 6 percent; and California, 19 percent. It was estimated that in Arizona 90 percent of the wheat was irrigated.

2/ Proportion harvested by each method from BAE Report, F.B. 91, "Harvesting Small Grains and Soybeans and Methods of Saving Straw."

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Table 8.- Rye: Labor used per acre, 1950

State	Man-hours per acre								Yield per acre
	Preharvest 1/			Harvest 2/				Total	
				Combined					
	Non-irrigated	Irrigated	All	As standing grain	From windrow	Threshed from shock, stack, etc.	All methods		
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Bushels
New York	5.2		5.2	1.6	---	9.1	2.5	7.7	19.5
New Jersey	5.0		5.0	1.6	---	8.5	2.4	7.4	17.5
Pennsylvania	5.2		5.2	1.6	---	7.6	2.3	7.5	15.5
Middle Atlantic	5.1		5.1	1.6		8.5	2.4	7.5	17.7
Ohio	3.0		3.0	1.7	2.5	7.1	2.5	5.5	16.0
Indiana	1.6		1.6	1.7	2.5	6.0	2.1	3.7	13.5
Illinois	1.6		1.6	1.5		5.6	1.7	3.3	13.5
Michigan	4.8		4.8	1.8	2.7	6.1	3.3	8.1	14.5
Wisconsin	4.7		4.7	1.6	2.4	4.8	3.7	8.4	12.5
E. N. Central	3.2		3.2	1.6	2.5	5.5	2.8	6.0	13.7
Minnesota	3.8		3.8	1.5	2.2	6.3	4.4	7.4	14.5
Iowa	2.5		2.5	1.6	2.5	6.6	2.4	4.9	16.0
Missouri	2.7		2.7	1.7	2.4	5.3	2.2	4.9	11.0
North Dakota	1.7		1.7	1.4	1.9	4.5	2.3	4.0	10.5
South Dakota	1.6		1.6	1.7	2.3	5.8	3.0	4.6	13.0
Nebraska	2.1		2.1	1.7	2.4	5.2	2.6	4.7	11.0
Kansas	2.0		2.0	1.6	2.0	5.0	1.8	3.8	10.0
W. N. Central	2.8		2.8	1.7	2.2	5.7	2.9	4.9	12.2
Delaware	5.0		5.0	1.6		8.2	2.4	7.4	14.0
Maryland	5.0		5.0	1.6		7.5	2.3	7.3	14.0
Virginia	9.5		9.5	1.6	3.0	7.7	3.5	13.0	14.0
West Virginia	13.0		13.0	1.7		11.0	4.5	17.5	14.0
North Carolina	6.0		6.0	1.7	3.0	7.5	3.5	9.5	12.5
South Carolina	5.9		5.9	1.7		5.9	2.0	7.9	10.0
Georgia	6.2		6.2	1.7		5.7	1.9	8.1	9.5
South Atlantic	7.3		7.3	1.7	3.0	7.7	2.9	10.2	13.2
Kentucky	4.0		4.0	1.6	2.0	7.5	3.4	7.4	11.5
Tennessee	4.0		4.0	1.7	3.0	6.2	3.0	7.0	10.0
E. S. Central	4.0		4.0	1.7	2.5	6.8	3.2	7.2	10.7
Oklahoma	2.5		2.5	1.6	2.0	4.5	1.6	4.1	5.0
Texas	2.2		2.2	1.5	2.0	4.5	1.6	3.8	7.0
W. S. Central	2.4		2.4	1.6	2.0	4.5	1.6	4.0	5.8
Montana	1.7	10.0	2.3	1.4	1.7	6.2	2.0	4.3	13.0
Idaho	1.7	10.0	2.6	1.7	2.0	5.7	2.2	4.8	13.0
Wyoming	2.2	10.5	2.9	1.7	2.0	5.7	2.3	5.2	11.0
Colorado	2.4	10.5	2.9	1.4	1.9	4.5	1.8	4.7	7.5
New Mexico	2.5	10.5	3.6	1.5	2.0	5.8	2.1	5.7	6.0
Utah	2.5	14.0	4.8	1.5	2.0	4.5	1.9	6.7	10.0
Mountain	2.2	11.0	2.9	1.5	1.9	5.1	2.0	4.9	9.4
Washington	1.5	8.6	2.0	1.5	1.8	4.8	1.9	3.9	11.5
Oregon	1.5	8.6	3.0	1.4	2.0	6.6	2.0	5.0	11.0
California	1.5	7.0	2.2	1.5	1.5	5.2	1.8	4.0	10.0
Pacific	1.5	8.5	2.6	1.5	1.8	5.6	1.9	4.5	11.1
United States	3.1	9.2	3.2	1.6	2.2	5.7	2.8	6.0	12.2

1/ According to the 1950 census the following percentage of the total acreage of rye was grown on farms on which the entire acreage of rye was irrigated: Montana, 9 percent; Wyoming, 7 percent; Colorado, 5 percent; New Mexico, 15 percent; Utah, 17 percent; Washington, 6 percent; and Oregon, 21 percent. It was estimated that in both Idaho and California 15 percent of the rye was irrigated.

2/ Proportion harvested by each method from BAE Report, F.M. 91, "Harvesting Small Grains and Soybeans and Methods of Saving Straw."

Table 9.- Buckwheat: Labor used per acre, 1950

State	Man-hours per acre						Yield per acre
	Pre-harvest	Harvest 1/				Total	
		Combined		Threshed from shock, stack, etc.	All methods		
		As standing grain	From windrow				
	Hours	Hours	Hours	Hours	Hours	Hours	Bushels
Maine	7.5	1.7		6.8	2.4	9.9	22.0
New York	5.9	1.6		6.4	2.2	8.1	19.5
Pennsylvania	5.9	1.6		6.6	2.2	8.1	19.0
Mid. Atlantic	5.9	1.6		6.5	2.2	8.1	19.3
Ohio	3.7	1.7	2.4	5.6	2.2	5.9	18.0
Indiana	2.5	1.7	2.5	5.0	2.1	4.6	13.5
Illinois	2.5	1.5		5.3	1.6	4.1	18.0
Michigan	5.5	1.8	2.7	5.0	2.9	8.4	15.5
Wisconsin	5.3	1.6	2.5	5.0	3.8	9.1	17.0
E. N. Central	4.8	1.7	2.5	5.1	3.0	7.8	16.7
Minnesota	3.5	1.5	2.2	5.0	3.7	7.2	10.5
North Dakota	2.5	1.2	1.9	5.0	2.3	4.8	15.0
South Dakota	2.4	1.8	2.3	5.0	2.8	5.2	9.0
W. N. Central	3.3	1.5	2.2	5.0	3.4	6.7	10.9
Maryland	7.6	1.6		7.9	2.5	10.1	21.0
Virginia	9.5	1.6		7.0	3.2	12.7	18.0
West Virginia	13.0	1.7		11.0	4.5	17.5	20.5
S. Atlantic	10.9	1.7		9.7	3.7	14.6	20.2
Tennessee	5.0	1.7	3.0	7.2	3.4	8.4	16.5
United States	5.4	1.6	2.2	5.8	2.7	8.1	17.5

1/ Proportion harvested by each method adapted from BAE Report, F.M. 66, "Harvesting Small Grains and Utilization of the Straw."

Table 10.- Rice: Labor used per acre, 1950

State	Man-hours per acre					Yield per acre
	Pre-harvest	Harvest 1/		All methods	Total	
		Combined as standing grain	Threshed from shock, stack, etc.			
	Hours	Hours	Hours	Hours	Hours	Pounds
Mississippi	14.0	4.0		4.0	18.0	2,700
Arkansas	12.0	2.8	11.2	4.5	16.5	2,275
Louisiana	12.0	1.7	10.7	3.5	15.5	1,975
Texas	12.0	2.0	11.0	2.9	14.9	2,400
W. S. Central	12.0	2.1	10.9	3.5	15.5	2,199
California	7.0	5.0	---	5.0	12.0	3,475
United States	11.3	2.6	10.9	3.8	15.1	2,388

1/ Proportion harvested by each method adapted from BAE Report, F.M. 66, "Harvesting Small Grains and Utilization of the Straw."

Table 11.- Alfalfa hay: Labor used per acre, 1950

State	Man-hours per acre					Yield per acre
	Preharvest 1/			Harvest 2/	Total	
	Nonirrigated	Irrigated	All			
	Hours	Hours	Hours	Hours	Hours	Tons
Maine	1.3		1.3	5.5	6.8	1.1
New Hampshire	1.3		1.3	7.3	8.6	1.95
Vermont	1.3		1.3	7.3	8.6	1.9
Massachusetts	1.3		1.3	7.5	8.8	2.15
Rhode Island	1.5		1.5	7.7	9.2	2.2
Connecticut	1.5		1.5	8.6	10.1	2.5
New England	1.4		1.4	7.6	9.0	2.09
New York	1.5		1.5	7.0	8.5	2.1
New Jersey	1.3		1.3	8.3	9.6	2.35
Pennsylvania	1.3		1.3	8.0	9.3	1.95
Middle Atlantic	1.4		1.4	7.6	9.0	2.06
Ohio	1.0		1.0	7.4	8.4	1.9
Indiana	1.0		1.0	6.5	7.5	1.9
Illinois	1.3		1.3	7.4	8.7	2.3
Michigan	1.7		1.7	5.7	7.4	1.6
Wisconsin	1.8		1.8	6.5	8.3	2.0
E. N. Central	1.5		1.5	6.6	8.1	1.94
Minnesota	1.9		1.9	6.2	8.1	1.9
Iowa	1.4		1.4	6.9	8.3	2.75
Missouri	1.4		1.4	8.8	10.2	2.6
North Dakota	1.8	7.5	1.9	4.4	6.3	1.5
South Dakota	1.8	7.5	2.0	4.6	6.6	1.35
Nebraska	1.7	7.5	2.1	6.7	8.8	2.0
Kansas	1.6	7.5	1.7	7.2	8.9	2.1
W. N. Central	1.7	7.5	1.8	6.5	8.3	1.98
Delaware	1.6		1.6	9.4	11.0	2.25
Maryland	1.6		1.6	8.5	10.1	2.05
Virginia	3.0		3.0	12.1	15.1	2.2
West Virginia	3.4		3.4	16.6	20.0	1.9
North Carolina	4.0		4.0	15.4	19.4	2.15
Georgia	4.5		4.5	16.7	21.2	1.85
South Atlantic	3.0		3.0	13.0	16.0	2.13
Kentucky	2.6		2.6	11.6	14.2	2.0
Tennessee	3.5		3.5	13.3	16.8	2.1
Alabama	4.0		4.0	14.8	18.8	1.8
Mississippi	3.5		3.5	14.8	18.3	2.25
E. S. Central	3.0		3.0	12.5	15.5	2.03
Arkansas	3.5		3.5	15.7	19.2	2.4
Louisiana	3.5		3.5	13.5	17.0	1.9
Oklahoma	1.7	12.5	1.8	10.5	12.3	1.95
Texas	1.7	12.5	5.0	10.5	15.5	2.1
W. S. Central	1.9	12.5	2.9	10.9	13.8	2.08
Montana	1.1	12.0	6.3	5.5	11.8	1.65
Idaho	1.3	8.5	6.6	7.7	14.3	2.6
Wyoming	1.1	12.0	9.1	5.2	14.3	1.5
Colorado	2.0	6.0	5.4	6.6	12.0	2.1
New Mexico	1.5	12.8	11.8	9.7	21.5	2.9
Arizona	1.7	18.5	18.3	10.4	28.7	2.8
Utah	1.7	13.5	11.6	7.8	19.4	2.2
Nevada	1.7	12.0	11.9	7.9	19.8	2.6
Mountain	1.3	10.6	8.3	7.0	15.3	2.17
Washington	2.0	13.3	6.0	7.4	13.4	2.1
Oregon	2.1	13.5	10.1	8.4	18.5	2.7
California	3.0	15.7	14.7	12.2	26.9	4.7
Pacific	2.1	15.2	12.5	10.8	23.3	3.95
United States	1.7	12.1	3.8	7.5	11.3	2.18

1/ Includes the annual prorated share of time for establishing the stand, and time for annual care of established stands. According to the 1950 census the following percentage of the total alfalfa hay acreage was grown on farms on which the entire acreage of alfalfa hay was irrigated: North Dakota, 1 percent; South Dakota, 3 percent; Nebraska, 7 percent; Kansas, 1 percent; Oklahoma, 3 percent; Texas, 31 percent; Montana, 45 percent; Idaho, 75 percent; Wyoming, 73 percent; Colorado, 85 percent; New Mexico, 91 percent; Arizona, 99 percent; Utah, 84 percent; Nevada, 99 percent; Washington, 35 percent; Oregon, 70 percent; and California, 92 percent.

2/ Includes time for mowing and raking once over, multiplied by number of cuttings, as shown in BAE Report, F.M. 57, "Harvesting the Hay Crop," and time for moving hay from windrow to storage by each method, weighted by the proportion put up each way as adapted from BAE Report, F.M. 107, "Harvesting Hay and Straw and Use of Balers."

Table 12.- Clover and timothy hay: Labor used per acre, 1950

State	Man-hours per acre					Yield per acre
	Preharvest 1/			Harvest 2/	Total	
	Nonirrigated	Irrigated	All			
	Hours	Hours	Hours	Hours	Hours	Tons
Maine	0.5		0.5	3.6	4.1	1.0
New Hampshire	.6		.6	4.8	5.4	1.35
Vermont	.6		.6	5.0	5.6	1.4
Massachusetts	.7		.7	5.6	6.3	1.7
Rhode Island	.7		.7	5.5	6.2	1.65
Connecticut	.7		.7	5.6	6.3	1.7
New England	.6		.6	4.7	5.3	1.33
New York	.7		.7	5.2	5.9	1.6
New Jersey	.6		.6	5.3	5.9	1.65
Pennsylvania	.6		.6	5.0	5.6	1.4
Mid. Atl.	.7		.7	5.1	5.8	1.52
Ohio	.7		.7	4.4	5.1	1.35
Indiana	.6		.6	3.8	4.4	1.25
Illinois	.7		.7	4.2	4.9	1.4
Michigan	.7		.7	4.0	4.7	1.25
Wisconsin	.7		.7	4.5	5.2	1.45
E. N. Cent.	.7		.7	4.2	4.9	1.35
Minnesota	.7		.7	3.9	4.6	1.3
Iowa	.7		.7	4.1	4.8	1.5
Missouri	.7		.7	3.6	4.3	1.15
South Dakota	1.2	5.8	1.3	2.9	4.2	1.0
Nebraska	1.2	5.8	1.2	3.6	4.8	1.25
Kansas	1.2		1.2	3.7	4.9	1.25
W. N. Cent.	.7	5.8	.7	3.9	4.6	1.35
Delaware	.7		.7	5.0	5.7	1.45
Maryland	.7		.7	4.8	5.5	1.3
Virginia	1.1		1.1	5.7	6.8	1.25
West Virginia	1.4		1.4	9.9	11.3	1.25
North Carolina	1.3		1.3	7.6	8.9	1.15
Georgia	1.3		1.3	7.8	9.1	1.0
S. Atl.	1.1		1.1	7.1	8.2	1.25
Kentucky	.8		.8	6.6	7.4	1.3
Tennessee	.9		.9	7.2	8.1	1.3
Alabama	1.3		1.3	7.3	8.6	1.0
Mississippi	1.3		1.3	7.6	8.9	1.35
E. S. Cent.	.9		.9	6.9	7.8	1.3
Arkansas	1.2		1.2	7.1	8.3	1.2
Louisiana	1.3		1.3	6.9	8.2	1.25
W. S. Cent.	1.2		1.2	7.0	8.2	1.22
Montana	.8	8.5	5.5	3.9	9.4	1.25
Idaho	.8	6.5	3.8	4.2	8.0	1.35
Wyoming	.8	10.0	8.5	3.4	11.9	1.05
Colorado	1.0	5.8	5.0	3.9	8.9	1.3
New Mexico	1.2	9.5	5.9	4.0	9.9	1.25
Utah	1.2	6.5	6.1	5.0	11.1	1.6
Nevada	1.2	8.2	8.1	4.4	12.5	1.3
Mountain	.8	7.8	5.8	4.0	9.8	1.26
Washington	1.5	9.4	2.7	6.8	9.5	2.0
Oregon	1.6	9.6	5.4	6.0	11.4	1.75
Pacific	1.5	9.5	3.7	6.5	10.2	1.9
United States	.8	8.0	1.0	4.7	5.7	1.38

1/ According to the 1950 census the following percentage of the total acreage of clover and timothy hay was grown on farms on which the entire acreage of clover and timothy hay was irrigated: South Dakota, 3 percent; Nebraska, 1 percent; Montana, 61 percent; Idaho, 52 percent; Wyoming, 84 percent; Colorado, 84 percent; New Mexico, 57 percent; Utah, 93 percent; Nevada, 99 percent; Washington, 15 percent; and Oregon, 47 percent.

2/ Time for mowing and raking once over multiplied by estimated number of cuttings, and time from windrow to storage by each method weighted by the proportion put up each way as reported in U.S.D.A. Farmers' Bul. F.M. 107, "Harvesting Hay and Straw and Use of Balers."

Table 13.- Cowpea hay: Labor used per acre, 1950

State	Man-hours per acre			Yield per acre
	Preharvest	Harvest 1/	Total	
	Hours	Hours	Hours	Tons
Indiana	3.0	5.8	8.8	1.5
Illinois	3.0	3.5	6.5	1.0
E. N. Central	3.0	3.6	6.6	1.08
Missouri	4.0	4.2	8.2	1.25
Kansas	4.0	3.6	7.6	1.2
W. N. Central	4.0	3.8	7.8	1.2
Virginia	6.5	5.1	11.6	1.15
North Carolina	6.4	6.9	13.3	.95
South Carolina	6.0	5.8	11.8	.75
Georgia	8.0	6.0	14.0	.75
Florida	7.0	5.1	12.1	.60
S. Atlantic	6.5	6.0	12.5	.77
Kentucky	6.5	8.3	14.8	1.35
Tennessee	7.0	7.4	14.4	1.1
Alabama	8.5	6.0	14.5	.75
Mississippi	4.2	7.9	12.1	1.05
E. S. Central	6.1	7.6	13.7	1.1
Arkansas	4.0	7.9	11.9	1.0
Louisiana	5.0	7.2	12.2	1.0
Oklahoma	3.9	4.5	8.4	.85
Texas	3.8	3.5	7.3	.75
W. S. Central	4.1	5.5	9.6	.89
United States	5.7	5.8	11.5	.86

1/ Includes time for mowing and raking and for moving hay from windrow to storage by each method weighted by the proportion put up each way as adapted from BAE Report, F.M. 107, "Harvesting Hay and Straw and Use of Balers."

Table 14.- Grain hay: Labor used per acre, 1950

State	Man-hours per acre			Yield per acre
	Preharvest 1/	Harvest 2/	Total	
	Hours	Hours	Hours	Tons
Maine	7.0	5.1	12.1	1.65
New Hampshire	6.5	5.0	11.5	1.50
Vermont	7.4	5.1	12.5	1.60
Massachusetts	5.8	5.1	10.9	1.65
Rhode Island	5.8	5.1	10.9	1.70
Connecticut	4.9	5.1	10.0	1.70
New England	6.9	5.1	12.0	1.63
New York	5.0	4.8	9.8	1.55
Wisconsin	4.0	3.9	7.9	1.20
Minnesota	2.2	3.3	5.5	1.15
Iowa	1.5	3.4	4.9	1.20
Missouri	2.5	3.2	5.7	.95
North Dakota	1.4	2.8	4.2	1.00
South Dakota	1.5	2.2	3.7	.65
Nebraska	2.1	2.6	4.7	.80
Kansas	2.2	3.2	5.4	1.05
W. N. Central	1.8	2.8	4.6	.99
Virginia	9.5	5.6	15.1	1.20
West Virginia	13.0	8.7	21.7	1.10
North Carolina	6.0	6.8	12.8	.95
South Carolina	5.9	6.6	12.5	.85
Georgia	6.2	6.8	13.0	.85
S. Atlantic	7.6	6.7	14.3	1.00
Kentucky	3.6	6.8	10.4	1.05
Tennessee	3.5	6.8	10.3	1.00
E. S. Central	3.5	6.8	10.3	1.02
Arkansas	4.5	7.5	12.0	.95
Oklahoma	2.4	4.2	6.6	.80
Texas	2.1	4.1	6.2	.90
W. S. Central	2.7	4.9	7.6	.88
Montana	3.9	3.3	7.2	1.00
Idaho	4.4	4.4	8.8	1.50
Wyoming	5.7	2.9	8.6	.85
Colorado	4.9	3.2	8.1	1.05
New Mexico	5.4	3.7	9.1	1.25
Arizona	9.2	4.7	13.9	1.70
Utah	9.8	3.6	13.4	1.10
Nevada	13.1	3.8	16.9	1.20
Mountain	5.2	3.5	8.7	1.10
Washington	2.9	4.3	7.2	1.45
Oregon	3.0	3.8	6.8	1.30
California	2.3	3.3	5.6	1.45
Pacific	2.6	3.6	6.2	1.40
United States	3.4	3.8	7.2	1.16

1/ Man-hours for preharvest work on oats, barley, wheat, and rye weighted by the acreage of each cut for hay.

2/ Includes time for mowing and raking and for moving hay from windrow to storage by each method of preservation put up each way as adapted from BAE Rreport, F.M. 107, "Harvesting Hay and [illegible]."

Table 15.- Lespedeza hay: Labor used per acre, 1950

State	Man-hours per acre			Yield per acre
	Preharvest	Harvest 1/	Total	
	Hours	Hours	Hours	Tons
Indiana	0.8	3.3	4.1	1.1
Illinois	.8	3.1	3.9	1.05
E. N. Central	.8	3.2	4.0	1.07
Missouri	1.0	3.5	4.5	1.15
Kansas	1.0	3.4	4.4	1.2
W. N. Central	1.0	3.5	4.5	1.15
Delaware	1.2	4.2	5.4	1.25
Maryland	1.2	4.3	5.5	1.2
Virginia	1.3	5.1	6.4	1.1
West Virginia	1.3	8.4	9.7	1.05
North Carolina	1.3	7.2	8.5	1.1
South Carolina	1.3	5.6	6.9	.8
Georgia	1.5	6.5	8.0	.85
South Atlantic	1.3	6.1	7.4	1.03
Kentucky	1.2	5.7	6.9	1.15
Tennessee	2.0	6.5	8.5	1.15
Alabama	1.3	6.9	8.2	.95
Mississippi	1.3	6.8	8.1	1.2
E. S. Central	1.5	6.2	7.7	1.15
Arkansas	1.3	6.5	7.8	1.1
Louisiana	1.3	7.7	9.0	1.45
Oklahoma	1.2	5.3	6.5	1.2
W. S. Central	1.3	6.4	7.7	1.15
United States	1.3	5.4	6.7	1.12

1/ Includes time for mowing and raking and for moving hay from windrow to storage by each method weighted by the proportion put up each way as adapted from BAE Report, F.M. 107, "Harvesting Hay and Straw and Use of Balers."

Table 16.- Peanut hay: Labor used per acre, 1950 1/

State	Man-hours per acre for harvest	Yield per acre
	Hours	Tons
Virginia	3.2	0.6
North Carolina	3.4	.65
South Carolina	3.5	.6
Georgia	2.9	.45
Florida	3.6	.55
South Atlantic	3.1	.52
Tennessee	5.3	.85
Alabama	3.3	.55
Mississippi	5.2	.85
E. S. Central	3.4	.56
Arkansas	5.9	.85
Louisiana	4.2	.65
Oklahoma	2.4	.45
Texas	2.6	.5
W. S. Central	2.6	.49
New Mexico	1.7	.5
United States	3.0	.52

1/ Includes time for caring for peanut vines or tops saved for hay after the nuts are picked or threshed. See table 33 for labor used for growing and harvesting peanuts.

Table 17.- Soybean hay: Labor used per acre, 1950

State	Man-hours per acre			Yield per acre
	Preharvest	Harvest 1/	Total	
	Hours	Hours	Hours	Tons
New Jersey	5.0	5.6	10.6	1.6
Pennsylvania	5.0	5.8	10.8	1.65
Middle Atlantic	5.0	5.7	10.7	1.64
Ohio	3.5	5.0	8.5	1.5
Indiana	3.0	4.7	7.7	1.45
Illinois	3.0	4.3	7.3	1.3
Michigan	4.6	4.2	8.8	1.3
Wisconsin	4.6	5.1	9.7	1.65
E. N. Central	3.4	4.6	8.0	1.43
Minnesota	3.0	4.1	7.1	1.4
Iowa	3.0	4.6	7.6	1.6
Missouri	4.0	4.4	8.4	1.35
North Dakota	3.6	3.2	6.8	1.2
South Dakota	3.6	3.2	6.8	1.1
Kansas	4.0	4.4	8.4	1.4
W. N. Central	3.4	4.3	7.7	1.42
Delaware	5.0	4.8	9.8	1.3
Maryland	6.0	5.3	11.3	1.45
Virginia	8.5	7.0	15.5	1.35
West Virginia	15.0	12.3	27.3	1.6
North Carolina	8.5	7.7	16.2	1.1
South Carolina	6.0	7.3	13.3	1.0
Georgia	6.8	7.4	15.4	.95
South Atlantic	8.1	7.5	15.6	1.16
Kentucky	6.5	9.0	15.5	1.45
Tennessee	7.0	8.5	15.5	1.3
Alabama	8.5	7.6	16.1	1.0
Mississippi	4.2	9.4	13.6	1.35
E. S. Central	6.1	8.7	14.8	1.29
Arkansas	4.0	9.2	13.2	1.2
Louisiana	5.0	8.7	13.7	1.25
Oklahoma	3.9	5.4	9.3	1.1
Texas	3.8	3.9	7.7	.75
W. S.Central	4.1	8.7	12.8	1.2
United States	5.4	7.0	12.4	1.31

1/ Includes time for mowing and raking and for moving hay from windrow to storage by each method weighted by the proportion put up each way as adapted from BAE Report, F. M. 107, "Harvesting Hay and Straw and Use of Balers."

Table 18.- Wild hay: Labor used per acre, 1950

State	Man-hours per acre			Yield per acre
	Preharvest 1/	Harvest 2/	Total	
	Hours	Hours	Hours	Tons
Wisconsin		3.7	3.7	1.3
Minnesota		2.7	2.7	1.09
Iowa		3.0	3.0	1.2
Missouri		3.1	3.1	1.1
North Dakota		1.9	1.9	.8
South Dakota		1.6	1.6	.55
Nebraska		1.8	1.8	.75
Kansas		2.6	2.6	1.15
W. N. Central		1.9	1.9	.76
Arkansas		6.2	6.2	1.05
Oklahoma		4.5	4.5	1.25
Texas		3.9	3.9	1.05
W. S. Central		4.7	4.7	1.16
Montana	1.3	2.1	3.4	.75
Idaho	1.9	2.7	4.6	1.05
Wyoming	2.2	2.3	4.5	.75
Colorado	2.2	2.7	4.9	.90
New Mexico	0.9	2.0	2.9	.65
Utah	2.4	3.3	5.7	1.2
Nevada	2.9	3.0	5.9	1.0
Mountain	1.9	2.4	4.3	.84
Washington	.2	4.1	4.3	1.3
Oregon	1.7	3.0	4.7	1.1
California	1.0	3.0	4.0	1.25
Pacific	1.3	3.1	4.4	1.17
United States	.3	2.2	2.5	.8

1/ The time for irrigating multiplied by the percentage irrigated. According to the 1950 census the following percentage of the total acreage of wild hay harvested was on farms on which the entire acreage of wild hay was irrigated: Montana, 40 percent; Idaho, 58 percent; Wyoming, 74 percent; Colorado, 74 percent; New Mexico, 30 percent; Utah, 79 percent; Nevada, 98 percent; Washington, 7 percent; Oregon, 69 percent; and California, 50 percent.

2/ Includes time for mowing and raking and for moving hay from windrow to storage by each method weighted by the proportion put up each way as adapted from BAE Report, F.M. 107, "Harvesting Hay and Straw and Use of Balers."

Table 19.- Sorghums for forage and for silage: Labor used per acre, 1950

State	Man-hours per acre									Yield per acre	
	Preharvest 1/			Harvest				Total			
					For silage 2/						
	Non-irrigated	Irrigated	All	For forage	Field forage harvester	Stationary cutter	All methods	Forage	Silage	Forage	Silage
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Tons	Tons
Indiana	4.7		4.7		8.1	14.6	10.0		14.7		10.5
Illinois	4.7		4.7	6.9	7.9	14.1	9.8	11.6	14.5	3.0	10.0
E. N. Central	4.7		4.7	6.9	8.0	14.3	9.8	11.6	14.5	3.0	10.2
Minnesota	5.5		5.5	4.3	6.9	11.5	9.1	9.8	14.6	2.5	7.5
Iowa	4.7		4.7	5.2	7.9	14.1	9.8	9.9	14.5	3.0	10.0
Missouri	6.3		6.3	8.2	7.5	13.0	9.6	14.5	15.9	2.0	9.0
North Dakota	3.8		3.8	2.6	3.6	4.6	3.9	6.4	7.7	1.0	2.3
South Dakota	3.7		3.7	3.5	4.2	6.2	4.9	7.2	8.6	1.3	4.0
Nebraska	3.6	7.4	3.6	4.5	5.4	9.2	6.3	8.1	9.9	1.9	7.0
Kansas	3.6	7.4	3.6	5.7	6.0	10.7	7.1	9.3	10.7	2.0	8.5
W. N. Central	3.8	7.4	3.8	5.0	6.0	10.6	7.2	8.8	11.0	1.8	8.3
Virginia	20.0		20.0	8.7				28.7		1.6	
North Carolina	14.7		14.7	6.9				21.6		2.0	
South Carolina	14.4		14.4	5.1	6.5	12.4	9.5	19.5	23.9	1.5	5.0
Georgia	15.4		15.4	4.4	6.8	13.3	10.2	19.8	25.6	1.4	5.5
S. Atlantic	16.0		16.0	5.5	6.7	13.0	9.9	21.5	25.9	1.6	5.4
Kentucky	10.5		10.5	8.6				19.1		2.2	
Tennessee	15.4		15.4	7.8	8.1	17.0	13.2	23.2	28.6	2.1	7.5
Alabama	15.4		15.4	7.0	7.8	16.1	12.1	22.4	27.5	1.4	7.0
Mississippi	13.8		13.8	7.1	9.4	20.8	15.2	20.9	29.0	2.0	9.5
E. S. Central	14.4		14.4	7.5	8.6	18.2	13.7	21.9	28.1	1.9	8.2
Arkansas	13.3		13.3	7.2	8.1	17.0	12.6	20.5	25.9	1.9	7.5
Louisiana	16.6		16.6	5.7	7.2	14.3	10.8	22.3	27.4	1.6	6.0
Oklahoma	3.5		3.5	5.1	4.8	7.7	5.5	8.6	9.0	1.6	5.5
Texas	3.5	11.0	4.2	4.4	4.5	6.8	5.0	8.6	9.2	1.3	4.6
W. S. Central	3.7	11.0	4.2	4.6	4.7	8.0	5.5	8.8	9.7	1.4	5.1
Montana	4.2	11.0	4.7	3.7				8.4		1.3	
Wyoming	5.1	12.0	5.3	2.7				8.0		.8	
Colorado	3.8	9.8	4.0	3.8	4.7	7.2	5.1	7.8	9.1	1.0	4.5
New Mexico	4.2	11.0	4.7	3.0	4.2	5.8	4.5	7.7	9.2	1.1	2.9
Arizona	5.1	20.9	20.6	4.1	6.5	12.3	7.2	24.7	27.8	2.0	10.0
Mountain	3.9	13.9	4.6	3.5	5.5	8.9	5.9	8.1	10.5	1.0	6.7
California	5.6	13.2	11.1	6.7	6.5	12.3	7.8	17.8	18.9	3.5	10.0
United States	4.1	11.5	4.4	4.7	5.8	10.7	7.0	9.1	11.4	1.5	7.5

1/ According to the 1950 census the following percentage of the acreage of sorghum for all purposes except sirup was grown on farms on which the entire acreage of sorghum was irrigated: Nebraska, 1 percent; Kansas, 1 percent; Texas, 10 percent; Montana, 8 percent; Wyoming, 3 percent; Colorado, 4 percent; New Mexico, 7 percent; Arizona, 98 percent; and California, 72 percent.

2/ Proportion harvested by each method adapted from U. S. Department of Agriculture, Statistical Bulletin No. 128.

Table 20.- Alfalfa seed and sweetclover seed: Labor used per acre, 1950

State	Alfalfa seed				Sweetclover seed			
	Man-hours per acre			Yield per acre	Man-hours per acre			Yield per acre
	Preharvest 1/	Harvest	Total		Preharvest 2/	Harvest	Total	
	Hours	Hours	Hours	Pounds	Hours	Hours	Hours	Pounds
Ohio		2.6	2.6	45	0.4	2.5	2.9	145
Indiana		2.6	2.6	54	.4	2.5	2.9	120
Illinois					.4	2.4	2.8	87
Michigan		2.6	2.6	35	.4	2.7	3.1	135
Wisconsin		2.7	2.7	62	.4	2.8	3.2	120
E. N. Central		2.6	2.6	45	.4	2.5	2.9	117
Minnesota		2.6	2.6	36	.4	2.6	3.0	180
Iowa		2.5	2.5	29	.4	2.4	2.8	140
Missouri					.4	2.5	2.9	115
N. Dakota		2.5	2.5	29	.8	2.2	3.0	135
S. Dakota		2.5	2.5	37	.8	2.2	3.0	180
Nebraska		2.9	2.9	60	1.0	2.4	3.4	180
Kansas		2.8	2.8	52	1.0	2.0	3.0	125
W. N. Central		2.7	2.7	43	.7	2.3	3.0	156
Oklahoma		4.0	4.0	87	1.1	2.0	3.1	105
Texas	1.1	4.5	5.6	125	1.1	2.2	3.3	180
W. S. Central	.3	4.1	4.4	97	1.1	2.1	3.2	159
Montana	.8	4.0	4.8	72	2.2	2.1	4.3	210
Idaho	1.8	5.0	6.8	150				
Wyoming	2.0	4.5	6.5	66	2.8	2.3	5.1	190
Colorado	2.5	5.0	7.5	85	2.8	2.4	5.2	215
N. Mexico	2.6	5.0	7.6	220				
Arizona	4.0	5.0	9.0	185				
Utah	2.3	4.5	6.8	165				
Mountain	2.1	4.6	6.7	127	2.6	2.3	4.9	206
Washington	2.9	7.0	9.9	500				
Oregon	2.5	5.5	8.0	185				
California	3.0	6.0	9.0	270				
Pacific	3.0	6.1	9.1	289				
United States	1.2	4.0	5.2	113	.9	2.3	3.2	156

1/ Preharvest hours are for irrigating the seed crop only and other labor previous to harvest is included with the hay crop. According to the 1950 census the following percentage of the total acreage of alfalfa seed was grown on farms on which the entire acreage of alfalfa seed was irrigated: Montana, 25 percent; Idaho, 44 percent; Wyoming, 51 percent; Colorado, 70 percent; New Mexico, 87 percent; Arizona, 100 percent; Utah, 76 percent; Washington, 83 percent; and California, 81 percent. It was estimated that in Texas 31 percent and in Oregon 70 percent of the alfalfa seed was irrigated.

2/ It is assumed that seed is obtained from "second crop" and half the preharvest labor is included with the seed crop. According to the 1950 census the following percentage of the total acreage of sweetclover seed was grown on farms on which the entire acreage of sweetclover seed was irrigated: Montana, 47 percent; and Colorado, 74 percent. It was estimated that in Wyoming 74 percent of the sweetclover seed was irrigated. The preharvest hours used in the three States were 3.5 hours per acre for irrigated seed, and 1.0 hour per acre for nonirrigated seed.

Table 21.- Red clover seed and alsike clover seed: Labor used per acre, 1950

State	Red clover seed				Alsike clover seed			
	Man-hours per acre			Yield per acre	Man-hours per acre			Yield per acre
	Preharvest 1/	Harvest	Total		Preharvest	Harvest	Total	
	Hours	Hours	Hours	Pounds	Hours	Hours	Hours	Pounds
New York		3.4	3.4	70				
Pennsylvania		3.5	3.5	45				
Middle Atlantic		3.5	3.5	52				
Ohio		3.2	3.2	51	0.7	3.3	4.0	94
Indiana		3.0	3.0	46	.6	3.0	3.6	80
Illinois		2.9	2.9	48	.7	3.0	3.7	74
Michigan		3.2	3.2	66	.7	3.2	3.9	73
Wisconsin		3.4	3.4	68	.7	3.5	4.2	100
E. N. Central		3.1	3.1	53	.7	3.3	4.0	88
Minnesota		3.4	3.4	66	.7	3.5	4.2	135
Iowa		3.2	3.2	48	.7	3.3	4.0	60
Missouri		3.3	3.3	66				
Nebraska		2.7	2.7	42				
Kansas		2.6	2.6	42				
W. N. Central		3.2	3.2	54	.7	3.5	4.2	124
Maryland		3.5	3.5	45				
Virginia		3.6	3.6	45				
South Atlantic		3.5	3.5	45				
Kentucky		3.5	3.5	70				
Montana	1.9	5.0	6.9	165				
Idaho	3.0	5.5	8.5	255	4.3	5.5	9.8	155
Mountain	2.8	5.4	8.2	241	4.3	5.5	9.8	155
Washington	0.7	5.0	5.7	130				
Oregon	1.0	5.0	6.0	130	5.4	6.0	11.4	365
California	2.0	5.0	7.0	175	6.0	8.0	14.0	465
Pacific	1.0	5.0	6.0	131	5.6	6.5	12.1	392
United States	0.1	3.2	3.3	58	1.8	4.1	5.9	146

1/ It is assumed that seed is obtained from "second crop." Preharvest hours are for irrigating the seed crop only and other labor previous to harvest is included with the hay crop. According to the 1950 census the following percentage of the total red clover seed acreage was grown on farms on which the entire acreage of red clover seed was irrigated: Montana, 70 percent; Idaho, 86 percent; Washington, 27 percent; and Oregon, 36 percent. It was estimated that in California 75 percent of the red clover seed was irrigated.

Table 22.- Lespedeza seed and timothy seed: Labor used per acre, 1950

State	Lespedeza seed				Timothy seed			
	Man-hours per acre			Yield per acre	Man-hours per acre			Yield per acre
	Pre-harvest	Harvest	Total		Pre-harvest	Harvest	Total	
	Hours	Hours	Hours	Pounds	Hours	Hours	Hours	Pounds
Pennsylvania					0.5	3.5	4.0	105
Ohio					.5	2.8	3.3	130
Indiana	0.8	2.1	2.9	185	.5	3.0	3.5	120
Illinois	.8	2.1	2.9	170	.5	2.8	3.3	105
Wisconsin					.5	2.9	3.4	120
E. N. Central	.8	2.1	2.9	176	.5	2.8	3.3	123
Minnesota					.5	3.0	3.5	155
Iowa					.5	2.9	3.4	145
Missouri	1.0	2.4	3.4	180	.5	3.0	3.5	160
Kansas	1.0	2.2	3.2	225				
W. N. Central	1.0	2.4	3.4	187	.5	3.0	3.5	153
Maryland	1.2	2.6	3.8	170				
Virginia	1.3	2.6	3.9	165				
North Carolina	1.3	2.6	3.9	180				
South Carolina	1.3	2.5	3.8	150				
Georgia	1.5	2.5	4.0	160				
South Atlantic	1.3	2.6	3.9	169				
Kentucky	1.2	2.4	3.6	225				
Tennessee	2.0	2.5	4.5	215				
Alabama	1.3	2.5	3.8	190				
Mississippi	1.3	2.2	3.5	170				
E. S.Central	1.5	2.4	3.9	209				
Arkansas	1.3	2.3	3.6	280				
Louisiana	1.3	2.2	3.5	115				
Oklahoma	1.2	2.3	3.5	190				
W. S. Central	1.3	2.3	3.6	254				
United States	1.2	2.4	3.6	192	.5	2.9	3.4	142

Table 23.- Potatoes: Labor used per acre, 1950 1/

State	Man-hours per acre					Yield per acre
	Preharvest 2/			Harvest	Total	
	Nonirrigated	Irrigated	All			
	Hours	Hours	Hours	Hours	Hours	Bushels
Maine	30		30	57	87	430
New Hampshire	20		20	38	58	275
Vermont	20		20	34	54	225
Massachusetts	18		18	36	54	245
Rhode Island	18		18	38	56	275
Connecticut	17		17	40	57	305
New England	28		28	53	81	436
New York	23		23	61	84	313
New Jersey	26		26	63	89	329
Pennsylvania	32		32	45	77	240
Middle Atlantic	27		27	56	83	269
Ohio	32		32	59	91	255
Indiana	31		31	52	83	250
Illinois	30		30	22	52	100
Michigan	25		25	37	62	180
Wisconsin	27		27	38	65	200
E. N. Central	27		27	41	68	200
Minnesota	25		25	34	59	175
Iowa	25		25	26	51	135
Missouri	25		25	25	50	131
North Dakota	20	30	20	23	43	190
South Dakota	17	25	17	20	37	150
Nebraska	17	25	23	29	52	240
Kansas	17	25	17	21	38	198
W. N. Central	22	25	22	27	49	186
Delaware	26		26	40	66	177
Maryland	26		26	32	58	141
Virginia	34		34	41	75	181
West Virginia	60		60	35	95	105
North Carolina	42		42	43	85	167
South Carolina	43		43	40	83	106
Georgia	44		44	47	91	80
Florida	34		34	54	88	226
S. Atlantic	39		39	43	82	162
Kentucky	38		38	27	65	91
Tennessee	40		40	33	73	100
Alabama	35		35	40	75	116
Mississippi	40		40	28	68	68
E. S. Central	38		38	33	71	99
Arkansas	40		40	28	68	87
Louisiana	40		40	30	70	63
Oklahoma	25	33	26	26	52	91
Texas	25	33	29	25	54	89
W. S. Central	34	33	34	27	61	83
Montana	21	33	30	28	58	225
Idaho	16	28	27	26	53	300
Wyoming	25	38	36	27	63	260
Colorado	27	32	31	34	65	325
New Mexico	19	30	27	20	47	140
Arizona	16	27	27	34	61	360
Utah	21	35	34	26	60	245
Nevada	16	38	38	28	66	260
Mountain	18	30	29	28	57	297
Washington	15	35	30	48	78	380
Oregon	17	25	24	40	64	340
California	27	25	25	50	75	386
Pacific	16	26	25	48	73	376
United States	29	28	29	40	69	253

1/ Includes potatoes grown for seed.

2/ According to the 1950 census the following percentage of the acres of potatoes was grown on farms on which the entire acreage of potatoes was irrigated: North Dakota, 1 percent; South Dakota, 1 percent; Nebraska, 27 percent; Kansas, 1 percent; Oklahoma, 0 percent; Texas, 16 percent; Montana, 72 percent; Idaho, 93 percent; Wyoming, 82 percent; Colorado, 97 percent; New Mexico, 76 percent; Arizona, 97 percent; Utah, 95 percent; Nevada, 99 percent; Washington, 75 percent; Oregon, 47 percent; and California, 74 percent.

Table 24.- Sweetpotatoes: Labor used per acre, 1950

States	Man-hours per acre			Yield per acre
	Preharvest 1/	Harvest	Total	
	Hours	Hours	Hours	Bushels
New Jersey	50	70	120	165
Indiana	55	64	119	150
Illinois	55	50	105	105
E. N. Central	55	55	110	121
Iowa	55	46	101	95
Missouri	60	56	116	125
Kansas	60	54	114	120
W. N. Central	59	54	113	118
Delaware	50	68	118	160
Maryland	50	66	116	155
Virginia	70	59	129	130
North Carolina	70	60	130	110
South Carolina	75	55	130	105
Georgia	75	50	125	80
Florida	90	67	157	65
South Atlantic	73	57	130	102
Kentucky	75	60	135	93
Tennessee	70	53	123	98
Alabama	88	60	148	90
Mississippi	60	60	120	95
E. S. Central	73	59	132	93
Arkansas	67	45	112	86
Louisiana	67	43	110	102
Oklahoma	65	46	111	83
Texas	65	47	112	85
W. S. Central	66	44	110	96
California	59	70	129	120
United States	69	54	123	101

1/ According to the 1950 census nearly 100 percent of the acreage of sweetpotatoes in California was grown on farms on which the entire acreage of sweetpotatoes was irrigated.

Table 25.- Dry beans: Labor used per acre, 1950 1/

State	Man-hours per acre					Yield per acre
	Preharvest 2/			Harvest	Total	
	Non-irrigated	Irrigated	All			
	Hours	Hours	Hours	Hours	Hours	Pounds
Maine	12.0		12.0	10.0	22.0	900
New York	10.0		10.0	10.0	20.0	970
Michigan	7.0		7.0	6.0	13.0	950
Nebraska	4.0	22.8	21.9	5.2	27.1	1,575
Montana	4.4	24.9	23.6	8.5	32.1	1,460
Idaho	4.4	22.5	21.2	4.1	25.3	1,900
Wyoming	4.0	25.0	24.4	7.6	32.0	1,350
Colorado	3.0	20.0	9.1	5.5	14.6	760
New Mexico	2.3	18.6	3.9	3.0	6.9	250
Arizona	3.2	18.6	8.3	6.9	15.2	500
Utah	3.4	23.5	4.7	3.8	8.5	280
Mountain	2.9	22.2	12.9	5.1	18.0	1,022
Washington	4.4	18.4	16.9	5.0	21.9	2,050
California	3.5	22.0	17.0	6.0	23.0	1,457
Pacific	3.5	21.8	17.0	6.0	23.0	1,479
United States	6.0	22.1	12.0	6.0	18.0	1,117

1/ Includes beans grown for seed.

2/ According to the 1950 census the following percentage of the acres of dry beans was grown on farms on which the entire acreage of dry beans was irrigated: Nebraska, 95 percent; Montana, 94 percent; Idaho, 93 percent; Wyoming, 97 percent; Colorado, 36 percent; New Mexico, 10 percent; Arizona, 33 percent; Utah, 7 percent; Washington, 89 percent; and California, 73 percent.

Table 26.- Dry field peas: Labor used per acre, 1950 1/

State	Man-hours per acre					Yield per acre
	Preharvest 2/			Harvest	Total	
	Non-irrigated	Irrigated	All			
	Hours	Hours	Hours	Hours	Hours	Pounds
Minnesota	3.0		3.0	1.7	4.7	1,100
North Dakota	3.0		3.0	1.5	4.5	900
W. N. Central	3.0		3.0	1.6	4.6	986
Montana	1.6	10.0	6.4	3.0	9.4	1,400
Idaho	1.6	12.5	4.1	2.5	6.6	1,470
Wyoming	2.9	9.4	9.0	5.2	14.2	1,250
Colorado	2.0	9.0	8.6	4.0	12.6	950
Mountain	1.6	10.6	5.1	2.7	7.8	1,425
Washington	1.8	12.5	1.9	2.0	3.9	1,420
Oregon	2.0	12.5	2.6	4.8	7.4	1,150
California	1.5	7.0	4.6	4.0	8.6	1,000
Pacific	1.8	8.7	2.1	2.4	4.5	1,369
United States	1.8	10.3	3.2	2.5	5.7	1,376

1/ Includes peas grown for seed and cannery peas harvested dry.

2/ According to the 1950 census the following percentage of the acres of dry field peas was grown on farms on which the entire acreage of dry field peas was irrigated: Montana, 56 percent; Idaho, 23 percent; Wyoming, 94 percent; Colorado, 94 percent; Washington, 1 percent; Oregon, 6 percent; and California, 57 percent. In several Western States peas for seed are usually grown on irrigated land.

Table 27.- Sugar beets: Labor used per acre, 1950

State	Man-hours per acre					Yield per acre
	Pre-harvest 1/	Harvest 2/			Total	
		Hand top and mechanically load 3/	Mechanical harvester	All methods		
	Hours	Hours	Hours	Hours	Hours	Tons
Ohio	39	41.6	11.9	34.4	73.4	12.6
Indiana	39	37.4	10.7	26.0	65.0	11.1
Illinois	40	41.6	12.2	31.8	71.8	13
Michigan	39	36.4	10.3	20.7	59.7	10.4
Wisconsin	40	35.4	10.1	25.3	65.3	10.1
E. N. Central	39.1	37.7	10.4	23.7	62.8	10.8
Minnesota	32	27.3	10.0	19.0	51.0	8.8
Iowa	33	27.8	10.2	17.1	50.1	10.3
North Dakota	31	26.0	10.0	17.7	48.7	8.4
South Dakota	45	27.5	10.2	17.1	62.1	10.2
Nebraska	45	27.6	12.8	17.7	62.7	13.8
Kansas	45	27.2	10.0	14.5	59.5	9.7
W. N. Central	37.6	27.1	11.2	18.0	55.6	10.7
Texas	40		11.8	11.8	51.8	12.3
Montana	52	24.0	11.5	14.5	66.5	12
Idaho	55	34.6	15.4	21.7	76.7	17.3
Wyoming	55	35.2	11.9	17.0	72.0	12.6
Colorado	48	30.0	13.7	22.2	70.2	15
New Mexico	50		10.0	10.0	60.0	8
Arizona	55		14.0	14.0	69.0	15.4
Utah	63	40.9	13.0	30.0	93.0	14.1
Mountain	52.6	31.5	13.4	21.0	73.6	14.7
Washington	70	46.8	19.9	32.8	102.8	23.5
Oregon	58	39.6	17.2	22.8	80.8	19.9
California	58	37.6	16.5	21.8	79.8	18.8
Pacific	59.0	39.1	16.8	22.8	81.8	19.3
United States	49.3	33.3	13.8	21.3	70.6	14.6

1/ Practically all of the sugar beets in the Plains States, except North Dakota, and in States farther west are irrigated.

2/ According to James Fischer of the Beet Sugar Development Foundation, the following percentages of sugar beets were harvested with mechanical harvesters in 1950: Ohio, 24 percent; Indiana, 36 percent; Illinois, 32 percent; Michigan, 60 percent; Wisconsin, 40 percent; Minnesota, 48 percent; Iowa, 61 percent; North Dakota, 52 percent; South Dakota, 61 percent; Nebraska, 67 percent; Kansas, 74 percent; Montana, 76 percent; Idaho, 67 percent; Wyoming, 62 percent; Colorado, 48 percent; New Mexico, 100 percent; Utah, 39 percent; Washington, 52 percent; Oregon, 75 percent; and California, 75 percent. It was estimated by the authors that the entire crop in Texas and in Arizona was harvested with mechanical harvesters.

3/ Includes some hand loading.

Table 28.- Sugarcane for sugar: Labor used per acre, 1950

State	Man-hours per acre			Yield per acre
	Preharvest	Harvest	Total	
	Hours	Hours	Hours	Tons
Florida	60	63	123	31.3
Louisiana	72	55	127	19.5
United States	71	56	127	20.9

Table 29.- Maple products: Labor used per gallon of sirup and per pound of sugar, 1950 1/

State	Man-hours per		Number of trees tapped	Average gallons of sap per tree
	Gallon of sirup	Pound of sugar		
	Hours	Hours	1,000 trees	Gallons
Maine	2.1	0.26	145	10.7
New Hampshire	2.1	.26	281	10.7
Vermont	2.0	.25	3,465	11.5
Massachusetts	1.6	.21	173	14.6
New England	2.0	.25	4,064	11.6
New York	2.1	.26	2,107	10.9
Pennsylvania	2.0	.25	451	11.7
Middle Atlantic	2.1	.26	2,558	11.0
Ohio	1.9	.24	556	12.1
Michigan	2.3	.28	432	9.8
Wisconsin	1.9	.24	378	12.5
E. N. Central	2.0	.25	1,366	11.5
Minnesota	2.7		130	6.9
Maryland	1.4	.18	28	22.7
United States	2.0	.25	8,146	11.4

1/ Requirements are for average commercial groves and include labor for cutting and hauling wood, and for marketing sirup and sugar.

Table 30.- Cotton: Labor used per acre, 1950

State	Man-hours per acre						Yield per acre
	Pre-harvest	Harvest 1/				Total	
		Hand-pick	Hand-snap	Machine harvest	All methods		
	Hours	Hours	Hours	Hours	Hours	Hours	Pounds
Illinois	35	36	26		33	68	2/ 190
Missouri	36	52	38		47	83	278
Virginia	45	23			23	68	120
North Carolina	45	29	20		29	74	149
South Carolina	45	42			42	87	224
Georgia	46	41	32		41	87	228
Florida	50	44			44	94	226
South Atlantic	45.5	38.6	29.1		38.6	84.1	208
Kentucky	53	46	37		45	98	2/ 262
Tennessee	53	54	44		53	106	310
Alabama	46	37	29		37	83	212
Mississippi	55	57	41	4.9	54	109	314
E. S. Central	51.7	49.8	37.9	4.4	48.3	100.0	280
Arkansas	37	54	40	4.9	51	88	313
Louisiana	38	51		4.7	49	87	287
Oklahoma	15	27	16	2.2	17	32	145
Texas	15	39	22	2.6	27	42	211
W. S. Central	20.2	41.1	25.0	2.9	31.7	51.9	229
New Mexico	46	63	46	5.8	59	105	526
Arizona	31	101	72	7.0	89	120	825
Mountain	36.8	86.5	62.4	6.2	78.1	114.9	713
California	40	92	70	7.0	62	102	805
United States	32.0	45.8	29.8	3.0	38.8	70.8	269

1/ Proportion harvested by each method from PMA Report, "Charges for Cotton Ginning and Marketing Services and Related Data, Season 1950-51," April 1951.

2/ Assumed.

Table 31.- Tobacco: Labor used per acre, by class, 1950

State	Man-hours per acre			Yield per acre
	Pre-harvest	Harvest	Total	
	Hours	Hours	Hours	Pounds
Flue-cured				
Virginia	203	419	622	1,375
North Carolina	140	380	520	1,341
South Carolina	140	325	465	1,320
Georgia	170	280	450	1,095
Florida	198	306	504	1,015
Alabama	203	334	537	1,000
Total flue-cured	150	366	516	1,312
Fire-cured				
Virginia	225	240	465	1,310
Kentucky	170	154	324	897
Tennessee	180	189	369	1,199
Total fire-cured	184	185	369	1,102
Air-cured (Light)				
Ohio	180	213	393	1,100
Indiana	180	229	409	1,275
Missouri	180	200	380	1,100
Kansas	180	215	395	1,200
Maryland	149	174	323	800
Virginia	298	253	551	1,680
West Virginia	298	275	573	1,090
North Carolina	298	254	552	1,700
Kentucky	181	200	381	1,165
Tennessee	265	228	493	1,320
Total air-cured (Light)	198	206	404	1,176
Air-cured (Dark)				
Indiana	180	150	330	1,000
Virginia	180	160	340	1,120
Kentucky	187	126	313	971
Tennessee	195	170	365	1,050
Total air-cured (Dark)	187	136	323	998

- Continued

Table 31.- Tobacco: Labor used per acre, by class, 1950 - Continued

State	Man-hours per acre			Yield per acre
	Pre-harvest	Harvest	Total	
	Hours	Hours	Hours	Pounds
		Cigar filler		
Pennsylvania	105	157	262	1,500
Ohio	100	160	260	1,350
Total cigar filler	104	158	262	1,474
		Cigar binder		
Massachusetts	100	166	266	1,758
Connecticut	100	160	260	1,626
New York	100	180	280	1,400
Pennsylvania	100	188	288	1,520
Wisconsin	80	120	200	1,449
Minnesota	80	114	194	1,300
Total cigar binder	89	140	229	1,547
		Cigar wrapper		
Massachusetts	300	900	1,200	1,200
Connecticut	300	900	1,200	1,070
Georgia	325	620	945	1,150
Florida	325	630	955	1,190
Total cigar wrapper	310	793	1,103	1,130
		Miscellaneous		
Louisiana (Perique)	130	172	302	375

- Continued

Table 31.- Tobacco: Labor used per acre, by class, 1950 - Continued

State	Man-hours per acre			Yield per acre
	Pre-harvest	Harvest	Total	
	Hours	Hours	Hours	Pounds
		All classes		
Massachusetts	142	322	464	1,640
Connecticut	169	414	583	1,435
New England	161	387	548	1,495
New York	100	180	280	1,400
Pennsylvania	105	157	262	1,500
Middle Atlantic	105	158	263	1,499
Ohio	150	193	343	1,195
Indiana	180	228	408	1,272
Wisconsin	80	120	200	1,449
E. N. Central	127	170	297	1,315
Minnesota	80	114	194	1,300
Missouri	180	200	380	1,100
Kansas	180	215	395	1,200
W. N. Central	173	194	367	1,118
Maryland	149	174	323	800
Virginia	214	381	595	1,393
West Virginia	298	275	573	1,090
North Carolina	143	378	521	1,347
South Carolina	140	325	465	1,320
Georgia	172	284	456	1,096
Florida	222	367	589	1,048
S. Atlantic	155	354	509	1,294
Kentucky	181	192	373	1,135
Tennessee	244	217	461	1,284
Alabama	203	334	537	1,000
E. S. Central	196	198	394	1,171
Louisiana	130	172	302	375
United States	164	302	466	1,269

Table 32.- Soybeans: Labor used per acre, 1950

State	Man-hours per acre						Yield per acre
	Pre-harvest	Harvest 1/			All methods	Total	
		Combined: As standing grain	Combined: From windrow	Threshed: from shock, stack, etc.			
	Hours	Hours	Hours	Hours	Hours	Hours	Bushels
New York	6.0	1.6	2.5	8.6	1.8	7.8	18.0
New Jersey	6.0	1.6	2.6	8.6	1.8	7.8	20.5
Pennsylvania	6.0	1.6	2.4	8.2	1.8	7.8	17.5
Middle Atlantic	6.0	1.6	2.5	8.4	1.8	7.8	18.7
Ohio	4.1	1.7	2.5	7.5	1.7	5.8	22.5
Indiana	3.6	1.7	2.5	7.5	1.7	5.3	22.5
Illinois	3.6	1.5	2.2	7.9	1.5	5.1	24.0
Michigan	5.5	1.8			1.8	7.3	20.0
Wisconsin	5.5	1.6	2.7	7.5	1.9	7.4	14.0
E. N. Central	3.7	1.6	2.3	7.7	1.6	5.3	23.3
Minnesota	3.5	1.5	2.2	6.9	1.8	5.3	15.5
Iowa	3.5	1.7	2.5	7.7	1.8	5.3	22.0
Missouri	4.5	1.7	2.5	7.3	1.7	6.2	23.0
North Dakota	4.0	1.4	1.9		1.5	5.5	10.5
South Dakota	4.0	1.7	2.3	5.2	2.0	6.0	12.5
Nebraska	4.0	1.7	2.4		1.8	5.8	24.0
Kansas	4.4	1.6		5.5	1.6	6.0	18.0
W. N. Central	3.8	1.6	2.3	7.1	1.8	5.6	20.2
Delaware	6.0	1.6			1.6	7.6	14.0
Maryland	7.0	1.6			1.6	8.6	17.0
Virginia	10.0	1.6	2.7	9.0	1.7	11.7	19.0
West Virginia	18.0	1.7	2.5	11.0	2.0	20.0	15.0
North Carolina	10.0	1.7	2.6	7.6	1.7	11.7	16.0
South Carolina	5.7	1.7	2.7	7.1	1.7	7.4	12.0
Georgia	9.0	1.7	2.6	6.9	2.0	11.0	11.0
Florida	8.0	1.5	2.0	7.6	1.9	9.9	19.0
South Atlantic	8.9	1.7	2.6	7.5	1.7	10.6	16.1
Kentucky	7.0	1.6	2.4	7.5	1.8	8.8	17.5
Tennessee	8.0	1.7		8.0	1.7	9.7	21.0
Alabama	8.5	1.7	2.7	7.7	1.7	10.2	19.0
Mississippi	4.9	1.4		8.5	1.5	6.4	25.0
E. S. Central	6.3	1.5	2.5	7.8	1.6	7.9	22.2
Arkansas	4.5	1.5	2.2	8.2	1.6	6.1	21.5
Louisiana	5.8	1.4			1.4	7.2	18.0
Oklahoma	4.4	1.6	2.0		1.6	6.0	17.0
W. S. Central	4.6	1.5	2.2	8.2	1.6	6.2	21.1
United States	4.2	1.6	2.3	7.4	1.7	5.9	21.7

1/ Proportion harvested by each method from BAE Report, F.M. 91., "Harvesting Small Grains and Soybeans and Methods of Saving Straw."

Table 33.- Peanuts: Labor used per acre, 1950 1/

State	Man-hours per acre			Yield per acre
	Preharvest	Harvest	Total	
	Hours	Hours	Hours	Pounds
Virginia	32	28	60	1,520
North Carolina	27	28	55	1,070
South Carolina	24	26	50	800
Georgia	20	26	46	935
Florida	30	15	45	820
South Atlantic	24	26	50	1,032
Tennessee	25	30	55	800
Alabama	20	26	46	970
Mississippi	25	30	55	425
E. S. Central	20	26	46	952
Arkansas	25	30	55	475
Louisiana	29	30	59	340
Oklahoma	14	10	24	590
Texas	10	4	14	675
W. S. Central	12	6	18	646
New Mexico	23	18	41	820
United States	20	20	40	898

1/ For peanuts harvested for nuts. See table 16 for labor used for putting up peanut hay.

Table 34.- Flaxseed: Labor used per acre, 1950

State	Man-hours per acre								Yield per acre
	Preharvest 1/			Harvest 2/				Total	
	Non-irrigated	Irrigated	All	Combined: As standing: grain	Combined: From windrow	Threshed from shock, stack, etc.	All methods		
	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Hours	Bushels
Illinois	2.1		2.1	1.5	2.2	5.7	2.8	4.9	14.0
Michigan	4.5		4.5		2.7	5.0	2.9	7.4	6.0
Wisconsin	4.0		4.0	1.6	2.4	5.9	3.1	7.1	15.5
E. N. Central	4.1		4.1	1.6	2.6	5.7	3.0	7.1	11.7
Minnesota	2.3		2.3	1.5	2.2	4.7	2.6	4.9	11.0
Iowa	2.0		2.0	1.7	2.5	6.2	2.6	4.6	15.5
Missouri	2.5		2.5	1.7	2.5		1.8	4.3	7.0
North Dakota	1.7		1.7	1.4	1.9	4.0	1.9	3.6	9.0
South Dakota	1.9		1.9	1.7	2.3	4.0	2.4	4.3	9.0
Kansas	3.0		3.0	1.6	2.0		1.6	4.6	7.0
W. N. Central	1.9		1.9	1.5	2.1	4.4	2.2	4.1	9.8
Oklahoma	2.5		2.5	1.6	2.1		1.9	4.4	9.0
Texas	2.5		2.5	1.5			1.5	4.0	6.5
W. S. Central	2.5		2.5	1.5	2.1		1.5	4.0	6.5
Montana	1.5	10.0	3.2	1.4	1.9	4.0	1.5	4.7	8.5
Wyoming	1.7		1.7	1.7			1.7	3.4	5.0
Arizona		11.0	11.0	1.4			1.4	12.4	19.0
Mountain	1.5	10.5	4.5	1.4	1.9	4.0	1.5	6.0	10.2
Washington	2.0		2.0	1.5			1.5	3.5	14.0
Oregon	3.3		3.3	1.4			1.4	4.7	8.0
California	1.5	11.5	11.0	1.5			1.5	12.5	24.0
Pacific	2.2	11.5	10.6	1.5			1.5	12.5	23.3
United States	2.0	11.2	2.2	1.5	2.1	4.4	2.2	4.4	9.8

1/ According to the 1950 census the following percentage of the acres of flaxseed was grown on farms on which the entire acreage of flaxseed was irrigated: Montana, 20 percent; Arizona, 100 percent; and California, 95 percent.

2/ Proportion harvested by each method from BAE Report, F.M. 91, "Harvesting Small Grains and Soybeans and Methods of Saving Straw."

Table 35.- Broomcorn: Labor used per acre, 1950

State	Man-hours per acre			Yield per acre
	Preharvest	Harvest	Total	
	Hours	Hours	Hours	Pounds
Illinois	5.0	30.0	35.0	550
Kansas	3.5	17.0	20.5	275
Oklahoma	3.5	27.0	30.5	320
Texas	5.0	20.0	25.0	300
W. S. Central	4.0	24.4	28.4	312
Colorado	1.6	16.7	18.3	190
New Mexico	4.8	19.2	24.0	210
Mountain	2.6	17.5	20.1	196
United States	3.2	20.8	24.0	256

Table 36.- Mint for oil: Labor used per acre, 1950 1/

State	Man-hours per acre			Yield per acre
	Preharvest 2/	Harvest 3/	Total	
	Hours	Hours	Hours	Pounds
Indiana	36	13	49	27.9
Michigan	39	15	54	26.1
Wisconsin	40	16	56	31.0
E. N. Central	37	14	51	27.3
Washington	43	27	70	60
Oregon	42	23	65	45
Pacific	42	24	66	49.2
United States	39	17	56	34.7

1/ Includes both peppermint and spearmint for oil.
2/ Weighted average of man-hours required for new settings or row mint and old settings or meadow mint.
3/ Includes distilling and disposing of roughage or spent mint.

Table 37.- Cowpeas for peas: Labor used per acre, 1950

State	Man-hours per acre			Yield per acre
	Preharvest	Harvest	Total	
	Hours	Hours	Hours	Bushels
Indiana	3.0	2.0	5.0	5.5
Illinois	3.0	1.8	4.8	6.0
E. N. Central	3.0	1.8	4.8	6.0
Missouri	4.0	2.0	6.0	8.0
Kansas	4.0	2.0	6.0	9.5
W. N. Central	4.0	2.0	6.0	9.1
Virginia	6.5	10.7	17.2	8.0
North Carolina	6.4	7.9	14.3	5.5
South Carolina	6.0	8.6	14.6	5.0
Georgia	8.0	9.5	17.5	5.5
Florida	7.0	8.1	15.1	4.5
South Atlantic	6.9	8.9	15.8	5.3
Tennessee	7.0	9.0	16.0	6.5
Alabama	8.5	10.8	19.3	6.5
Mississippi	4.2	8.8	13.0	6.5
E. S. Central	6.4	9.8	16.2	6.5
Arkansas	4.0	8.9	12.9	6.5
Louisiana	5.0	12.0	17.0	7.5
Oklahoma	3.9	10.1	14.0	7.5
Texas	3.8	10.1	13.9	7.5
W. S. Central	3.9	10.1	14.0	7.4
United States	5.3	9.2	14.5	6.5

Table 38.- Hops: Labor used per acre, 1950

State	Man-hours per acre					Yield per acre
	Pre-harvest 1/	Harvest 2/			Total	
		Hand pick	Pick with machine	All methods		
	Hours	Hours	Hours	Hours	Hours	Pounds
Idaho	140		165	165	305	1,855
Washington	145	400	155	162	307	1,745
Oregon	125	268	100	150	275	1,115
California	136	400	155	211	347	1,735
Pacific	135	317	137	170	305	1,499
United States	135	317	138	170	305	1,508

1/ Most of the hops are irrigated in each State except Oregon.
2/ It was estimated that the following percentage of the acreage of hops was picked with mechanical pickers: Idaho, 100 percent; Washington, 97 percent; Oregon, 70 percent; and California, 77 percent.

Table 39.- Popcorn: Labor used per acre, 1950 1/

State	Man-hours per acre					Yield per acre 3/
	Pre-harvest	Harvest 2/			Total	
		Mechanical picker	Picked by hand	All methods		
	Hours	Hours	Hours	Hours	Hours	Pounds
Ohio	7.2	2.3	10.3	2.7	9.9	2,000
Indiana	6.0	2.1	9.8	2.3	8.3	1,900
Illinois	6.0	1.9	9.0	2.1	8.1	1,750
Michigan	10.3	2.2	8.7	2.7	13.0	1,700
E. N. Central	6.4	2.1	9.6	2.3	8.7	1,847
Iowa	6.0	1.8	8.0	2.0	8.0	1,560
Missouri	8.1	2.3	10.3	4.6	12.7	2,000
Nebraska	4.2	1.9	8.5	2.3	6.5	1,650
Kansas	4.2	2.2	9.0	2.9	7.1	1,750
W. N. Central	6.1	2.0	9.7	2.9	9.0	1,717
Kentucky	18.0	2.0	7.7	3.0	21.0	1,490
Oklahoma	7.1	2.0	9.3	3.7	10.8	1,250
Texas	6.4	1.8	8.0	3.3	9.7	1,070
W. S. Central	7.0	2.0	9.0	3.6	10.6	1,213
United States	7.3	2.0	9.2	2.7	10.0	1,693

1/ In principal commercial producing States.
2/ It was estimated that a little more of the popcorn than of the regular corn for grain was picked with mechanical pickers.
3/ Of ear corn; 70 pounds to the bushel.

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