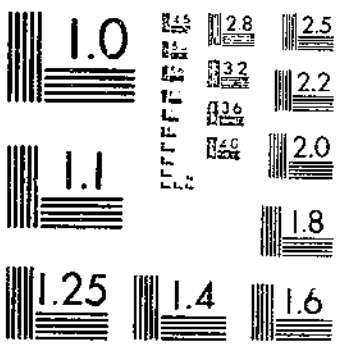
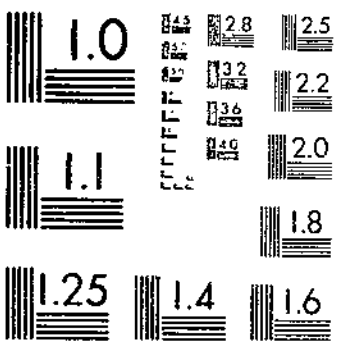
LIBRARY(1,53)
USDA STATISTICAL BULLETINS
UPDATA
HARVESTING CORN FOR GRAIN
BRODELL, A.P.; WALKER, H.R.
1 OF 1

START

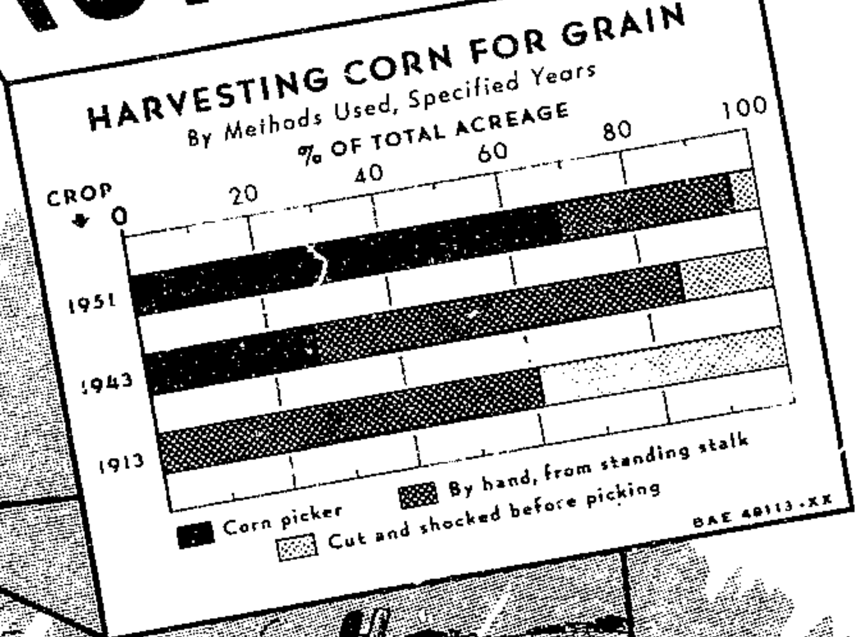


MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS 1963-A

Harvesting CORN for Grain



Statistical Bulletin No. 129

UNITED STATES DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS

WASHINGTON, D. C.
June 1953

HARVESTING CORN FOR GRAIN

By

Albert P. Brodell, Agricultural Economist

and

Harold R. Walker, Agricultural Statistician

CONTENTS

TRENDS IN ACREAGE AND PRODUCTION

Early settlers arriving in the New World soon discovered that corn was an important food crop of the Indians. It had probably been so for centuries. Corn is now grown in most countries of the world, but our country alone contributes about 60 percent of the world crop.

In this country, corn ranks first in importance both as to value of crop and acreage of land used--about 1 in 4 acres of land planted to crops is in corn. Annual estimates of acreage and production of corn are available, beginning with 1866. The total acreage of field corn harvested for all purposes has ranged from about 30 million acres in 1866 to 111 million acres in 1917.

SOURCE OF MATERIAL

The information in this report relating to methods of harvesting corn for grain in 1951 was obtained from the voluntary crop correspondents of the United States Department of Agriculture in February 1952. A mailed questionnaire was used. At that time, the crop correspondents reported the number of acres of corn for grain grown in 1951 that was harvested with each of these methods--the mechanical field-type picker, from the standing stalk by hand, and husked or snapped from the shock. About 16,500 farms that produced corn for grain in 1951 were included in the study. These farms harvested about 550,000 acres. The field reports of the February 1952 survey were edited, tabulated, and prepared for publication in the Washington office of the Bureau of Agricultural Economics.

This report also gives the results of earlier nationwide studies of methods of harvesting corn and estimates of the numbers and distribution of the principal machines used in harvesting.

For sale by the Superintendent of Documents, U. S. Government Printing Office
Washington 25, D. C. - Price 30 cents

During the 25 years ending with 1933, the harvested acreage of corn was at a high level. It exceeded 100 million acres in all except 5 years. Since 1933, the largest acreage was in 1935, when 96 million acres were harvested. From 1949 to 1951, inclusive, harvested acres averaged about 83 million (table 1). The 80.7 million acres of corn harvested in 1951 was the smallest since 1894.

Although the acreage used for corn is now substantially less than in earlier years, production has increased, reflecting the substantial increase in yields per acre. By 1951, the corn crop had exceeded 3 billion bushels in only 7 years; of these crops all but one were produced in the last decade.

In the Lake States, the harvested acreage has been larger in recent than in earlier years. In all other groups of States, the trend in acreage has been downward. Large decreases in acreage have occurred in Oklahoma-Texas and the Delta States.

UTILIZATION OF CORN ACREAGE

In recent years almost 90 percent of the total acreage of field corn was harvested for grain--the ears husked or snapped before storing. The remaining acreage was used for silage, or was hogged, grazed, or harvested for forage. The information in this report relating to methods of harvesting corn applies only to corn harvested for grain.

Utilization of corn varies widely in the different parts of the country. In the Corn Belt and in the South a major part of the crop is harvested for grain (table 1). In recent years, about a third of the acreage of corn in the Northeastern States and about 22 percent of the acreage in the Lake States were used for silage. In the Pacific States, only a small acreage of corn is grown, but more than 40 percent of it is used for silage. Although from 1920 to 1950 the acreage of corn harvested for all purposes decreased by about 17 percent, the acreage harvested for silage increased. Fewer acres and a smaller percentage of the crop are now hogged, grazed, or harvested for forage than was the case earlier.

HARVESTING WITH MECHANICAL CORN PICKERS

The first patents for a field-type corn picker were issued around 1850. It is estimated that in 1910, there were 1,000 mechanical corn pickers on farms. A decade later the number was estimated at 10,000. All of these early pickers were one-row traction machines. Use of pickers on farms made little headway until 1928, when the tractor power take-off was first adapted for use with them. Two-row pickers first came into use about the same time. Farmers' purchases of corn pickers

increased with these changes and on January 1, 1930, it was estimated that there were 61,000 on farms. In the depression years of the early thirties farmers bought few pickers. But from 1935 to 1939 purchases averaged about 10,000 units annually and on January 1, 1940, the number on farms was estimated at about 110,000. Around 100,000 pickers were available to harvest the 1938 crop.

A nationwide study made in February 1939, based on material supplied by the voluntary crop reporters of the Department of Agriculture, showed that about 12 percent of the 1938 acreage of corn for grain was harvested with mechanical pickers. In only 5 States--Illinois, Iowa, Minnesota, Indiana, and South Dakota (table 2) - was more than a sixth of the acreage picker-harvested; but more than 90 percent of the total acreage harvested with pickers in 1938 was in these 5 States. Per acre yields are high in the major corn-growing States where the use of pickers is most pronounced. Therefore, the per acre yield of the corn harvested with pickers was substantially above the average yield of the country. At least 18 percent of the 1938 production of corn for grain was harvested with them.

About 146,000 corn pickers were on farms on January 1, 1944. Most of these were available to harvest the 1943 corn crop. This number was about 45 percent more than were available for the 1938 crop. In 1943, however, there were acute shortages of farm labor and acreage harvested per machine was substantially larger than in 1938. A nationwide study made in February 1944 showed that about 27 percent of the acreage of corn for grain in 1943 was harvested with mechanical pickers (tables 2 and 3). Because pickers are used where yields per acre of corn harvested are above average, it is estimated that around 38 percent of the crop harvested for grain in 1943 was harvested with pickers.

In 1943, 60 percent or more of the acreage of corn for grain in Illinois, Iowa, Minnesota, and North Dakota was harvested with pickers. More than two-thirds of the 1943 acreage so harvested was in the 5 Corn Belt States. These States also had about 70 percent of the 130,000 corn pickers on farms January 1, 1942 (table 2). By 1946 about 41 percent of the acreage of corn for grain was harvested with pickers according to another nationwide study made in February 1947. Because pickers are used where per acre yields are above-average, it is estimated that about 52 percent of the crop harvested for grain in 1946 was machine-harvested. In 1946, corn pickers harvested 75 percent or more of the acreage in Iowa, Illinois, and Minnesota, and were important as a method of harvest in practically all of the North Central States. In most Southern States, however, only a small percentage of the 1946 acreage of corn was machine-harvested. About 236,000 corn pickers were on farms on January 1, 1947. Practically all of these were available for the 1946 harvest.

By 1951, harvesting with mechanical corn pickers had become the leading method in all of the North Central and Western States. For the country as a whole about 68 percent of the acreage was machine-harvested (tables 2 and 3). It is estimated that about 75 percent of the production of corn for grain in 1951 was picked with machines from the standing stalk.

Corn pickers were used to harvest 90 percent or more of the 1951 acreage in each of 7 States. The pickers still accounted for only a small percentage of the acreage in most Southern States, where the per acre yield of corn is relatively low. Of the 588,000 corn pickers on farms January 1, 1952, more than 55 percent were in the 5 Corn Belt States. In most Southern States there were few pickers in relation to the acreage of corn harvested for grain (table 2). In all areas of the country the percentage of the acreage of corn harvested with pickers was larger on farms with large acreages of corn than on farms with smaller acreages (table 4).

HARVESTING BY HAND FROM STANDING STALK

For many years most of the acreage of corn for grain has been harvested by husking or snapping the ears from the standing stalk. Until the coming of mechanical corn pickers this was done by hand.

In 1913 information supplied by the county reporters of the Department of Agriculture indicated that 61 percent of the acreage of corn for grain was harvested from the standing stalk. Practically all of this acreage was harvested by hand, as there were few machine pickers in 1913. Thirty years later, when 27 percent of the acreage was harvested with the picker, about 60 percent of the acreage was still harvested by hand from the standing stalk (tables 3 and 5). This latter method of harvesting accounted for more than half of the 1913 acreage in the Central Corn Belt, most of the Great Plains States, most of the Southern States, and the Western States (table 5). In 1943 harvesting by hand still accounted for most of the acreage of corn in Missouri, most of the Plains States, most Southern States, and the West.

By 1951, however, only 28 percent of the acreage was harvested by hand from the standing stalk (tables 3 and 5). In most Southern States this was the chief method of harvesting. In Missouri and Kansas, an appreciable part of the 1951 crop was harvested by hand from the standing stalk, as heavy precipitation during the harvest season made it difficult to use corn pickers in some areas.

In all parts of the country, harvesting by hand from the standing stalk was an important method in 1951 on farms with small acreages of corn (table 4). Although 28 percent of the 1951 acreage of corn for grain was harvested by hand from the standing stalk, the acre yield of this corn was below the average for the country. In terms of bushels of corn for grain, only about 20 percent of the 1951 production was harvested by this method.

HARVESTING CORN FROM THE SHOCK

Cutting and shocking corn is a long-established method of harvesting. In the early years, hand tools and animal-drawn sleds were used to cut the corn. In fact, around the turn of the century, some corn was cut with animal-drawn harvesters and shocked on the harvesters; the completed shock was then removed and placed on the ground. Around 1890, row binders were used to cut corn for grain, as well as corn and sorghum for forage and for silage.

Reports from county reporters of the Department of Agriculture indicated that about 40 percent of the acreage of corn for grain in 1913 was cut and shocked and the ear removed from the stalk before the grain was stored or fed. At that time, harvesting corn for grain from the shock was a leading method in the Northeastern States, in Ohio, Indiana, Missouri, the Lake States, and in most of the Appalachian States (table 5).

Usually about three times as much labor is needed to harvest corn from the shock as to harvest by hand from the standing stalk, and about 6 times as much as to harvest with mechanical pickers. With the acute labor shortage of 1943, only 14 percent of the acreage of corn for grain in the country as a whole was harvested from the shock. But this method of harvest accounted for more than half of the 1943 acreage in most Northeastern States, in Michigan, Wisconsin, Virginia, West Virginia, and Kentucky (tables 3 and 5).

About four times as many corn pickers were available for harvest in 1951 as in 1943. With continued shortages of labor and high wage rates, farmers harvested only about 4 percent of the 1951 acreage of corn for grain from the shock (tables 3 and 5). When corn is harvested for grain from the shock the ears are removed from the stalks either by hand methods or with stationary machines. Most of the stationary machines have attachments for shredding the stalks. A good many of these stationary huskers and shredding machines were used in some areas around 1900. But in 1943 and in 1946, only about 3 percent of the total acreage of corn for grain was harvested with husker shredders.

Row binders were once used to harvest corn for grain and to harvest corn and sorghum for forage and for silage as well. Use of these machines, especially for harvesting corn for grain and for harvesting corn and sorghum silage, has decreased greatly in recent years. Recently, farmers have bought few row binders and the number of these machines on farms January 1, 1951, was estimated to be at least 25 percent below the number in 1942 (table 5). Since 1942, numbers of row binders have declined in most States, but have increased moderately in some Southern States. In 1951, only about 13 percent of the row binders were in the South and the West (table 5).

Table 1. - Corn: Acreage harvested, utilization of the crop, and yield per harvested acre, by State groups, average of specified periods

State group 1/	Period	Acreage harvested	Percentage of Crop			Yield per harvested acre
			Harvested for grain	Harvested for silage	Hogged grazed and for forage	
		1,000 acres	Percent	Percent	Percent	Bushels
Northeast	1909-11	3,594				35.4
	1919-21	3,558	74.6	17.7	7.7	41.9
	1929-31	2,837	64.2	28.0	7.8	33.7
	1939-41	2,997	66.1	30.3	4.6	37.4
	1949-51	2,409	65.2	32.8	2.0	45.1
Corn Belt	1909-11	35,958				36.3
	1919-21	34,496	89.2	3.1	7.7	37.5
	1929-31	34,754	87.9	2.7	9.4	31.9
	1939-41	28,369	95.7	2.1	2.2	46.1
	1949-51	31,471	95.9	2.1	2.0	48.7
Lake States	1909-11	5,536				33.1
	1919-21	7,473	67.9	17.2	14.9	36.5
	1929-31	7,931	55.6	23.6	20.8	29.1
	1939-41	8,230	70.1	23.0	6.9	40.3
	1949-51	9,563	73.2	22.3	4.5	42.3
Great Plains	1909-11	18,264				20.9
	1919-21	16,653	86.7	1.6	11.7	26.5
	1929-31	22,423	79.2	2.6	18.3	18.4
	1939-41	12,929	77.3	5.0	17.8	17.7
	1949-51	14,809	86.3	3.6	10.2	27.7
Appalachian	1909-11	11,747				21.9
	1919-21	11,552	94.7	.9	4.4	23.1
	1929-31	9,933	94.1	1.7	4.2	20.0
	1939-41	9,429	97.2	1.2	1.6	24.3
	1949-51	7,733	96.7	1.8	2.5	34.7
Southeast	1909-11	8,325				12.6
	1919-21	10,187	98.1	.1	1.8	13.6
	1929-31	8,653	97.4	.2	2.4	11.9
	1939-41	10,081	97.0	.2	2.8	11.3
	1949-51	7,674	87.0	.4	12.6	18.1
Delta	1909-11	6,260				17.6
	1919-21	6,833	96.5	.2	3.3	17.4
	1929-31	5,289	96.0	.1	3.9	15.1
	1939-41	6,737	98.2	.1	1.7	15.7
	1949-51	3,947	96.7	.3	3.0	22.3
Okla.-Texas	1909-11	10,894				14.5
	1919-31	8,371	97.0	.4	2.6	21.4
	1929-31	7,871	95.3	.3	4.4	16.3
	1939-41	6,483	95.1	.6	4.3	17.1
	1949-51	3,576	96.8	.7	2.5	20.4
Mountain	1909-11	575				16.9
	1919-21	1,635	75.6	4.4	20.0	16.4
	1929-31	2,174	76.5	3.0	21.5	15.1
	1939-41	1,463	64.6	9.1	26.3	14.3
	1949-51	1,007	52.8	18.4	28.8	23.3
Pacific	1909-11	134				28.9
	1919-31	248	58.8	28.9	12.3	30.6
	1929-31	180	44.9	26.2	26.9	32.3
	1939-41	175	49.4	32.1	18.5	32.4
	1949-51	117	46.4	41.6	12.0	38.7
United States	1909-11	101,287				26.1
	1919-31	100,886	89.1	3.5	7.4	28.7
	1929-31	102,045	84.9	4.4	10.7	23.4
	1939-41	85,791	89.3	5.1	5.6	29.5
	1949-51	82,908	89.1	5.7	5.2	37.1

1/See table 2 for States included in specified group.

Table 2. - Corn for Grain: Acreage harvested with corn pickers, and number of corn pickers on farms, by States and State groups, specified years

State and area	Acreage for grain								Corn pickers on farm January 1	
	Harvested				Percentage harvested with field type mechanical corn picker					
	1938	1943	1946	1951	1938	1943	1946	1951	1942	1952
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	Percent	Percent	Percent	Percent	Number	Number
Northeast										
New England	38	28	25	20		3	13	65		200
New York	198	131	153	172	1	13	25	76	100	2,700
New Jersey	144	127	125	135	2	12	20	70	200	1,500
Pennsylvania	1,080	1,024	1,065	1,053	3	10	29	75	600	12,600
Delaware	139	130	134	151	1/	4	22	70	20	1,000
Maryland	463	413	412	406	1/	5	20	70	85	4,100
Total	2,062	1,853	1,904	1,937	2	9.0	26.5	73.1	1,005	22,000
Corn Belt										
Ohio	3,350	3,186	3,405	3,334	12	34	55	87	9,200	45,000
Indiana	4,003	4,114	4,398	4,396	22	54	65	93	11,900	58,000
Illinois	8,073	8,023	8,553	8,584	43	65	75	93	32,100	92,000
Iowa	9,844	10,127	10,600	9,907	35	63	76	95	37,000	111,000
Missouri	4,142	4,172	4,239	3,689	2	7	18	60	1,800	26,000
Total	29,412	29,622	31,195	30,010	28	51.1	64.9	88.9	92,000	332,000
Lake States										
Michigan	1,340	1,043	1,243	1,365	5	23	37	80	1,900	14,000
Wisconsin	1,164	1,302	1,399	1,378	5	21	37	80	2,700	13,000
Minnesota	3,360	4,102	4,323	4,410	35	66	76	95	18,000	57,000
Total	5,764	6,447	6,865	7,053	22	49.4	61.4	89.4	22,600	84,000
Great Plains										
North Dakota	307	419	437	405	5	61	72	91	1,100	7,500
South Dakota	2,231	2,799	3,529	2,980	18	44	72	95	6,800	36,000
Nebraska	6,513	7,499	7,418	6,736	4	21	45	90	4,100	54,000
Kansas	1,944	2,987	2,469	2,187	1	12	24	73	1,000	16,500
Total	11,095	13,704	13,853	12,198	6	25.0	49.0	88.2	13,000	114,000
Appalachian										
West Virginia	412	347	284	202	1/	1/	2	20	10	600
Kentucky	2,484	2,457	2,194	2,104	3	1	8	41	200	7,400
Tennessee	2,628	2,508	2,106	1,899		1	3	16	360	3,000
Virginia	1,287	1,225	1,017	886	1/	1	10	44	40	4,000
North Carolina	2,388	2,252	2,104	2,107	1/	1	4	15	30	3,000
Total	9,199	8,789	7,706	7,198		1.0	5.6	26.5	640	18,000
Southeast										
South Carolina	1,818	1,553	1,415	1,263	1/	1/	2	6	5	700
Georgia	4,504	3,511	2,886	2,564	1/	1/	1	7	40	1,400
Florida	694	595	526	379		1/	3	4		200
Alabama	3,564	3,128	3,531	2,247		1/	1	7	40	1,300
Total	10,580	8,787	7,358	6,443			1.3	6.6	85	3,600
Delta										
Mississippi	3,162	2,626	2,173	1,694	1/	1/	1	10	20	1,200
Louisiana	1,673	1,242	975	677	1/	1/	1	4		500
Arkansas	2,338	1,570	1,435	955		1/	1	11	20	1,300
Total	7,063	6,638	4,583	3,326		1/	1.0	9.1	40	3,000
Okla-Texas										
Oklahoma	1,652	1,673	1,317	946		2	6	33	100	2,500
Texas	4,735	4,972	3,019	3,176		1	6	27	200	4,500
Total	6,377	6,145	4,336	3,122		1.2	6.0	28.8	300	7,000
Mountain										
Colorado	777	676	372	370	4.0	12	28	70	180	2,900
Other Mt. States	367	275	188	120	.6	7	12	22	180	800
Total	1,144	951	560	490	2.9	10.4	22.6	58.3	360	3,700
Pacific States	92	70	51	49		12.7	30	60.0	100	700
United States	82,788	81,906	78,410	71,836	12.0	27.1	41.1	68.2	130,030	588,000

1/Less than one-half of 1 percent.

Table 3. - Corn for Grain: Method of harvesting, by States and State groups, 1943 and 1951

State and area	1943 crop				1951 crop			
	Acreage harvested	Percentage harvested			Acreage harvested	Percentage harvested		
		From standing stalk		Shocked corn husked or snapped		From standing stalk		Shocked corn husked or snapped
		Corn picker	By hand			Corn picker	By hand	
	1,000 acres	Percent	Percent	Percent	1,000 acres	Percent	Percent	Percent
Northeast								
New England	28	3	28	69	20	65	20	15
New York	131	13	28	59	172	75	11	14
New Jersey	127	12	42	46	135	70	20	10
Pennsylvania	1,024	10	31	59	1,053	75	13	12
Delaware	130	4	19	77	151	70	10	20
Maryland	413	5	12	83	406	70	11	19
Total	1,953	9.0	26.0	65.0	1,937	73.1	12.7	14.2
Corn Belt								
Ohio	3,136	34	19	47	3,334	87	5	8
Indiana	4,114	54	35	11	4,396	93	5	2
Illinois	8,023	65	30	5	8,684	93	6	1
Iowa	10,127	63	35	2	9,907	95	4	1
Missouri	4,172	7	71	22	3,689	60	35	5
Total	29,522	51.1	37.2	11.7	30,010	88.9	8.6	2.5
Lake States								
Michigan	1,043	23	22	55	1,365	80	7	13
Wisconsin	1,302	21	24	55	1,278	80	9	11
Minnesota	4,102	65	23	12	4,410	95	3	2
Total	6,447	49.4	23.0	27.6	7,053	89.4	4.9	5.7
Great Plains								
North Dakota	419	61	27	12	405	91	3	6
South Dakota	2,799	44	53	3	2,880	95	4	1
Nebraska	7,499	21	78	1	6,726	90	9	1
Kansas	2,987	12	81	7	2,187	73	24	3
Total	13,704	25.0	71.9	3.1	12,198	88.2	10.3	1.5
Appalachian								
West Virginia	347	1	10	89	202	20	28	52
Kentucky	2,457	1	37	62	2,104	41	45	14
Tennessee	2,508	1	74	25	1,899	16	74	10
Virginia	1,225	1	20	79	886	44	26	30
North Carolina	2,252	1	81	19	2,107	15	76	9
Total	8,789	1.0	55.5	43.5	7,198	26.6	58.9	14.5
Southeast								
South Carolina	1,553	1/	97	3	1,363	6	92	2
Georgia	3,511	1/	97	3	2,554	7	91	2
Florida	595	1/	95	5	379	4	94	2
Alabama	3,128	1/	98	2	2,247	7	91	2
Total	8,787	1/	97.2	2.8	6,443	6.6	91.4	2.0
Delta								
Mississippi	2,626	1/	93	7	1,694	10	88	2
Louisiana	1,242	1/	95	5	677	4	93	3
Arkansas	1,670	1/	94	6	955	11	84	5
Total	5,538	1/	93.8	6.2	3,326	9.1	87.9	3.0
Okla.-Texas								
Oklahoma	1,573	2	89	9	946	33	63	4
Texas	4,572	1	98	1	2,176	27	71	2
Total	6,145	1.2	95.9	2.9	3,122	28.8	68.5	2.6
Mountain								
Colorado	676	13	77	11	370	70	26	4
Other Mt. States	275	7	81	12	120	22	72	6
Total	951	10.4	78.3	11.4	490	58.3	37.3	4.4
Pacific States	70	12.7	76.8	10.5	48	60.0	35.0	5.0
United States	81,906	27.1	58.8	14.1	71,826	68.2	27.6	4.2

1/Less than one-half of 1 percent.

Table 4.- Corn for Grain: Method of harvesting on farms by specified acreage of corn by State groups, 1951

Item	Percentage harvested						
	On farms with corn acreage of -						All farms
	Less than 10	10 to 19	20 to 34	35 to 54	55 to 99	100 and over	
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
Northeast							
Harvested from -							
Standing stalk							
Corn picker	46.0	68.0	81.0	89.0	91.0	98.0	73.1
By hand	34.0	21.0	10.0	6.0	5.0	1.0	12.7
Shocked corn							
Husked or snapped	20.0	11.0	9.0	5.0	4.0	1.0	14.2
Corn Belt							
Harvested from -							
Standing stalk							
Corn picker	35.0	59.0	77.0	89.0	96.0	98.0	88.9
By hand	46.0	31.0	19.0	9.0	3.0	1.0	8.6
Shocked corn							
Husked or snapped	19.0	10.0	4.0	2.0	1.0	1.0	2.5
Late States							
Harvested from -							
Standing stalk							
Corn picker	51.0	72.0	89.0	96.0	98.0	98.0	89.4
By hand	26.0	13.0	5.0	2.0	1.0	1.0	4.9
Shocked corn							
Husked or snapped	23.0	15.0	6.0	2.0	1.0	1.0	5.7
Great Plains							
Harvested from -							
Standing stalk							
Corn picker	35.0	57.0	71.0	84.0	93.0	97.0	88.2
By hand	54.0	38.0	26.0	15.0	6.5	2.5	10.3
Shocked corn							
Husked or snapped	11.0	5.0	3.0	1.0	.5	.5	1.5
Appalachian							
Harvested from -							
Standing stalk							
Corn picker	5.0	15.0	24.0	37.0	55.0	56.0	26.6
By hand	55.0	67.0	64.0	57.0	40.0	40.0	58.9
Shocked corn							
Husked or snapped	40.0	18.0	12.0	6.0	5.0	4.0	14.5
Southeast							
Harvested from -							
Standing stalk							
Corn picker	1.0	2.0	4.0	10.0	25.0	27.0	6.6
By hand	94.0	94.0	94.0	89.0	74.5	72.5	91.4
Shocked corn							
Husked or snapped	5.0	4.0	2.0	1.0	.5	.5	2.0
Delta							
Harvested from -							
Standing stalk							
Corn picker	1.0	2.0	6.0	12.0	18.0	20.0	9.1
By hand	95.0	94.0	90.0	85.0	80.0	79.0	87.9
Shocked corn							
Husked or snapped	4.0	4.0	4.0	3.0	2.0	1.0	3.0
Okla.-Texas							
Harvested from -							
Standing stalk							
Corn picker	3.0	16.0	30.0	39.0	48.0	60.0	28.8
By hand	94.0	81.0	68.0	59.0	50.0	38.0	68.5
Shocked corn							
Husked or snapped	3.0	3.0	2.0	2.0	2.0	2.0	2.6
West							
Harvested from -							
Standing stalk							
Corn picker	25.0	58.0	60.0	63.0	74.0	79.0	58.4
By hand	69.0	38.0	36.0	33.0	22.0	18.0	37.1
Shocked corn							
Husked or snapped	6.0	4.0	4.0	4.0	4.0	3.0	4.5
United States							
Harvested from -							
Standing stalk							
Corn picker	31.0	38.0	57.0	73.0	88.0	89.0	68.2
By hand	57.0	52.0	38.0	25.0	11.0	10.5	27.6
Shocked corn							
Husked or snapped	22.0	10.0	5.0	2.0	1.0	.5	4.2

Table 5.- Corn for Grain: Percentage of acreage harvested, by designated methods and number of row binders on farms, by State groups, specified years

State and area	Percentage of acreage harvested						Row binders on farms January 1	
	From standing stalk by hand			Cut and shocked husked or snapped				
	1913 1/	1943	1951	1913	1943	1951	1942	1951
	Percent	Percent	Percent	Percent	Percent	Percent	Number	Number
Northeast								
New England	2/	28	20	2/	69	15	7,300	7,500
New York	2/	28	11	2/	59	14	36,000	25,000
New Jersey	2/	42	20	2/	46	10	1,700	2,500
Pennsylvania	2	31	13	98	59	12	18,000	19,000
Delaware	2/	19	10	2/	77	20	25	100
Maryland	2/	12	11	2/	83	19	1,600	2,400
Total	9	26.0	12.7	91	65.0	14.2	64,625	56,500
Corn Belt								
Ohio	9	39	5	91	47	8	39,000	25,000
Indiana	39	35	5	61	11	2	18,000	10,000
Illinois	59	30	6	41	5	1	25,000	12,000
Iowa	80	35	4	20	2	1	40,000	21,000
Missouri	42	71	35	58	22	6	9,000	9,000
Total	53	37.2	8.6	47	11.7	2.6	131,000	77,000
Lake States								
Michigan	2	22	7	98	55	13	37,000	31,000
Wisconsin	9	24	9	91	55	11	88,000	55,000
Minnesota	43	23	3	57	12	2	72,000	53,000
Total	24	23.0	4.9	76	27.6	5.7	197,000	139,000
Great Plains								
North Dakota	26	27	3	75	12	6	18,000	13,000
South Dakota	51	53	4	49	3	1	18,500	12,000
Nebraska	58	78	9	42	1	1	22,000	15,000
Kansas	54	81	24	46	7	3	32,000	23,000
Total	55	71.9	10.3	45	3.1	1.5	90,500	63,000
Appalachian								
West Virginia	5	10	28	95	89	52	300	500
Kentucky	30	37	45	70	62	14	500	2,000
Tennessee	73	74	74	27	25	10	800	2,500
Virginia	18	20	28	82	79	30	500	3,500
North Carolina	84	81	76	16	19	9	600	2,000
Total	52	55.6	58.9	48	43.5	14.5	2,700	10,500
Southeast								
South Carolina	93	97	92	7	3	2	200	800
Georgia	95	97	91	5	3	3	300	1,000
Florida	96	95	94	4	6	3		100
Alabama	94	98	91	6	2	2	300	600
Total	94	97.2	91.4	6	2.8	2.0	800	2,500
Delta								
Mississippi	98	93	88	2	7	2	700	900
Louisiana	98	95	93	2	5	3	100	500
Arkansas	90	94	84	10	6	5	600	800
Total	95	93.8	87.9	5	6.2	3.0	1,400	2,200
Okla.-Texas								
Oklahoma	76	89	63	24	9	4	7,000	6,000
Texas	90	88	71	10	1	2	18,000	21,000
Total	84	95.9	68.6	16	2.9	2.6	25,000	27,000
Mountain								
Colorado	67	77	26.0	33	11	4	5,000	2,600
Other Mt.States	50	81	72.0	50	12	6	7,670	4,700
Total	61	78.2	37.3	39	11.4	4.4	12,670	7,300
Pacific States	54	75.8	35.0	46	10.5	5.0	1,100	1,000
United States	61	58.8	27.5	39	14.1	4.2	526,795	386,000

1/Includes acreage harvested with corn pickers. Only 1,000 corn pickers were estimated on U.S. farms in 1910, so that probably less than 0.1 percent of the 1913 corn acreage was harvested with pickers.

2/Included in State group total.

U. S. GOVERNMENT PRINTING OFFICE 1951 O 256648

END