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MAJOR USES OF LAND IN THE UNITED STATES

Summary for 1954

Agriculture Information Bulletin No. 168
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PREFACE

This publication is intended to supply an account of the extent and distribution of the major agricultural land uses and a general analysis of the land use situation in the United States as of 1954. It is one of a series of publications published at intervals that show acreages of land used for crops, pastures and grazing, forests and woodlands, and other purposes. Because of the need for fairly complete information on all land used for agriculture, both in farms and not in farms, this survey was made for 1954, the year in which data for the farm census were obtained. A previous publication, "Major Uses of Land in the United States," carried data for 1950.

The many persons who are interested in appraising land use, farm production, and consumption of farm products and making studies of land requirements will find the information contained herein of use. The data will help the user to (1) see the land used in agriculture in historical perspective, (2) measure current changes, and (3) judge projected requirements for the future.

A brief digest of the basic data for the various major uses of land is presented along with 21 summary tables for the United States as a whole and for the major geographic divisions and farm-production regions. This is followed by a series of 22 tables on major uses of land by States, as grouped by regions.

Reports, records, aerial photographs, and maps prepared by Federal and State agencies that deal with agricultural statistics, forestry, conservation, land improvement, and management of public land provided much of the data on major uses of land. Several agencies in the Department of Agriculture collect data on acreages of land used and improved for specific purposes, and other agencies in the Department are interested in and make use of these data. To provide total estimates of major uses of land, it is necessary, however, to assemble and analyze the data on use of land from the various State and Federal sources and to fit the segments together. The gaps in the data assembled from available reports and records are filled so far as possible by cooperative projects with State agricultural experiment stations and other agencies.

It is not possible here to give adequate recognition to all State and Federal workers who aided significantly in this study. The references cited indicate to a limited extent the sources consulted. Special assistance was received from M. L. Upchurch and Adon Poli on western rangelands; B. T. Inman, A. J. Walrath, and W. H. Heneberry on land use data for the Lake States; M. M. Tharp, L. A. Reuss and J. H. Southern on information on pasture and grazing land in the Southern States.

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MAJOR USES OF LAND IN THE UNITED STATES

Summary for 1954

By

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Production Economics Research Branch
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THE COUNTRY AS A WHOLE

The 48 States

Present land use.- The inventory of major uses of land in the United States shows that the land of the Nation is made up of one-fourth cropland, one-half pasture and grazing land, and one-sixth forest not pastured. The rest is in service and miscellaneous other uses. The acreage of cropland used for domestic production is a little more than 2 acres per capita, and open or nonforested pasture totals about 4 acres per person.

In 1954, the major uses of land were as follows: Cropland, including 66 million acres of cropland used only for pasture, 465 million acres; pasture and grazing land, 934 million acres, of which 633 million acres were open grassland and 301 million acres were woodland and forest land; forest not pastured, 314 million acres; special uses, such as urban areas, highways, parks, and other public facilities, 110 million acres; and miscellaneous other land, 81 million acres (table 1 and fig. 1; see also appendix tables 22 to 29). The present distribution of these major uses of land among the farm production regions is shown in figure 2.

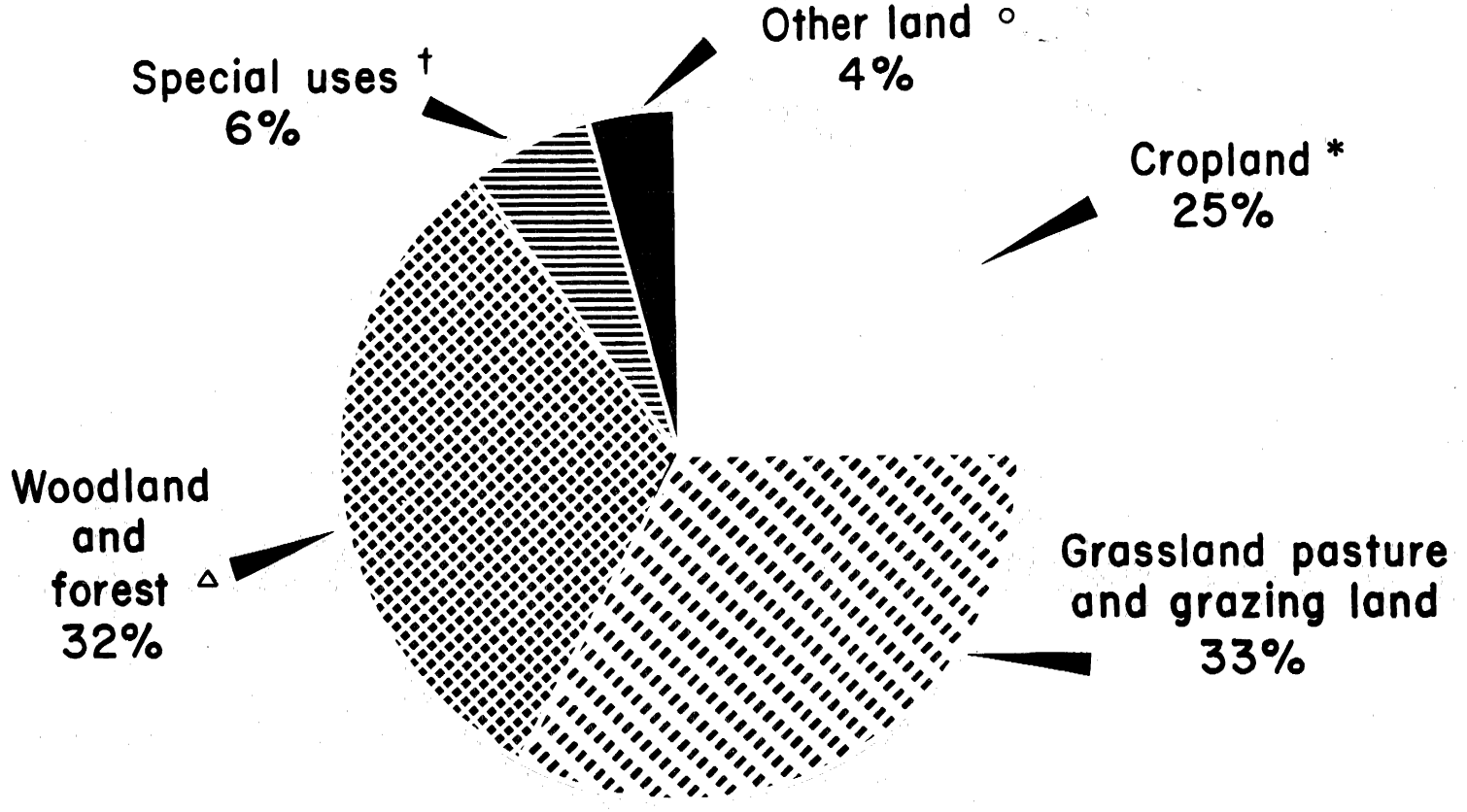
All of the cropland is in farms. About 62 percent, or 581 million acres, of pasture and grazing land is in farms and 353 million acres are not in farms. Nearly a third, or 197 million acres, of woodland and forest is in farms (table 2). Much of this acreage is scattered among many farms in woodlots and small tracts. Other farm areas include farmsteads, feed lots, storage yards, small orchards, and gardens for home use.

Data assembled in recent agricultural studies indicate that nearly 88 percent of the feed supply obtained from pasture is produced on pasture in farms, and that the remaining 12 percent is produced on grazing land not in farms. 1/ One-third of the pasture feed is furnished by rotation or cropland pasture. Open permanent pasture in farms supplies more than 40 percent. Woodland pasture in farms furnishes 8 percent of the pasture forage, and aftermath pasture 8 percent.

1/ Jennings, R. D., Relative Use of Feeds by Livestock Including Pasture by States. U. S. Dept. Agr. Statis. Bul. 153, 59 pp., illus., 1955.

MAJOR USES OF LAND, 1954

Total U.S. Acreage = 1,904 Mil. Acres



* INCLUDES CROPLAND USED ONLY FOR PASTURE ° DESERT, SWAMP, DUNES, ETC.

† FARMSTEADS, HIGHWAYS, RAILROADS, URBAN AREAS, PARKS, ETC.

△ EXCLUDES FOREST LAND IN PARKS AND OTHER RESERVED AREAS

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Figure 1

Table 1.- Major uses of all land in continental United States, 1954 1/

Land use	Acreage	Percentage of total
	Million acres	Percent
Land used for crops, pasture, and forest:		
Cropland used chiefly for crops:		
Cropland harvested, failure, and fallow	380	20.0
Land in soil-improvement crops and idle cropland not harvested or pastured	19	1.0
Total 2/	399	21.0
Cropland used only for pasture	66	3.4
Total cropland available for crops	465	24.4
Pasture and grazing land, not cropland and not woodland	633	33.2
Woodland and forest: 3/		
Pastured	301	15.8
Not pastured	314	16.5
Total	615	32.3
Special use 4/	110	5.8
Miscellaneous 5/	81	4.3
Grand total	1,904	100.0

1/ For data on each major use for each State and Territory, see table 3 and appendix table 22.

2/ Total cropland used chiefly for crops in 1954 includes cropland harvested (including crops, gardens, and orchards not otherwise reported, and wild hay harvested); crop failure; summer fallow; cropland in soil-improvement and cover crops not harvested or pastured, or used for another crop; and temporarily idle cropland.

3/ Woodland and forest, excluding 26 million acres withdrawn from primary forest use for parks and other special public-use areas, and duplications of 7 million acres with pasture (not woodland) reported by the 1954 Agricultural Census. The total woodland and forest area as of January 1, 1953 was approximately 648 million acres, according to the preliminary report of the U. S. Forest Service, Timber Resource Review, 1955.

4/ Urban and town areas, farmsteads and farm roads and lanes, highway and railroad rights-of-way, airports, parks, wildlife refuges, national defense areas, flood-control areas, and other special-use areas.

5/ Includes miscellaneous unaccounted-for areas not included among other major uses, including marshes, bare rock areas, deserts, sand dunes, and other lands which now generally have low value for agricultural purposes but which have social utility for wildlife and recreational use and potential value for minerals.

Estimates based on data assembled from current records and reports of State and Federal agencies dealing with agriculture and public land management, and from the reports of the Bureau of the Census for the 1954 Census of Agriculture.

MAJOR USES OF ALL LAND AS COMPARED WITH TOTAL LAND AREA

By Regions, 1954

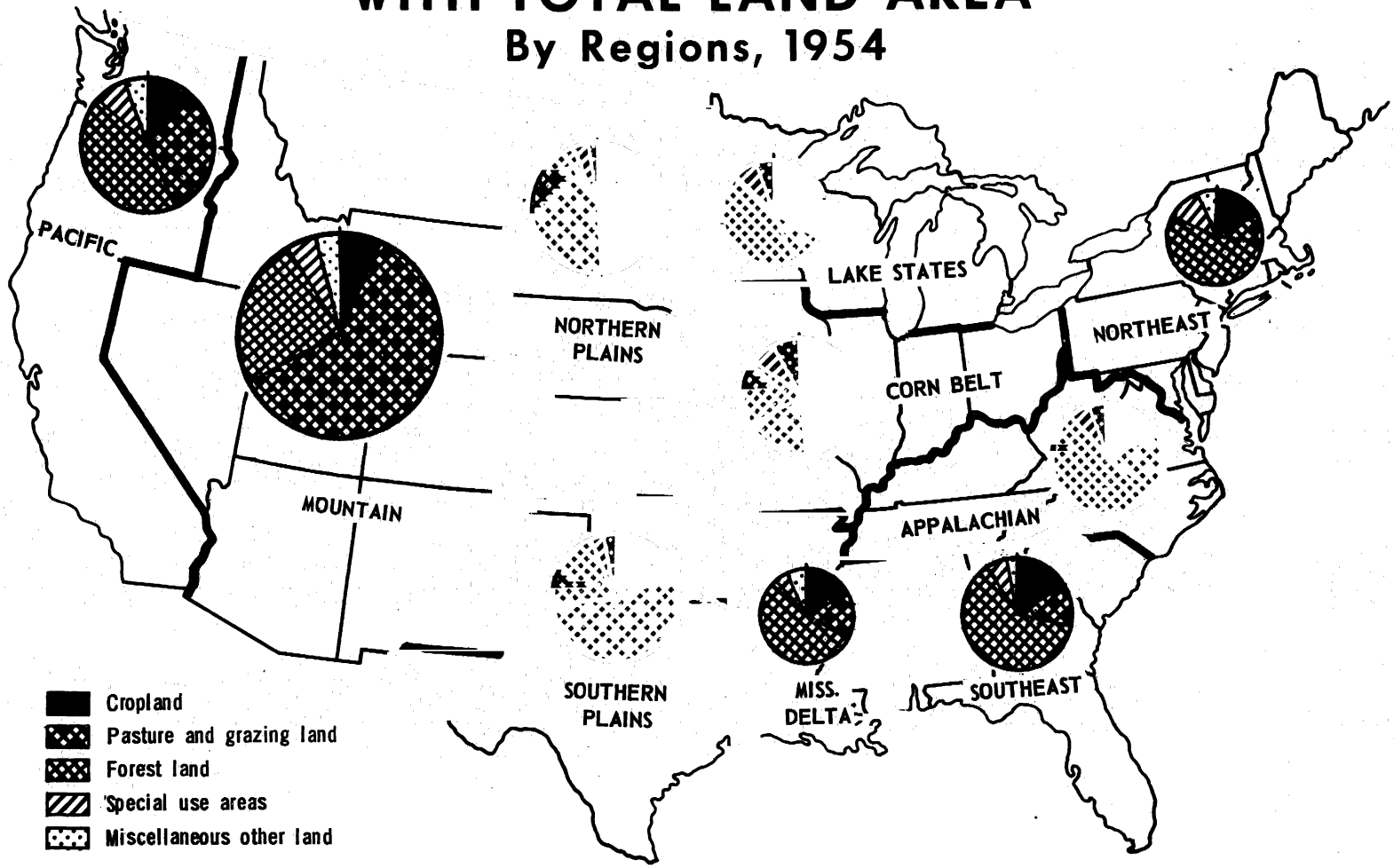

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Figure 2

Table 2.- Major uses of land in farms and not in farms, continental United States, 1954

Land use	In farms	Not in farms	Total acreage	Percentage of total
	Million acres	Million acres	Million acres	Percent
Cropland:				
Used chiefly for crops	399	---	399	21.0
Used only for pasture	66	---	66	3.4
Total 1/	465	---	465	24.4
Pasture and grazing land:				
Open pasture and grazing land	460	173	633	33.2
Woodland pastured	121	180	301	15.8
Total	581	2/ 353	934	49.0
Forest and woodland not pastured	76	238	3/ 314	16.5
Special use areas and miscellaneous other land	4/ 36	5/ 155	6/ 191	10.1
Grand total	1,158	746	1,904	100.0

1/ Total acreages of land are for the calendar-year 1954. Acreages of cropland and pasture are for 1954.

2/ Land not in farms estimated to have been usable for grazing at some time during the year 1954.

3/ The total woodland and forest land in farms and not in farms, including that pastured and not pastured, covers about 615 million acres, including commercial forest and noncommercial woodland, and exclusive of forested areas set apart for parks and other special uses and overlaps with pasture (not woodland).

4/ Farmsteads, feet lots, lanes, ditches, farm roads, highways, and miscellaneous other areas in farms.

5/ Other land not in farms includes urban and town areas, highway and railroad rights-of-way, parks, wildlife refuges, national defense areas, flood-control areas, other special-use areas, and miscellaneous other areas not in farms.

6/ Special uses and miscellaneous unaccounted-for areas, including marshes, bare rock areas, sand dunes, and deserts.

Estimates of major uses of land in continental United States based on data assembled by the Production Economics Research Branch, Agricultural Research Service, land use inventory project, 1955; from reports of the 1954 Census of Agriculture; and reports and records of the Federal and State land management and conservation agencies.

Trends in land use.- Although the total acreages of cropland, pasture, and grazing land have not changed greatly since 1920, there have been significant changes within and among the major use classes. Foremost among these trends has been a gradual improvement of land for crops and permanent pastures by drainage, flood control, irrigation, and clearing. Substantial shifts also have been made between uses in some regions. For example, cropland is increasingly concentrated on fertile and level land. Hilly and eroded land is being shifted to grass and trees. Shift of crops to the better soil areas has helped to increase average yields per acre. More of the acreage of grazing land is now reported in farms than ever before. This shift of grazing land to farms has been especially noticeable since 1940, and it has served to increase the acreage in farms.

Significant changes have occurred also in certain areas in the acreage and number of farms absorbed by urban, industrial, and other developments. Not only has land been shifted to nonfarm uses, but in addition, fringe areas have been partly abandoned or are only partially used because of the availability of more attractive nonfarm employment.

Study of available data on land development and shifts between major uses indicates that by 1975, the acreage in the total cropland rotation will probably increase by about 6 or 7 percent, if the trend of the last 15 years continues. Projection of the recent trend in land development and conversion indicates that by 1975, the total cropland area will include around 500 to 510 million acres. This will be an increase of 30 million acres or more over the average acreage used in the 1950's. 2/ Much of this increase - possibly more than half - is likely to come about by transfer of some of the best soil areas that are now in permanent grassland pasture to the cropland rotation. It will not necessarily be new land development, in the same sense as clearing and drainage of wet woodland, or clearing and irrigation of dry sagebrush land, is new land development.

Even though some permanent grassland pasture may be shifted to the cropland rotation by 1975, improved permanent pasture will probably increase by about 25 percent, or 50 to 60 million acres. Here again, much of this increase will not be a net addition to the total acreage of pasture and grazing land. Instead, it will be the result of reseeding and improvement of existing pastureland. The total land available for pasture and grazing (exclusive of rotation pasture), however, may decline slightly by 1975.

Review of our land resources indicates that future requirements for land likely will be met by the continuation of land improvement and development in their various forms and by improvement in farming practices that will bring higher production per acre and per animal unit.

A projected need for an increase by 1975 of 30 to 35 percent in feed from pasture and grazing land, if obtained without an increase in yield per

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2/ Wooten, H. H., and Anderson, James R., Agricultural Land Resources in the United States, with Special Reference to Present and Potential Cropland and Pasture. U. S. Dept. Agr., Agr. Inform. Bul. 140, 107 pp., illus., 1955.

acre, would call for a comparable increase of 30 to 35 percent in acreage, or 300 to 350 million acres. 3/ A look at these figures and at those for other needs, such as the need for crops and forests, indicates that an increase of this size in the acreage of pasture is improbable if other important land uses are to be met. Accordingly, requirements for pasture feed may need to be met by increasing production on about the same total acreage used in 1954.

The total forest area possibly will be maintained at about the present level through a decrease in the acreage classed as pasture and grazing land. Clearing, however, will occur in some areas and reforestation will proceed in others. The clearing will be influenced to a considerable extent by the suitability of the land for cultivation or pasture. The total area of cropland, including rotation pasture, likely will be increased by land development and shift of permanent grassland pasture to the cropland rotation. The area devoted to urban and industrial uses and other high-value purposes, such as highways, airports, reservoirs, and recreation, probably will also increase materially by 1975 to meet the needs of an expanding population.

Ownership and use of land.- More than 70 percent of the land area of continental United States is privately owned; 3 percent is Indian tribal and trust-allotted land; and 27 percent is publicly owned and administered by Federal, State, county, municipal, and other local governments. A large part of the public land consists of remnants of the original western public domain. Much of the publicly owned land is used for special public uses, which include parks, wildlife refuges, watershed and reservoir sites, highways, airports, military areas, and other public facilities. Multiple uses are especially significant on areas that are suitable for forestry, grazing, wildlife, and watershed protection. Only a relatively small part of the publicly owned land is used as cropland. However, 60 percent is used for seasonal grazing and 20 percent for forests, often in conjunction with other extensive multiple uses.

The Territories

The major uses of land in the Territories as of 1950, when the last census of agriculture was taken, are shown in table 3. In Alaska, cropland and pasture make up a very small part of the land area. Land not in farms is largely undeveloped forest, tundra, and grassland. In Hawaii, cropland accounts for about a tenth; grassland and brushland pasture comprise a fifth; and forest and woodland make up three-tenths of the total area. Other land includes a considerable acreage of nonvegetated lava flows and unusable palis, gulches, and streambeds. In Puerto Rico, cropland accounts for more than three-fifths of the land area. About half of it is used for crops and the other half for pasture. Grassland and brushland pasture and forest and

3/ Estimates based chiefly on data contained in the following U. S. Dept. of Agriculture publications and sources cited therein: Wooten, H. H., Major Uses of Land in the United States, Tech. Bul. 1082, 100 pp., illus., 1953; and Agriculture's Capacity to Produce - Possibilities Under Specified Conditions, Agr. Inform. Bul. 82, 62 pp., illus., 1952.

Table 3.- Major uses of land, Territories of the United States, 1950

Territory	Total cropland and arable land 1/	Grassland and brush-land pasture, excluding cropland pasture 2/	Forest and wood-land 3/	Other land 4/	Total land area 1/
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Alaska	12	363	153,008	212,099	365,482
American Samoa	15	---	30	4	49
Guam	35	54	32	10	131
Hawaii	465	796	1,211	1,628	4,100
Puerto Rico	1,367	152	218	462	2,199
Virgin Islands	16	21	27	20	84
Total	1,910	1,386	154,526	214,223	372,045

1/ For Alaska, Hawaii, Puerto Rico, and the Virgin Islands, total cropland includes cropland harvested, crop failure, cropland idle, fallow, cropland in soil-improvement crops, cropland for future harvest, and cropland pastured. Cropland pastured includes cropland that was used for pasture but that could have been used for crops without additional clearing, draining, and irrigating. For American Samoa and Guam, arable land includes land planted to crops, land temporarily fallow, temporary meadows, garden land, and land under tree crops.

2/ For Alaska, Hawaii, Puerto Rico, and Virgin Islands, grassland and other pasture includes rough areas and brushland pastured and any other land pastured that was not considered as either woodland or cropland. For American Samoa and Guam, all land classified as permanent meadows and pasture is included.

3/ Includes forest and woodland pastured and not pastured.

4/ Other land includes all unaccounted-for land areas, including urban and special-use areas, grassland areas not in farms, tundra, nonvegetated lava flows, sandy beaches, and rock areas.

Data for cropland and pasture for Alaska, Hawaii, Puerto Rico and Virgin Islands obtained from the U. S. Census of Agriculture, 1950, v. 1, pt. 34. All data for American Samoa and Guam and acreages of forest land for all territories are from the Food and Agriculture Organization of the United Nations, Yearbook of Food and Agricultural Statistics, 1951, v. 5, pt. 1. Although a census of agriculture was not taken for the Territories in 1954, a special report was published as Vol. III, Part 3, of the 1954 Census of Agriculture. This publication brings together statistics relating to agricultural inventories and production for Alaska, Hawaii, Puerto Rico, District of Columbia, American Samoa, Guam, and Virgin Islands.

woodland each account for about a tenth of the total area. Other land, including that occupied by buildings, roads, cities and towns, and wasteland, comprises the remaining fifth. American Samoa, Guam, and the Virgin Islands are small tropical islands with relatively little commercial agriculture, except for some sugarcane produced in the Virgin Islands.

SPECIFIC USES

Cropland

In 1954, the total acreage of cropland amounted to 465 million acres. Cropland used for crops totaled 380 million acres, of which 338 million acres were in cropland harvested, 4/ 29 million acres were cultivated summer fallow, and 13 million acres were crop failure. Also included in total cropland are 19 million acres of cropland in soil-improvement crops or idle, and 66 million acres of cropland used only for pasture (table 4).

Cropland used for crops.- Cropland used for crops averaged 380 million acres for the 5 years 1950-54, as compared with 376 million acres for the 1945-49 period. Since World War II, the acreage of cropland used for crops has fluctuated from a low of 369 million acres in 1946 to a high of 387 million acres in 1949. Over a longer period of time, cropland used for crops has remained relatively stable. Since the end of World War I, fluctuation rather than progressive change has characterized the period (table 5).

(1) Cropland harvested.- Although the acreage of cropland used for crops averaged 4 million acres more for the period 1950-54 than for the 1945-49 period, the acreage of cropland from which crops were harvested averaged 7 million acres less for 1950-54 than for 1945-49. The 5-year average for 1950-54 was 339 million acres compared with 346 million acres for 1945-49. Thus the increase in the acreage of cropland used for crops is accounted for by increases in crop failure and fallow which more than offset the decline in harvested area.

Several factors account for the decline in the acreage of cropland harvested. Acreage allotments in effect for certain crops in some years from 1950 to 1954 affected the acreage of cropland harvested. Diversion of acreage in wheat, cotton, and corn to other crops accounted for much of the acreage on which allotments applied. Some of this diversion, however, was to such uses as rotation pasture, soil-improvement crops, and idle cropland. Availability of urban employment has been a factor in the decline in cropland

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4/ This estimate of cropland harvested made by the Production Economics Research Branch, Agricultural Research Service, is an upward adjustment of approximately 2 percent in the acreage of cropland harvested reported by the 1954 Census of Agriculture. This adjustment was necessary in order to compensate for some of the underenumeration indicated by the postenumeration survey conducted by the Bureau of the Census and to conform with the total acreage of crops harvested as reported by the Agricultural Estimates Division of the Agricultural Marketing Service.

Table 4.- Cropland: Cropland harvested, failure, fallow, pasture, idle and other cropland, continental United States, 1954

Land use	Acreage	Percentage of total
	Million acres	Percent
Cropland used for crops:		
Harvested 1/	338	73
Crop failure 2/	13	3
Summer fallow 3/	29	6
Total	380	82
Cropland used for pasture 4/	66	14
Other cropland 5/	19	4
Grand total	465	100

1/ An upward adjustment of about 2 percent in the acreage of cropland harvested reported by the U. S. Census of Agriculture was made to compensate for some of the underenumeration indicated by the postenumeration survey conducted by the U. S. Bureau of the Census. Cropland harvested includes 12 million acres of wild hay cut.

2/ Cropland on which there was complete crop failure, not harvested, pastured, or planted in another crop.

3/ Cropland cultivated to conserve moisture or kill weeds, or otherwise prepared for a crop.

4/ Cropland used for pasture includes rotation pasture and other pastureland used for cultivated crops. However, it does not include all plowable pasture.

5/ Other cropland includes idle cropland and the acreage in cover and soil-improvement crops not harvested, or pastured and not plowed under and used for another crop during the crop year.

These estimates, which were assembled by the Production Economics Research Branch, Agricultural Research Service, are based on annual reports and records of the Agricultural Estimates Division, Agricultural Marketing Service, and on the U. S. Census of Agriculture, 1954.

harvested in areas where industry is well developed. Urban and industrial expansion into rural areas is also taking cropland out of production in some areas. Shifts in type of farming with greater emphasis on livestock and less on cotton have accounted for reductions in the acreage of cropland harvested in some parts of the South. Reversion of cropland to brush and forest is also taking place in some areas.

Table 5.- Cropland used for crops, continental United States, 1909-55

Year	Cropland harvested 1/	Crop failure 2/	Summer fallow 3/	Total cropland used for crops	Index 1947-49=100 4/
	Million acres	Million acres	Million acres	Million acres	
1909	311	9	4	324	86
1910	317	9	4	330	87
1911	322	10	5	337	89
1912	320	12	5	337	89
1913	324	11	5	340	90
1914	326	11	5	342	90
1915	332	11	5	348	92
1916	332	11	5	348	92
1917	341	11	5	357	94
1918	353	12	5	370	98
1919	355	14	5	374	99
1920	351	12	5	368	97
1921	350	12	6	368	97
1922	346	13	6	365	96
1923	345	14	6	365	96
1924	346	13	6	365	96
1925	351	12	7	370	98
1926	350	14	8	372	98
1927	349	15	9	373	98
1928	352	14	10	376	99
1929	356	13	10	379	100
1930	360	11	11	382	101
1931	356	17	11	384	101
1932	361	11	12	384	101
1933	331	33	14	378	100
1934	296	64	15	375	99
1935	336	25	16	377	100
1936	314	43	18	375	99
1937	338	21	20	379	100
1938	340	13	19	372	98
1939	321	21	21	363	96
1940	331	16	21	368	97
1941	335	12	20	367	97
1942	339	11	20	370	98
1943	348	12	17	377	100
1944	353	10	16	379	100
1945	345	9	18	372	98
1946	342	8	19	369	97
1947	346	8	19	373	98
1948	347	9	22	378	100
1949	352	9	26	387	102

- Continued

Table 5.- Cropland used for crops, continental United States, 1909-55 - continued

Year	Cropland harvested 1/	Crop failure 2/	Summer fallow 3/	Total cropland used for crops	Index 1947-49=100 4/
	Million acres	Million acres	Million acres	Million acres	
1950----	337	12	29	378	100
1951----	336	18	28	382	101
1952----	341	11	28	380	100
1953----	341	13	26	380	100
1954----	338	13	29	380	100
1955 5/-	333	17	28	378	100

1/ Includes cropland from which one or more crops were harvested. Cropland used for soil-improvement crops which was not harvested or pastured and idle cropland are not included. Acreages in farm gardens, minor crops, and small farm orchards are only partially included in cropland harvested in some years.

2/ Estimates based on acreages reported by the Census of Agriculture, 1925-45, and annual estimates of crop losses by the former Bureau of Agricultural Economics and the Agricultural Marketing Service. Acreage of hay land that produced nothing except pasture in some dry seasons is not included in acreage losses.

3/ Estimates of acreage of summer fallow were made only for the geographic divisions that lie west of the Mississippi River. From 1945 to 1948, estimates of fallow were based chiefly on acreages seeded to wheat on summer fallow land as estimated by the former Bureau of Agricultural Economics and based on data issued by the Great Plains Council. For 1949 and subsequent years, estimates of fallow were based partly on the 1950 and 1954 Censuses of Agriculture, estimates of wheat seeded on summer fallow made by the Agricultural Marketing Service, and data issued annually by the Great Plains Council. Estimates for years prior to 1945 were built up from fragmentary data available in the former Bureau of Agricultural Economics.

4/ Index numbers computed from unrounded data.

5/ Preliminary.

(2) Crop failure.- Cropland on which crops have failed has increased in recent years. The 5-year average of crop failure for 1950-54 was 13 million acres compared with 9 million acres for the period 1945-49. Failure of crops comes about mainly because of adverse weather, although insects and diseases may also cause damage. Most of the crop failure occurs in the Great Plains and Mountain States. Between 1950 and 1954, nearly three-fourths of the total estimated crop failure was located in these 14 States. Drought is the chief cause of crop failure for the country as a whole, although other causes, such as floods, frost, hail, and grasshoppers, are at times significant in some areas.

(3) Cropland fallowed.- Cultivated summer fallow has increased appreciably since the end of World War II. This cropping practice is widespread in subhumid and semiarid regions when small grains are produced without irrigation. In these areas, rainfall may be insufficient for a crop each year and experience has proved that increases in yields result from fallowing land before small grains are planted. Therefore, such land is ordinarily considered as a part of the cropland used for crops.

Cultivated summer fallow reported by the 1954 Census of Agriculture amounted to 29 million acres. Annual estimates show an average of 28 million acres for the 5-year period 1950-54, as compared with 21 million acres for the 1945-49 period.

In the war and postwar years, because of the high price of wheat, permanent grasslands in high-risk areas have been plowed up for production of wheat. An increase in cropland fallowed has accompanied the plowing. Reports of the Census of Agriculture and annual estimates of acreage prepared in the Agricultural Marketing Service indicate that in recent years when allotments for wheat were in effect, the acreage of cultivated summer fallow has remained high. This is explained partly by the fact that higher yields of wheat are obtained on fallowed than on other cropland.

Principal crops harvested.- Acreages in principal crops harvested, as reported by the former Bureau of Agricultural Economics and the Agricultural Marketing Service, plus estimated acreages in fruits, tree nuts, and farm gardens, averaged 347 million acres in 1951-53. Principal crops harvested amounted to 346 million acres in 1954 and 340 million acres in 1955 (fig. 3). Feed grains and hay crops occupied 213 of the 347 million acres in the 1951-53 period. These crops accounted for 225 million acres in 1954 and 229 million acres in 1955. Food crops averaged 102 million acres in 1951-53, but totaled only 93 and 87 million acres, respectively, in 1954 and 1955. Cotton, flaxseed, tobacco, and a few minor crops accounted for the remaining acreage.

Significant shifts in the acreage of several crops occurred between 1951-53 and 1954-55. These shifts may be explained by the influence of acreage allotments for wheat and cotton, which were in effect in 1954 and 1955 but not during the 1951-53 period. Sharp decreases occurred in the acreages of wheat and cotton. Most of the acreage diverted from these crops was used for sorghums, barley, oats, soybeans, and flaxseed (table 6).

Total cropland available for crops.- The decrease in total cropland from 478 to 4.5 million acres between 1949 and 1954 amounted to 13 million acres. Acreage allotments on wheat, cotton, and corn that were in effect in 1954 encouraged diversion of much of the cropland used for these crops to nonallotment crops, but part of the acreage was diverted to pasture and part of it remained idle and fallow.

The decrease of 3 million acres in cropland used only for pasture between 1949 and 1954 may be explained partly by the fact that in 1949 cropland used only for pasture that was not actually in rotation with crops was more frequently reported as cropland than in 1954. This shift is particularly evident

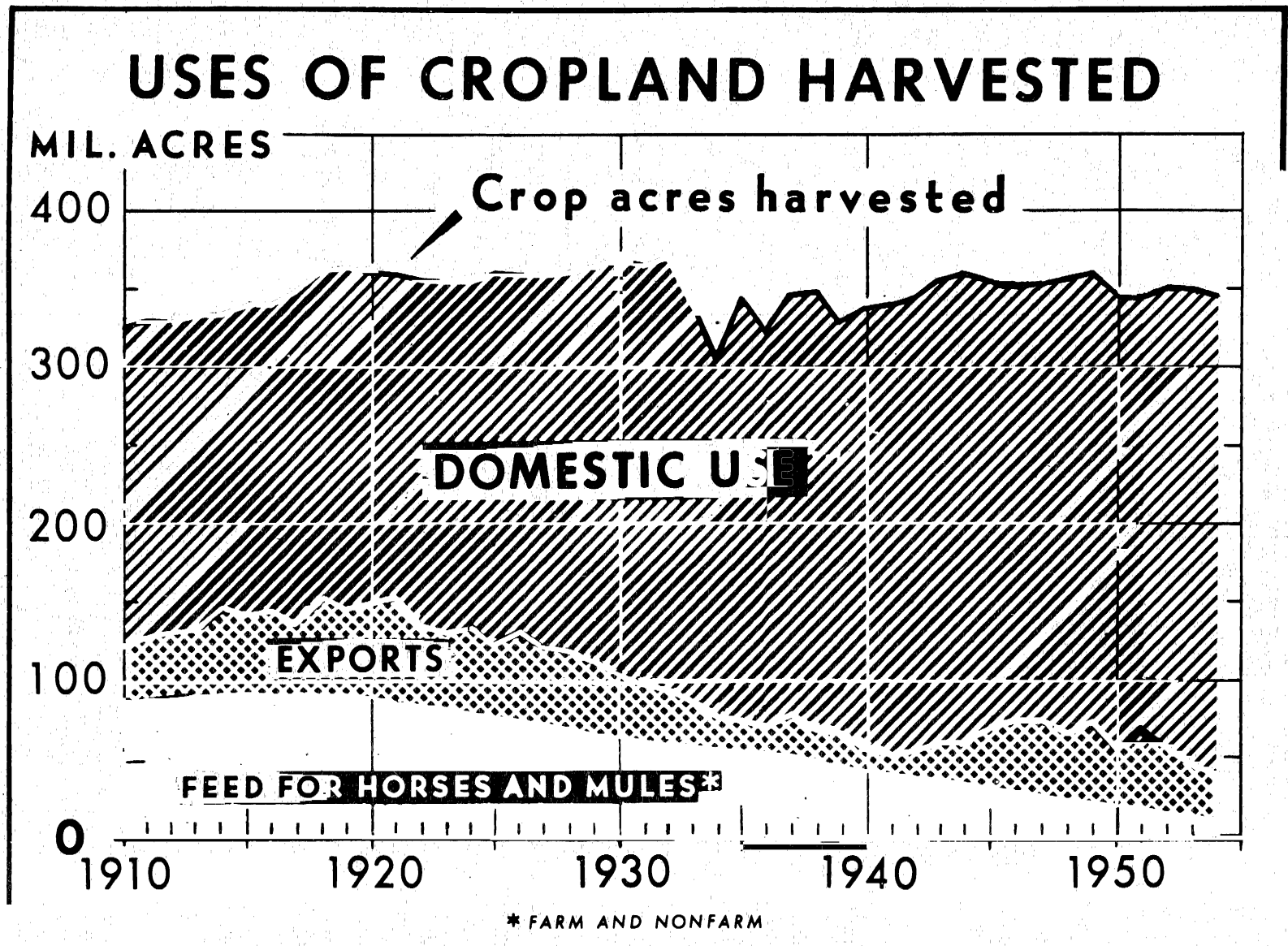

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Figure 3

Table 6.- Principal crops harvested, continental United States, average 1951-53, annual 1954 and 1955

Item	1951-53	1954	1955 1/
	Million acres	Million acres	Million acres
Food crops:			
Food grains:			
Wheat	66.7	54.3	47.2
Rice	2.0	2.5	1.8
Rye	1.5	1.7	2.1
Buckwheat	.2	.2	.1
Total food grains	70.4	58.7	51.2
Irish potatoes	1.4	1.4	1.4
Sweetpotatoes	.3	.3	.4
Dry beans	1.3	1.6	1.6
Dry peas	.3	.3	.3
Sugarcane for sugar and seed	.3	.3	.3
Sugar beets	.7	.9	.7
Sugarcane and sorgo sirup	.1	.1	.1
Peanuts for nuts	1.7	1.4	1.7
Soybeans for beans	14.2	17.0	18.6
Fruits and planted nuts 2/	4.8	4.5	4.5
Vegetables for fresh market and commercial processing	3.9	3.9	3.8
Farm gardens	2.6	2.4	2.4
Total food crops	102.0	92.8	87.0
Feed crops:			
Feed grains:			
Corn	80.8	80.3	80.0
Oats	38.1	42.3	40.9
Barley	8.8	13.2	14.3
Sorghums except sirup	12.	18.1	20.9
Total feed grains	140.0	153.9	156.1
All hay:			
Tame 3/	58.3	58.2	60.0
Wild	14.5	13.2	12.7
Total hay	72.8	71.4	72.7
Total feed crops	212.8	225.3	228.8

- Continued

Table 6.- Principal crops harvested, continental United States, average 1951-53, annual 1954 and 1955 - continued

Item	1951-53	1954	1955 1/
	Million acres	Million acres	Million acres
Other crops:			
Cotton	25.6	19.2	16.9
Flaxseed	3.9	5.6	4.9
Tobacco	1.7	1.7	1.5
Minor crops 4/	1.1	1.0	1.2
Total other crops	2.3	27.5	24.5
Total 59 harvested crops 5/	339.7	338.7	333.3
Total 59 harvested crops, fruits, planted nuts, and farm gardens	347.1	345.6	340.3

1/ Preliminary.

2/ Includes tree fruits, small fruits, and planted nuts, as reported by the 1954 Census of Agriculture, and estimates of the Production Economics Research Branch of acreage in orchards having less than 20 fruit or nut trees.

3/ Excluding peanut-vine hay which is largely duplicated in peanuts picked or threshed.

4/ Broomcorn, cowpeas, sweetclover seed, and timothy seed.

5/ The acreage of the 59 principal crops excludes duplicated acreage in alfalfa, red clover, alsike clover, and lespedeza seeds, peanut vine hay, and velvetbeans. Also not included are sweet corn for fresh market, some of the less important commercial vegetables (282,000 acres in 1952), hops, popcorn, cranberries, spelt, and various legumes and other crops harvested by livestock.

As reported by the former Bureau of Agricultural Economics and Agricultural Marketing Service in Crop Production, Annual Summary, 1952-55. Estimates of acreage in farm gardens, fruits, and planted nuts are based on the 1954 Census of Agriculture.

in parts of the South, where the seeding of pasture on cropland taken out of crop production proceeded rapidly after World War II. Much of this cropland, which had been seeded for only a short time when the 1950 Census of Agriculture was taken, has remained in pasture, and by 1954, it was generally considered as permanent grassland pasture.

Pasture and Grazing Land

As shown in the tabulation below, nearly a billion acres of land were grazed in continental United States in 1954. The acreage of land used for pasture and grazing in continental United States in 1954 was:

	Million acres
Grassland:	
In farms	
Cropland used only for pasture 1/	66
Open permanent pasture	460
Not in farms	
Grassland grazing land	173
Total grassland pasture and grazing land 2/	699
Forest and woodland:	
In farms	121
Not in farms	180
Total	301
Grand total	1,000

1/ Cropland used only for pasture is included also as land available for crops in tables 6, 22, 23, and 25.
2/ Includes cropland used only for pasture.

This acreage included 699 million acres in grassland pasture and grazing land, and some 301 million acres of woodland and forest grazed during part of the year. 5/ The grassland pasture included 66 million acres of cropland used only for pasture. It is estimated also that some 80 to 90 million acres in planted fields are pastured for short periods each year. These include fall

5/ The term "grassland" or "open pasture and grazing land" includes all land used primarily for pasture and grazing exclusive of the woodland and forest pastured or grazed. It includes the shrub and brushland types of pasture and grazing land such as sagebrush, scattered mesquite, and some other shrub types in the West, and some scattered brushland pasture in the East, and all tame and wild or native grasses and legumes and other forage used for pasture or grazing.

and winter pasturage of small grain, and after-harvest pasturage of wheat, hay, and cornstalk and stubble fields. The acreage of crops pastured as well as the acreage of pasture and grazing land varies from year to year, depending on the weather and the available forage. More than 90 percent of all pasture and grazing land is grazed for some period each year.

At present, more than a third of the feed for livestock comes from pasture and grazing land. The average yield per acre for unimproved grazing land, however, is low compared with that from cropland. Large acreages of this land furnish pasture for only a few weeks in certain seasons of the year. With respect to agriculture, much of it can be used only for grazing; it is not suitable for cultivated crops or for other intensive uses. Even though pasture and grazing lands have been improved by seeding and other practices, the increase in production from pasture has been less rapid than that from cropland in recent years.

Exclusive of cropland pasture, there are about 934 million acres of pasture and grazing land. About 62 percent is in farms and ranches. The rest is largely public land and large privately owned forest tracts not in farms. More than half of the farm and ranch pasture and nearly 80 percent of the grazing land not in farms is in the Western Range Region, or roughly west of the 100th meridian. 6/

More than half of the pasture and grazing land (56.5 percent), exclusive of cropland pasture, is in the 11 Western States. Here about 70 percent of the land area is devoted to this use. Pasture and grazing land occupies slightly less than half the land area in the 14 Southern States from Virginia to Texas and Oklahoma, inclusive. Approximately a fourth of the land in the Northern States is used for pasture and grazing land.

Most of the forest and woodland suitable for grazing is in the Southern and Western States. More than half of the woodland and forest area in these regions has some forage of value for grazing. More than 40 percent of the grazed forest and woodland in the country lies in the Western States. Only in some of the Southern States, however, does woodland used for grazing make up as much as half or more of the total pastured acreage.

Recent shifts in acreages of pasture and grazing land exclusive of cropland used only for pasture).- Acreages of pasture and grazing land continued to decline somewhat from 1949 to 1954 as additional woodland and forest areas were closed to grazing, and areas of young tree growth thickened to a point at which grazing was no longer profitable. Shifts of more land to urban and industrial development and other nonagricultural uses also were a factor in the decline. Much pastureland was seeded and otherwise improved. Thus the

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6/ About 45 percent of the farm pasture is in the 11 Western States. An additional 10 percent lies in the Great Plains Counties of North and South Dakota, Nebraska, Kansas, Oklahoma and Texas, which are included in the Western Range Region. More than 75 percent of the grazing land not in farms is in the 11 Western States.

overall changes were lower than they would have been had there been no improvement. The net result of these shifts was a decline of 17 million acres in pasture and grazing land, exclusive of cropland used only for pasture.

(1) Pasture in farms.- An increase occurred from 1949 to 1954 in open permanent pasture in farms of 44 million acres. This increase came about chiefly because of shifts of cropland to pasture, clearing and improvement of land, transfer of grazing land not in farms to pastureland in farms, and reclassification by the agricultural census of 1954 of some land classed in 1950 as woodland and brush as open permanent pasture. The net change in all pasture in farms exclusive of cropland used only for pasture was an increase of 31 million acres (fig. 4).

(2) Rangeland not in farms.- A decrease from 1949 to 1954 of 48 million acres of grazing land not in farms occurred chiefly because of transfer of land not in farms to land in farms, a decrease in the acreage of woodland and forest grazed, and the closing of depleted and other areas to grazing. The decrease in the acreage of grazing land not in farms was offset to the extent of 31 million acres by the increase in the acreage of pasture in farms. Thus the net decrease in the acreage of pasture and grazing land, not including a decrease of 3 million acres in cropland used only for pasture, amounted to 17 million acres.

Federal and State land used for grazing.- Nearly a third of the pasture and grazing land (exclusive of cropland used only for pasture) is Federal and State land (see tabulation below). In 1954, of approximately 252 million acres of Federal land that were classified as usable for grazing under permits and leases, about 7 million acres were closed temporarily to grazing in order to allow for reseeding and restoration. This left 245 million acres in active use. More than 90 percent of this land, or 231 million acres, is public domain land in grazing districts or public land in national forests and related land utilization and other areas in which established local farmers and ranchers have customarily carried on seasonal grazing under a system of permits. More than 65,000 permits and leases were in use from 1949 to 1954. Although the use of Federal land is important to many individual farmers and ranchers and to the livestock industry of certain western regions, the feed supplied by Federal grazing land represents less than 5 percent of all forage required by livestock in the country as a whole. The contribution to total production is less than proportional to the acreage because of the inherently low quality of much of the Federal rangeland as compared with improved pasture and range in private ownership.

In addition to the 231 million acres of Federal land that are usable for grazing by permit, 21 million acres are leased for grazing. The chief part of this acreage consists of scattered sections of public domain land in the settled farming and ranching areas, which were passed over by homesteaders and others. Some dry land in reclamation projects is leased for grazing, pending development of water supplies for irrigation. Some national defense land also is leased annually or seasonally, when not needed for public purposes.

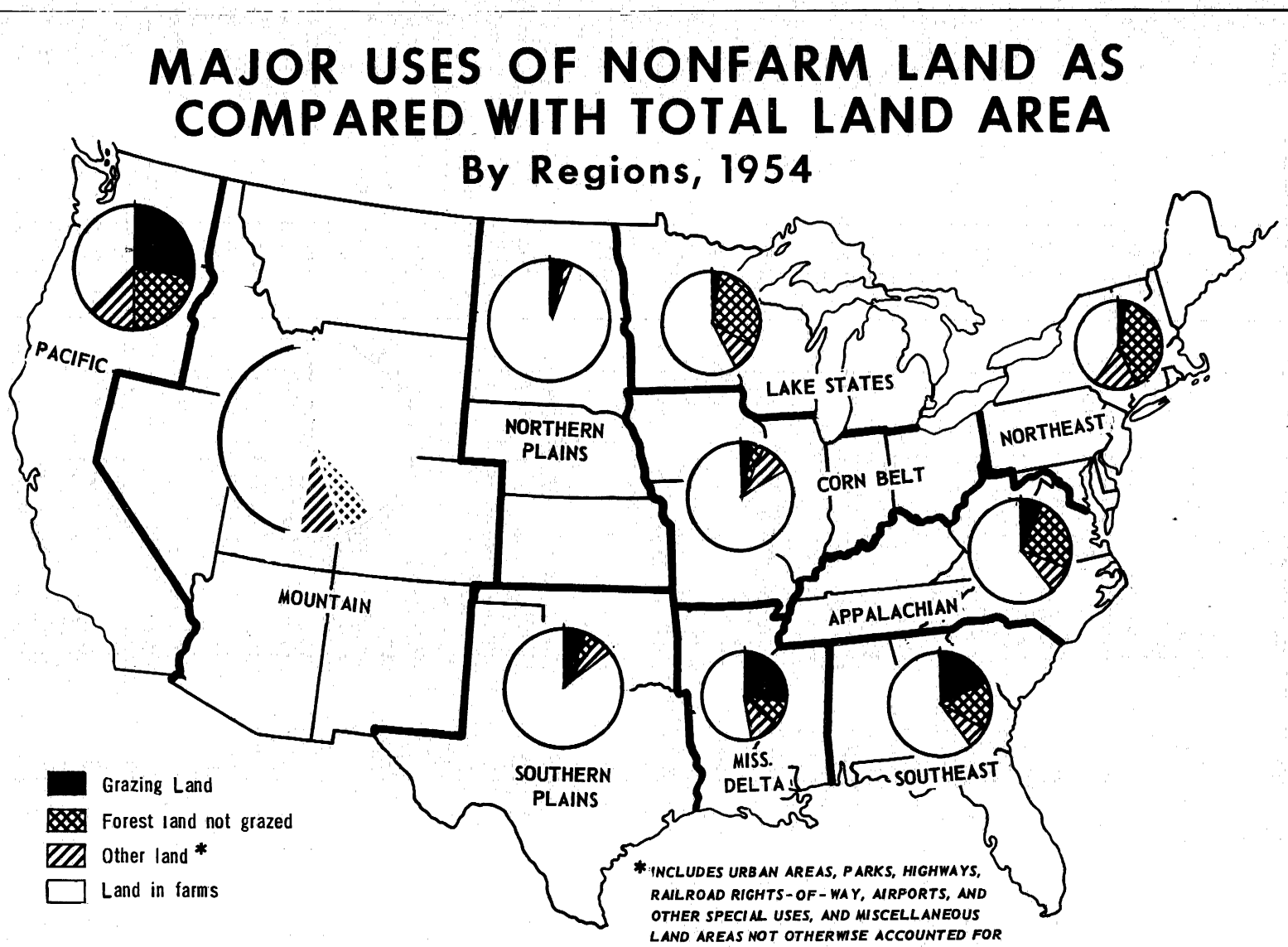

MAJOR USES OF NONFARM LAND AS COMPARED WITH TOTAL LAND AREA
By Regions, 1954
PACIFIC
MOUNTAIN
NORTHERN PLAINS
SOUTHERN PLAINS
LAKE STATES
CORN BELT
MISS. DELTA
APPALACHIAN
SOUTHEAST
NORTHEAST
Grazing Land
Forest land not grazed
Other land *
Land in farms
* INCLUDES URBAN AREAS, PARKS, HIGHWAYS, RAILROAD RIGHTS-OF-WAY, AIRPORTS, AND OTHER SPECIAL USES, AND MISCELLANEOUS LAND AREAS NOT OTHERWISE ACCOUNTED FOR
U.S. DEPARTMENT OF AGRICULTURE
NEG. 56(5)-2150 AGRICULTURAL RESEARCH SERVICE

Figure 4

Ownership of pasture and grazing land in continental United States in 1954 was as follows:

Ownership	Million acres
Private 1/	660
Indian 2/	44
Total private and Indian	704
Public:	
Federal 3/	252
State 4/	44
Total public	296
Total	1,000

1/ All private individual, partnership and corporate holdings, including some individually owned Indian tracts and possibly a few publicly owned institutional farm pastures and local government holdings.

2/ Tribal and trust-allotted lands under guardianship of the United States Government.

3/ Federally owned lands, including national forests and public domain lands in grazing districts and other areas.

4/ State-owned lands, including school-grant lands and other State-owned areas.

In 1954, approximately 44 million acres of State land were leased or otherwise made available for grazing. This State land supplies about 1 percent of the forage requirements of the country. The greater part of the State land is in the 17 Western States. Several of the Great Plains and other Western States have sizable areas of school-grant and other lands that are leased to farmers and ranchers for the grazing of livestock. Long-term leases usually are made, thus providing for security in operation. Much of the land is in scattered school sections but considerable acreages in a few States are in contiguous blocks large enough for ranches. Of particular importance in this respect are the school lands, both as a source of income for schools when efficiently managed and as a supply of land for rental by local farmers and ranchers. The State land is more productive on the average than the public domain or grazing district lands, as much of it was selected from the better parts of the public domain prior to settlement.

The public lands, both Federal and State, that are administered for grazing and forestry are more generally suited to these purposes than to any other use. The continued welfare of the livestock industry depends upon the balanced and complex integration of land use. This involves all of the rangeland and all classes of land ownership. Within the range country are limited irrigated areas devoted to production of specialty crops, but the backbone of the agricultural economy over extensive areas is the livestock industry. Supplemental forage produced on irrigated land depends on water supplies from

high mountain watersheds. These watersheds produce valuable livestock forage for summer use and yield water to produce much of the rest of the forage required annually by the livestock on the cultivated lands that lie below. The significance of the public grazing and forest lands is due partly to their watershed values, but they also provide spring, fall, and some winter grazing and thereby round out the annual forage requirements of dependent livestock operations.

Indian land used for grazing.- In 1954, approximately 44 million acres of Indian land were used for grazing. Much of the Indian grazing land is made up of dry range and desert shrub land. Several acres of this land - often 20 to 30 or more - are needed to carry one cow during the grazing season.

About three-fourths of the Indian grazing land, or 33 million acres, was used for grazing by Indian farmers and ranchers in 1954. Permits are issued in connection with some of the tribal lands, but usually individual allotments are made. Some trust-allotted land is leased to Indians or non-Indians, on the basis of competitive bids, when the persons for whom the land is held in trust are not able to use it. Indians are encouraged to use Indian land. If an Indian operator is in position to use Indian land, he is given preference in leasing the land. Indian land leased to non-Indians is managed by the Indian agencies, and leases are adapted to local situations. The proceeds from the sale of grazing privileges belong to the tribes or individuals who own the land.

The importance of the livestock industry to the Indians, and the value of the watersheds involved, make the conservative use of these forage and soil resources important. In general, the forage has been utilized in accordance with the principles of conservation. In the Southwest, however, continuing drought and heavy grazing pressures by the Indians in the past are creating major problems in range management.

Improved pasture.- The acreage of improved pasture is estimated at 215 million acres, which include 66 million acres of cropland used only for pasture. The acreage of improved pasture increased from an estimated 175 million acres in 1939 to 215 million acres in 1954, an increase of 40 million acres, or an average of about 2.7 million acres per year. 7/ The acreage of improved pasture now represents nearly a third of the entire grassland or nonforested pasture and grazing land area of 699 million acres. Increased interest in improved pasture is shown by the many farmers and ranchers who have carried out pasture-improvement work in the last few years.

7/ For reference, see table 16. Improved pasture includes cropland used only for pasture, and other grassland pasture in farms generally in tame grasses and legumes, either seeded or natural growth, but may include native forage land that has been improved. All classes have had two or more improvement or conservation practices applied, such as weed and brush control, artificial or natural seeding or reseeding, fertilization, drainage, irrigation, or other similar practices that improve yields.

A larger acreage of improved pasture could be attained without reducing the acreage of cropland or forest. The greatest opportunity for increasing production of forage is through improvement of the acreage now used for pasture. Experience has shown that old, neglected pastures can be renovated and production increased. The inclusion of additional pasture in the regular cropland rotation has aided the improvement and production of pasture.

Improvement of pasture and grazing land offers opportunities and presents problems in all regions. Much of this land cannot be used successfully for crops without expensive improvement. In the West, much of the grazing land is range on which per acre yields of forage are low because of limited rainfall. In the South, large areas grazed are made up of brush, woodland, and depleted cropland.

Unimproved grazing land.- Unimproved grazing land consists mainly of undeveloped land which, because of rough topography, poor or unsuitable soil, insufficient precipitation, lack of irrigation water, or other reasons, cannot be used successfully for crops and improved pastures without considerable improvement. This land is suitable for grazing by domestic livestock, and it is capable of supporting uncultivated and unfertilized forage, primarily native grasses and other forage plants.

Unimproved grazing land is generally considered to include forage-producing forest land economically suitable for grazing by domestic livestock. To this extent, grazing and forest lands overlap. Grazing land excludes large blocks of forest land on which forage is insufficient for domestic livestock, even though such areas are contiguous to areas suitable for grazing use.

The principal native or unimproved grazing lands are found in the West and the lower South. In the West, they are predominantly grasslands or desert shrublands too dry for arable farming, although mountain woodland, which is moist enough for trees but is generally too rough for tillable farming, is also important. In the South, they are mainly forested grazing lands in the Coastal Plains, together with some important areas of wet prairie and marsh.

Just where the line should be drawn between unimproved grazing lands suitable for grazing and low-capacity lands, such as deserts, on which grazing of domestic livestock is not feasible, is often a problem. Such low-capacity land is not usually considered grazing land.

Much of the depleted unimproved grazing land can be restored to higher productivity more economically through management than through cultivation. Control and limitation of grazing in accordance with carrying capacity, allowance of growth for natural seeding, artificial reseeding of open areas and abandoned fields, and removal of competing brush are among the chief methods of restoring grazing land. Abandoned fields that are submarginal for crop production and are used for grazing even though they need reseeding to grass are classified as grazing land. Unimproved land (including forested areas) now used for grazing is estimated at approximately 785 million acres.

Income enters strongly into the question of whether or not arable pasture or grazing land can best be used for native pasture, tame pasture, cultivated crops, or other purposes. Costs and returns also enter into the problem of the degree to which the grazing resources of nonarable rangelands should be shared among livestock, wildlife, recreation, and watershed interests.

Classification of land as range has been questioned on the grounds that it does not always provide a lower limit of usefulness as natural pasture - a limit below which the land would not be regarded as range. Some land is so arid, so rocky, so inaccessible, so steep, or otherwise so inherently unproductive that although it does provide some native pasturage, the quantity is so small that to term it "range" is misleading. To graze it with domestic livestock may be uneconomic. From a stockman's viewpoint, it may better be called wasteland than rangeland. This lower limit fluctuates with the seasonal precipitation and the water supply; it varies also with economic conditions and with the type of ranching operations carried on.

Woodland and Forest

The total area in continental United States classified as forest and woodland by the recent Timber Resource Review is 648 million acres in round numbers, of which 484 million is commercial and 164 is noncommercial. 8/ By definition of forest land, 42 million acres of nonstocked and other open or nonforested areas are included in the area classified as commercial forest land. 9/ Much of this acreage is cropland, pasture, and closely cutover land apparently idle or not used for any other purpose that was thought to be suitable and available for producing timber at the time of the field survey. Of the acreage classified as nonstocked forest land, approximately 17 million acres are in the Northern States, 16 million acres are in the Southern States, and 9 million acres are in the Western States.

The forest area also includes 15 million acres of productive and 11 million acres of nonproductive reserved lands in national and State parks, monuments and wilderness areas, and other special uses. These lands were set aside by statute, ordinance, or administrative order for public purposes. Deduction of these special public-use areas from the total forest land area leaves 622 million acres available primarily for timber and related uses.

8/ U. S. Forest Service. The Timber Resource Review, ch. IX, Appendices: A. Summary of Basic Statistics, and B. Definition of Terms. Preliminary. 1955.

9/ Definition of forest land: Includes (a) lands that are at least 10 percent stocked by trees of any size and capable of producing timber or other wood products, or of influencing the climate or the water regime; (b) land from which the trees described in (a) have been removed to less than 10 percent stocking and which have not been developed for other use; (c) afforested areas; and (d) chaparral areas.

Forest land area in continental United States in 1953 was as follows: 1/

Forest land	Million acres
Commercial forest land 2/	484
Noncommercial forest land	
Reserved	
Productive	15
Unproductive	11
Total reserved	26
Unreserved	138
Total noncommercial	164
Total forest land area	648
Less reserved forest land in parks and other special uses	26
Total	622
Less overlaps in other land and pasture	7
Net forest land area	615

1/ U. S. Forest Service, Timber Resource Review, Preliminary, ch. ix.
2/ Acreages are rounded to the nearest million. For example, commercial forest land area of 484.3 millions includes 41.6 million acres of nonstocked and other areas; 72.7 million acres 10 to 40 percent stocked; 323.9 million acres over 40 percent stocked; and 46.1 million acres old-growth sawtimber stands.

An additional 7 million acres of forest land overlap other land uses reported by the agricultural census and other land use surveys, thus leaving an estimated net forest and woodland area of 615 million acres. Differences in definition of forest land in the timber-resource survey and in the agricultural census and other surveys account for much of this overlap.

Nearly half, or 301 million acres, of the woodland and forest are estimated to be grazed at some time during the year, or to have forage of significant value for pasturage. Much of the forested area also has other significant values in addition to timber and forage. Among the chief additional contributions of forest lands are sources of water for irrigation and other purposes, watershed protection, wildlife habitat, recreation and scenic and climatic values.

Special and Miscellaneous Uses

Special uses of land vary widely. They include such uses as those for urban areas, highways, railroads, airports, parks, national defense areas, wildlife refuges, farmsteads, and farm roads and lanes. For the most part, these uses are nonagricultural. Recent interest in this group of uses centers around the question of whether or not it is desirable to use good agricultural land for urban sites and other similar purposes when less desirable agricultural land suitable for such uses is available. Competing demands for the use of land are particularly acute in good farming areas where urban and industrial expansion has been rapid.

The acreage occupied by the special-use land specified in table 7 totals 110 million acres (Refer also to appendix table 30 for data by States and regions). Urban and transportation areas account for about two-fifths of the total land area occupied by these special uses. Parks and wildlife areas occupy about a fourth of the total area in special uses. National defense and atomic energy installations, flood-control areas, and State-owned institutional and related sites account for another fourth. The remaining tenth of the area in special uses is in farmsteads and farm roads and lanes.

Ordinarily, urban and transportation areas are most directly in competition with agriculture for the use of level and fertile land. Other special uses for which separate estimates have not been made also frequently compete with agriculture for land. Examples of such areas are industrial, nonfarm residential, and commercial sites in rural areas; mining areas; clay, sand, and stone quarry sites; cemeteries; and golf courses.

Use of land for artificial reservoirs is not shown in table 7. As reservoir areas are deducted from the land area when completed, they are not included among the special uses of land. Excluding most natural lakes with controlled water levels, artificial reservoirs now occupy about 7 million acres.

According to available statistics, the acreage of land in urban areas, highways, airports, and reservoirs increased an average of about 831,000 acres per year from 1945 to 1954. Increase in urban areas accounted for 395,000 acres of this average annual increase, reservoir areas accounted for 360,000 acres, highways for 78,000 acres, and airports for 5,000 acres. The area occupied by railroads decreased by about 7,000 acres annually during this period. Not all of the land occupied by these nonagricultural uses is cultivable land. In addition to the changes in area used for the specific purposes mentioned above, increases in the area occupied by parks, wildlife areas, and national defense areas occurred.

Other miscellaneous unaccounted-for areas include deserts, sand dunes, bare rock areas, and marshes. The total acreage included in this category amounted to about 80 million acres in 1954. Land with these physical characteristics that is used for such things as military areas, parks, and wildlife refuges is not included in the above total.

Table 7.- Land in special-use areas, continental United States, 1954

Item	Acreage	Percentage of total
	Million acres	Percent
Urban areas 1/	18.6	16.9
Rural transportation areas:		
Highways and roads 2/	19.8	17.9
Railroads 3/	3.4	3.1
Airports 4/	1.3	1.2
Total	24.5	22.2
Farmsteads 5/	9.0	8.2
Farm roads and lanes	2.0	1.8
Parks:		
National parks 6/	14.0	12.7
State parks 7/	4.7	4.3
Total	18.7	17.0
Wildlife areas:		
Federal areas 8/	3.9	3.5
State areas 9/	4.9	4.5
Total	8.8	8.0
National defense areas: 10/		
Army	7.1	6.4
Air Force	10.2	9.3
Navy	4.2	3.8
Total	21.5	19.5
Flood-control areas 10/	3.9	3.5
Atomic energy areas 10/	2.0	1.8
State-owned institutional sites and miscellaneous other uses 11/	1.2	1.1
Grand total 12/	110.2	100.0

- Continued

Table 7.- Land in special-use areas, continental United States, 1954

1/ Areas occupied by towns and cities of 1,000 population and over are as of December 1954. Estimates are based on annexations since 1950, as reported by the Municipal Yearbook and the Bureau of the Census. Estimates of unincorporated areas added to urban areas since 1950 were based on the proportion of unincorporated to incorporated areas in 1950. Revision of the 1950 total urban area as reported in U. S. Dept. Agr. Tech. Bul. 1082 was made on the basis of 2 subsequent reports released by the Bureau of the Census. For places not reported by the Bureau of the Census, estimates were made by measurement of built-up areas on recent topographic maps and aerial photographs and by comparison with areas reported in 1940. Adjustments in census areas for incorporated places were made to exclude large non-built-up areas from urban land, particularly in the New England States. Approximately 10 million additional acres are occupied by rural villages and towns, with populations of 100 to 1,000. The estimated acreage in these villages and towns is now included in other major uses of land, such as forest, grazing, farm, and other land. Separation would call for revision of accepted major land use areas of many counties and States.

2/ Estimates of acreage in highways as of 1954 were derived by applying average right-of-way widths reported by State highway departments to the mileage in different highway systems reported by the Bureau of Public Roads.

3/ Estimates of acreage in railroad rights-of-way are based on State-by-State changes in mileage reported by the Interstate Commerce Commission, 1945-53.

4/ Airports used strictly for personal use or for military purposes are excluded as such areas are largely duplicated in agricultural and military uses of land respectively. Airports within corporate limits of cities and those surrounded by built-up areas in unincorporated places were also excluded.

5/ Rural homesites outside of towns and villages and not located on farms occupy an undetermined acreage, particularly along major highways near cities. The number of such homesites has been increasing. In some areas, many of the homesites on former farms are in this category, and the decline in acreage in farmsteads in such areas merely indicates that such homesites are no longer located on farms as defined by the Bureau of the Census.

6/ As of June 30, 1954, national recreation areas are excluded as these areas are reported by the Bureau of Reclamation. National park areas in Hawaii and Alaska are also excluded. Major water areas in national parks as compiled by the National Park Service as of March 1953 were deducted from the total area reported.

7/ Areas in State parks exclude water bodies of 40 acres or more. Adirondack and Catskill parks or forest-preserve areas are included in the acreage reported for New York.

8/ Does not include areas under the primary jurisdiction of another agency or land leased for wildlife purposes. Excludes 1,520,000 acres in the Cabeza Prieta and Kofa areas in Arizona and 2,728,711 acres in the Desert Game and Charles Sheldon areas in Nevada, which were reported in grazing districts by the Bureau of Land Management.

9/ State wildlife areas are as reported in U. S. Dept. Agr. Cir. 909 plus lands acquired since 1950 by the States for wildlife purposes under the Pittman-Robinson and Dingel-Johnson acts and by the States themselves without assistance from Federal funds.

10/ As reported in the Inventory Report on Federal Real Property in the United States as of June 30, 1955, prepared by the General Services Administration at the request of the Committee on Appropriations of the United States Senate, Senate Doc. 100, 84th Cong., 2d Sess., 1956.

11/ State-owned rural land held for institutional sites and miscellaneous other uses such as National Guard camps and rifle ranges, fairgrounds, airports, radio stations, flood-control areas, and watershed-protection areas. Data are incomplete for some States.

12/ The following special uses of rural land are not included: Reservoirs, industrial and commercial sites in rural areas, mining areas, clay, sand, and stone quarry sites, powerline rights-of-way, cemeteries, and golf courses. Water area in reservoirs, exclusive of most natural lakes with controlled water levels totaled approximately 7 million acres as of December 31, 1953. As the approximate land area of the United States excludes all natural or artificial water bodies of 40 acres or more, the area in reservoirs is considered separately from other special uses. Most reservoirs have a protective belt or area surrounding the reservoir. For some reservoirs, this area may be nearly equal to the water area of the reservoir, while for others it may be considerably less. These areas are often forested for watershed protection. They may also be used for recreation and for wildlife protection.

LAND CAPABILITY

The total land area of the United States is approximately 1,904 million acres. This constitutes the total land-resource base, which is made up of land of differing qualities. Estimates made in conjunction with the land-capability inventory carried out by the U. S. Soil Conservation Service make it possible to draw several significant comparisons between current land use and land capability (table 8).

The land-capability classification divides land into eight general classes. These classes in turn are subdivided into subclasses and units according to more detailed characteristics pertaining to kind of limitations on use and necessary management practices. These land classes indicate the degree of risk involved in using the land for different purposes. Class I land is level and easy to farm, and there is little or no danger from erosion. There are an estimated 72 million acres of class I land in the country as a whole. More than half of this class I land is located in the North Central States.

Land in capability classes II and III is also suited to cultivation if certain limitations such as slope, sandy soil, tight subsoil, or other permanent limiting features are kept in mind in using it. Class II land needs such easily applied practices as contouring, protective cover crops, and simple water-management practices. Class III land can be cultivated safely only if careful attention is given to such conservation measures as terracing and strip cropping on slopes and good water management on flat areas. The total acreage in these two classes is about equal.

Capability class IV includes land that must be cultivated with extreme care. It should be used only occasionally for cultivated crops. It can be used safely for hay crops or pasture.

Land in classes V, VI, and VII is not suited to cultivation but may be used for grazing or forestry. Class V land has few restrictions when used for grazing or forestry, while land in classes VI and VII has moderate to severe limitations when used for these purposes.

Land in class VIII is arid, rough, steep, stony, sandy, wet or severely eroded. Some examples of class VIII land are rocky foothills, rough mountain land, bare rock outcrops, coastal sand dunes, marsh and swamp land, and arid land not suited to grazing.

Possibilities for shifts in land use, when and if such shifts are needed in the interest of better conservation of land resources or for greater or smaller production of certain products, are indicated in table 8. In view of the unsuitability of land in capability classes V to VIII for use as cropland, it seems desirable from the standpoint of conservation to shift about 40 million acres of the 1950 cropland acreage into other uses as soon as possible. It is also apparent that, from the standpoint of

Table 8.- Estimated areas of land classified by capability classes and primary use, continental United States, 1950

Capability class 1/	Cropland	Grassland	Woodland	Miscel-laneous	Total land area	Percentage of total
	Million acres	Million acres	Million acres	Million acres	Million acres	Percent
I	52.8	11.5	7.7	---	72.0	3.8
II	170.5	39.5	34.5	---	244.5	12.9
III	165.1	59.4	63.1	---	287.6	15.1
Total	388.4	110.4	105.3	---	604.1	31.8
IV	49.2	43.9	38.8	---	131.9	6.9
V	3.9	22.4	40.7	---	67.0	3.5
VI	21.1	239.9	107.8	---	368.8	19.4
VII	14.8	327.7	190.2	---	532.7	28.0
Total	39.8	590.0	338.7	---	968.5	50.9
VIII	.4	33.1	5.6	54.8	93.9	4.9
Unclassified	---	---	---	105.4	105.4	5.5
Total	2/ 477.8	3/ 777.4	4/ 488.4	160.2	1,903.8	100.0

1/ This classification refers to the full potential based on the physical capability of the land. It does not necessarily follow that all land physically suitable for cultivation should be used for cultivated crops, as a balanced enterprise on most existing farms requires use of some land in classes I, II, or III for pasture or woodland.

2/ Includes about 69 million acres of rotation pasture classed as cropland.

3/ Includes about 118 million acres of shrubland classed as woodland.

4/ Excludes about 118 million acres of shrubland classed as grassland.

Estimates compiled in 1948-49 by the Soil Conservation Service. Adjusted slightly on basis of 1950 census figures.

physical capability, 216 million acres of land in capability classes I to III could be shifted from grassland and woodland to cropland, when and if these shifts are necessary in terms of needed production adjustments. Shifts in the use of class IV land are also possible in some areas.

OWNERSHIP OF LAND

Kinds of Ownership

Privately owned land.- Privately owned land comprises 1,343 million acres, or more than 70 percent of the land area of continental United States. These private land holdings, together with 56 million acres of Indian tribal and trust-allotted land, total 1,399 million acres, or about 73 percent of the land area. More than a billion acres of this land is in farms. Other significant private holdings are embraced in towns, cities, industrial and residential areas, and commercial timber tracts (table 9 and appendix tables 31 to 33).

Indian land.- The Indian tribal and trust-allotted land is administered by the Federal Government for the benefit and use of the Indian peoples. About three-fourths of this land is used directly for farming and grazing by Indian farmers and stockmen. Much of the rest is leased for farming and grazing to other farmers and ranchers and the proceeds are received by the Indian owners.

Public land.- Publicly administered Federal, State, county, and other local government land totals about 505 million acres, or 27 percent of the total land area, according to estimates compiled in a study of the use of public land. Of the total publicly administered area, approximately 80 percent is administered for Federal purposes, and 20 percent for State and local government purposes. Recent changes in acreage of public land represented transfers to other uses of land used for military purposes during World War II, and sales of State-owned land. There have been offsetting changes, however, through acquisition for public reservoirs, airports, and highway rights-of-way, and for forestry purposes. (See tables 9, 30, 31, 32, and 33).

Major uses of public land are grazing, 60 percent, forest and woodland not grazed, 20 percent, and special and miscellaneous uses, including idle and waste land, 20 percent. Federal lands include Federal grazing areas, national forests, national parks, wildlife refuges, and other special-use areas.

There are 408 million acres under Federal administration and 80 million acres in State ownership. Local government uses account for about 17 million acres.

Slightly less public land was grazed in recent years than formerly because of the effects of drought and of reductions in acreage to allow for restoration and for control of poisonous plants. Public grazing land, including both Federal and State land, supplies only about 6 percent of

Table 9.- Ownership of land, by classes, continental United States, 1954

Classes	Acreage	Percentage of total
	Million acres	Percent
Private land 1/	1,343	70.5
Indian land 2/	56	3.0
Public land:		
Federal land 3/	408	21.4
State land 4/	80	4.2
County and municipal land (estimated) 5/	17	0.9
Total	505	26.5
Grand total	1,904	100.0

1/ Private land includes individually owned, partnership, and corporate-owned land, also some highway and road rights-of-way not covered in public land. Approximation based partly on various State reports showing acreages assessed for taxation and partly on reports on acreages of public and Indian land.
2/ Summary of Indian lands by kind of use from the Bureau of Indian Affairs.
3/ Senate Doc. 100, 84th Cong. 2d Sess. Inventory Report on Federal Real Property in the United States as of June 30, 1955.
4/ U.S. Dept. Agr. Cir. No. 909.
5/ Estimate as of 1950 based on partial survey of readily available publications and records.
Compiled from State and Federal reports and records.

the forage requirements of the country. The average carrying capacity of this land is low because much of it is semiarid.

A comparison of estimated acreages of private, Indian, and public land in 1930 and 1954 is shown in table 10. Additional data on major uses

Table 10.- Major uses of land in private, Indian, and public ownerships, continental United States, 1930 and 1954

Land use	Private and Indian land 1/			Public land 2/			Total		
	1930	1954	Change	1930	1954	Change	1930	1954	Change
	Mil. acres	Mil. acres	Mil. acres	Mil. acres	Mil. acres	Mil. acres	Mil. acres	Mil. acres	Mil. acres
Cropland 3/	411	396	-15	2	3	1	413	399	-14
Pasture and grazing land, including forest and woodland grazed	745	704	-41	297	296	-1	1,042	1,000	-42
Forest and woodland not grazed	168	211	43	105	103	-2	273	314	51
Special uses 4/	23	33	10	41	77	36	64	110	46
Miscellaneous 5/	64	55	-9	49	26	-23	113	81	-32
Total 6/	1,411	1,399	-12	494	505	11	1,905	1,904	-1

1/ Private land includes all land owned by individuals, private groups, and corporations. It includes the major part of the farmland and urban and residential areas of the country. Individual trust-allotted and tribal Indian land is included with private land as it is used largely by individuals and small groups for private purposes in contrast to public land used for public purposes.

2/ Public land includes Federal, State, county, and municipal land. Considerable acreages of public land are included in farms and ranches or used with them for grazing, but most of the public land is not suitable for arable farming.

3/ The greater part of the cropland reported in public ownership is State school and other public land leased out temporarily to farmers for farming when not needed for public purposes.

4/ Towns, cities, farmsteads, highways, roads, parks, wildlife refuges, water-supply areas, and military lands.

5/ Land chiefly of low value for agriculture.

6/ Individual items adjusted to total. The total land area was calculated as 1,905 million acres in 1940 and prior years, but adjustments made for absorption by large reservoirs and minor revisions in a few State areas reduced the total in 1950 to 1,904 million acres.

Compiled from various sources, including State and Federal publications and records and reports of numerous State agencies. Total figures should be regarded as approximations of the acreages of land held by private parties and public groups and in different major uses rather than results of detailed enumeration.

of land by types of ownership are given in appendix tables 37 to 40. The acreage of public land, including Federal, State, and local government lands, rose from 494 million acres in 1930 to 505 million acres in 1954. This increase of 11 million acres represented land acquired for forests and other public purposes such as national defense and public reservoirs. Part of the increase also resulted from tax reversions in the 1930's. The total figures on ownership can be considered only as approximations. Exact data for county and municipal lands are not available. Many areas of land owned by local governments may be unaccounted for and estimates of private and public land may include some duplication. For example, in the past, highway and road rights-of-way in many areas customarily were included in the total acreages of both the private and public land tracts through which they passed. Only in recent years have acreages acquired for rights-of-way been deducted from private holdings in assessment and other land records.

Information concerning Federal and State land was provided by an inventory of these types of public holdings. Public records and reports prepared by State revenue or State tax commission officials for 40 States, plus data for the remaining 8 States from various publications and public agencies, were sources of data on ownership of private land.

CHANGES IN USE OF LAND

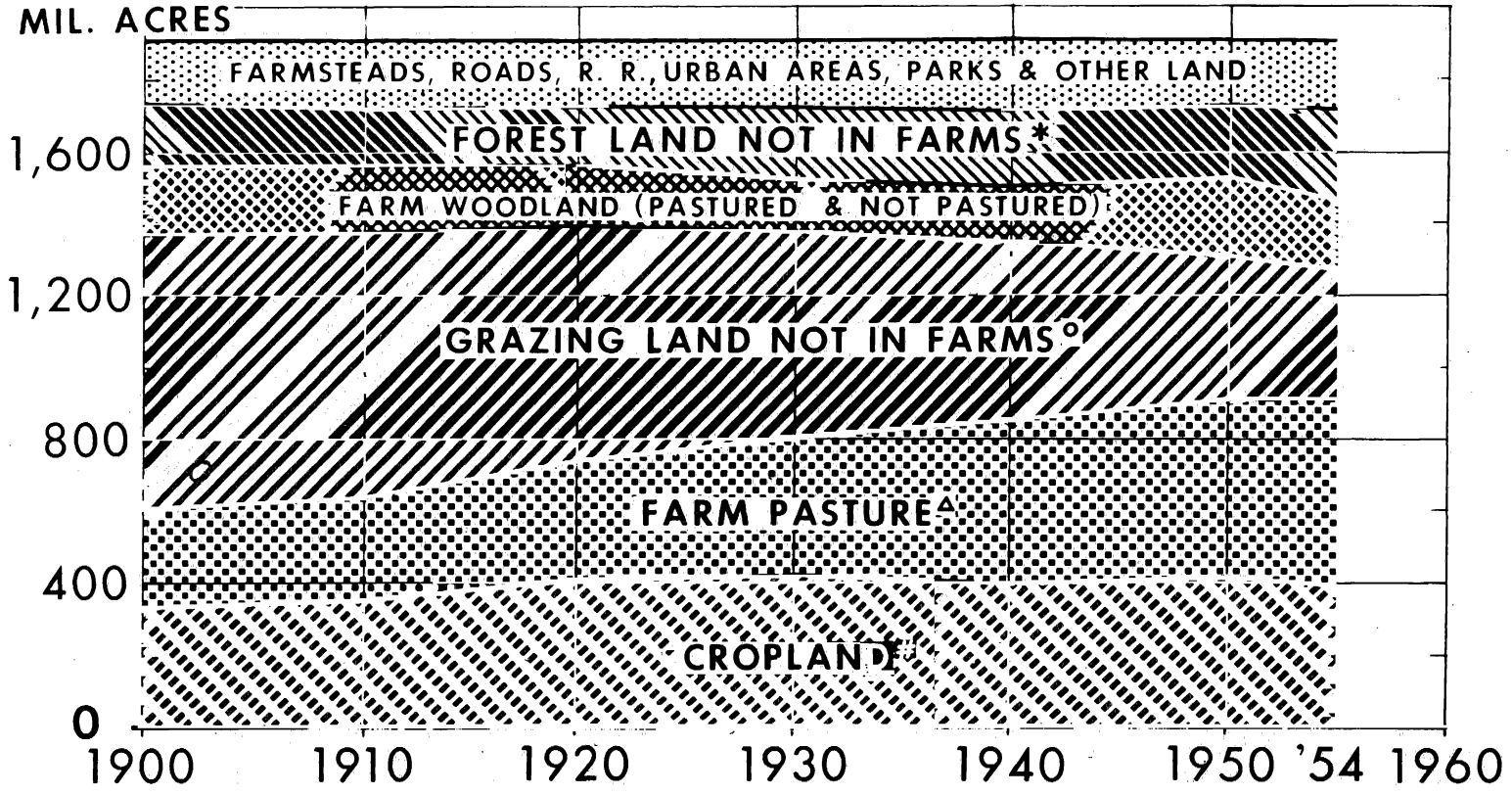
Shifts in Agricultural Uses

The notable shifts in the use of land since 1910 have been partly counterbalanced by regional changes. For example, acreages of cropland and improved pasture have increased generally in the West and the lower Mississippi Valley, but in many parts of the Northeast, Southeast, and Southwest, an increase in the acreage of improved pasture has been accompanied by a decrease in the acreage of cropland.

Large transfers among uses have taken place. From 1910 to 1930, the acreage of cropland increased by more than 66 million acres but acreages of pasture and rangeland decreased by about 79 million acres (fig. 5 and tables 11 and 12). Since 1930, the changes in total acreages of cropland and pasture have not been so great. Acreages of forest and woodland have increased in some areas of the South and East. Much land has been cut over and cleared, but in the East large acreages of crop and pastureland also have reverted to forest.

In 1954, the combined acreage used for crops, pasture, and range was 55 million acres less than in 1910 but the proportions in these uses have not changed greatly. In 1910, less than 24 percent was cropland; in 1954, cropland made up 28 percent of the total acreage used for crops, pasture, and range. Acreages of nonfarm grassland and forest land grazed have declined since 1910.

THE TREND IN LAND UTILIZATION



CONTINENTAL UNITED STATES EXCLUSIVE OF ALASKA.

* EXCLUDES FORESTED AREAS RESERVED FOR PARKS & RELATED USES & ARID WOODLAND, BRUSHLAND, & FOREST LAND USED FOR GRAZING.

† 121 MILLION ACRES WERE REPORTED PASTURED IN 1954.

° INCLUDES GRASSLAND, ARID WOODLAND, BRUSH LAND, & FOREST LAND GRAZED.

△ OPEN PASTURE IN FARMS, INCLUDING CROPLAND USED ONLY FOR PASTURE & OTHER PLOWABLE PASTURE.

\# INCLUDES SOIL IMPROVEMENT CROPS, SUMMER FALLOW, & LAND SEEDED TO CROPS FOR HARVEST THE SUCCEEDING YEAR. CROPLAND ACREAGES ARE FOR THE YEAR PRECEDING THE DATE OF THE CENSUS EXCEPT FOR 1954.

U. S. DEPARTMENT OF AGRICULTURE NEG. 56(11)-2242 AGRICULTURAL RESEARCH SERVICE

Figure 5

Table 11.- Land utilization in continental United States, census years, 1850-1900

Major land uses 1/	1850	1860	1870	1880	1890	1900
	Mil. acres	Mil. acres	Mil. acres	Mil. acres	Mil. acres	Mil. acres
Land in farms:						
Cropland 2/	113	163	189	188	248	319
Farm pasture	---	---	---	122	144	276
Farm woodland	181	244	219	190	190	191
Other land in farms	---	---	---	36	41	53
Total	294	407	408	536	623	839
Land not in farms:						
Grazing land 3/	4/	4/	4/	883	818	625
Forest land 5/	4/	4/	4/	368	344	318
Other nonfarm land 6/	5/	5/	5/	116	118	121
Total	1,590	1,496	1,495	1,367	1,280	1,064
Grand total 7/	1,884	1,903	1,903	1,903	1,903	1,903

1/ Acreages of total farmland and total nonfarm land are for the calendar year indicated. Acreages of cropland and pastureland usually relate to the preceding year.

2/ Land used chiefly for crops, including cropland harvested, crop failure, fallow, and idle cropland for 1880, 1890, and 1900; but for 1850, 1860, and 1870, it is improved land in farms.

3/ Grazing land not in farms consists of land used chiefly for grazing and includes open or nonforested grazing land, idle grassland, arid woodland (pinon-juniper, chaparral) and shrub and brush grazing land in all years.

4/ Not available.

5/ Forest land outside farms used chiefly for commercial timber; excludes forested areas included in parks, wildlife refuges, military areas, and recreation sites, and arid woodland and brushland used chiefly for grazing. About half of the forest and woodland in the United States is grazed by livestock. Nonfarm grazing land includes much of the arid woodland and other noncommercial forest land. Commercial forest land grazed is included in the acreage of forest land.

6/ Other land outside farms includes urban, industrial, and residential areas outside farms; parks and wildlife refuges; military lands; roads; railroads; and ungrazed desert, rock, swamp, and other unused and waste land.

7/ Remeasurement of the land area of the United States in connection with the 1950 census indicated an approximate total land area of 1,904 million acres. Total areas previously were reported as 1,905 million acres in 1940 and 1945; 1,903 million acres 1860 to 1935; and 1,884 million acres in 1850.

Compiled from census reports, publications and records of the former Bureau of Agricultural Economics and public land administering and conservation agencies. See U. S. Bureau of the Census, Historical Statistics of the United States, 1789-1945; U. S. Dept. Agr., Agricultural Statistics 1954; and U. S. Dept. Agr. Tech. Bul. 1082.

Table 12.- Land utilization in continental United States, census years, 1910-54

Major land uses 1/	1910	1920	1925	1930	1935	1940	1945	1950	1954
	Mil. acres	Mil. acres	Mil. acres	Mil. acres	Mil. acres	Mil. acres	Mil. acres	Mil. acres	Mil. acres
Land in farms:									
Cropland used for crops 2/	324	374	365	379	375	363	379	387	380
Cropland idle or in cover crops	23	28	26	34	41	36	24	22	19
Grassland pasture 3/	284	328	331	379	410	461	529	485	526
Forest and woodland:									
Pastured	98	77	77	85	108	100	95	135	121
Not pastured	93	91	67	65	77	57	71	85	76
Total	191	168	144	150	185	157	166	220	197
Farmsteads, roads, and other land	57	58	58	45	44	44	44	45	36
Total	879	956	924	987	1,055	1,061	1,142	1,159	1,158
Land not in farms:									
Grazing land 4/	739	661	646	578	533	504	428	400	353
Forest land not used for grazing 5/	162	160	203	208	184	203	186	201	238
Other land outside farms 6/	123	126	130	130	131	137	149	144	155
Total	1,024	947	979	916	848	844	763	745	746
Grand total 7/	1,903	1,903	1,903	1,903	1,903	1,905	1,905	1,904	1,904

1/ Total acreages of farmland and nonfarm land are for the calendar year indicated. Except in 1954, acreages of cropland and pastureland usually relate to the preceding year.

2/ Cropland used for crops includes cropland harvested, crop failure, and cultivated summer fallow. To find land available for crops in recent years add cropland used for crops, cropland idle or in cover crops, and cropland used only for pasture. In 1949, cropland used only for pasture was 69 million acres. In 1954, it amounted to 66 million acres.

3/ Grassland pasture consists of all open or nonforested pasture in farms, including cropland used only for pasture in 1945-54, and plowable pasture in earlier years.

4/ Grazing land not in farms consists of land used chiefly for grazing and includes open or nonforested grazing land, idle grassland in first decades, forest and arid woodland, and shrub and brush grazing land in all years.

5/ Forest land outside farms not used for grazing excludes forested areas in parks, wildlife refuges, military areas, recreation sites, and arid woodland, brushland, and forest land used for grazing.

6/ Other land outside farms includes urban, industrial, and residential areas outside farms; parks and wildlife refuges; military lands; roads; railroads; ungrazed desert, rock, swamp, and other unused and waste land.

7/ Remeasurement of the land area of the United States in connection with the 1950 census indicated an approximate total land area of 1,904 million acres. Total areas previously were reported as 1,905 million acres in 1940 and 1945; 1,903 million acres 1860 to 1935; and 1,884 million acres in 1850.

Compiled from census reports, publications, and records of the former Bureau of Agricultural Economics and public land administering and conservation agencies. For specific sources see table 11.

Changes in use of land 1930 to 1954.- The 25 years from 1930 to 1955 saw many changes in use of land for the country as a whole, as well as in the different major regions. First, the total acreage of cropland excluding cropland used only for pasture declined from 1930 to 1940 by about 14 million acres as a result of crop adjustments and shifts of poor land to less intensive uses. With greater demand during World War II and subsequent years, however, the acreage of cropland expanded. From 1940 to 1949, the total acreage of cropland, excluding cropland used only for pasture, increased by 10 million acres. It rose from 399 to 409 million acres, an increase of approximately 1 million acres per year (table 13 and appendix tables 34 and 35).

Since 1953, the trend has been downward because of the crop-allotment program and increased emphasis on the shift of cropland to pasture. From 1950 to 1954, the total acreage of cropland (exclusive of cropland used only for pasture) dropped back to 399 million acres, the same acreage as in the postwar year of 1939. This decrease in cropland of 10 million acres for the country as a whole represented conversion to other uses and reversion to an idle nonfarm status where it was no longer included in the agricultural census and other estimates of cropland. Therefore, although the changes in cropland acreages represent mainly the adjustment to improved systems of farming with higher yields and to acreage-control programs designed to bring production into line with market demand, they also represent to some extent, the changes that have been made in methods of classifying and reporting land.

The acreage of grassland or nonforested pasture and grazing land, including both farm and nonfarm grassland pasture, has remained fairly stable since 1930. In the latter year, there were 708 million acres. In 1954, the acreage was 699 million (table 13). Important shifts, however, have occurred by "plow up" for cropland in certain regions and by seeding of cropland to pasture in others, also by reversion of pasture to brush and trees in some areas and by clearing of brush, seeding, and other forms of improvement in other areas. For example, in the Southern States, acreages of grassland pasture increased from 137 million acres in 1930 to 164 million acres in 1954. In the Northern States, the acreage of grassland pasture declined by 9 million acres because of an increase in acreages of cropland in the North Central States and shifts to other uses in the Northeastern States. The Western States also showed a decrease in acreage of grassland pasture from 1930 to 1940 because of the plow up for cropland and the irrigation for improvement of land for cropland. Part of the decline also may be attributed to growth of brush on areas formerly classified as open or nonforested grassland.

Available information on acreages of woodland and forested pasture and grazing land indicates that estimates of land used, or usable, for grazing have fluctuated more than have estimates of grassland pasture. From 1930 to 1945, an increase of about 10 million acres was shown. Since that time, a decrease of about 45 million acres has occurred. In 1930, an estimated 334 million acres of woodland and forest were used for grazing; in

1945, the estimate was 345 million and in 1954 it was about 300 million. Corresponding regional shifts have occurred also. Considerably less woodland grazing was reported in 1954 in some of the Northern and Southern States than in former years.

In addition to the changes in grassland and forested pasture and grazing land as a whole, there have been significant changes in reporting acreages in farms or not in farms. Grassland pasture in farms increased from 1930 to 1954 by about 147 million acres and woodland pasture in farms increased by 36 million acres. However, land not in farms that was available for grazing declined by about 225 million acres. Thus, there was a net decrease of 42 million acres in pasture and grazing land as additional lands were added to farms or used for crops and other purposes. Part of this pastureland was developed for cropland, part was used for urban and other special uses, part reverted to woodland, and a considerable part represented a decline in the acreage of woodland reported as used for grazing.

Table 13.- Cropland used chiefly for crops; and all grassland, woodland, and forest land used for pasture and grazing, by major divisions, specified years, 1929-54

Major division	Cropland used chiefly for crops 1/			
	1929	1944	1949	1954
	Mil. acres	Mil. acres	Mil. acres	Mil. acres
Northern 2/	237	237	238	238
Southern	126	115	113	102
Western	50	51	58	59
Total cropland used chiefly for crops	413	403	409	399

- Continued

Table 13.- Cropland used chiefly for crops; and all grassland, woodland, and forest land used for pasture and grazing, by major divisions, specified years, 1929-54 - continued

Major division	Grassland pasture and grazing land 3/			
	1930	1945	1950	1954
	Mil. acres	Mil. acres	Mil. acres	Mil. acres
Northern	145	151	136	136
Southern	137	155	146	164
Western	426	401	418	399
Total grassland pasture and grazing land	708	707	700	699

	Woodland and forest land grazed 4/			
	1930	1945	1950	1954
Northern	42	44	45	38
Southern	147	145	141	126
Western	145	156	134	137
Total woodland and forest grazed	334	345	320	301
Grand total, all pasture and grazing land 5/	1,042	1,052	1,020	1,000

1/ Cropland used chiefly for crops includes cropland harvested, crop failure, cultivated summer fallow, soil-improvement crops, and cropland temporarily idle. Plowable pasture and cropland used only for pasture are not included.

2/ Includes Maryland, Delaware, and District of Columbia.

3/ Grassland pasture and grazing land includes plowable pasture, cropland used only for pasture, open permanent pasture in farms (not cropland and not woodland), and grassland grazing land (nonforested grazing land) not in farms.

4/ Woodland and forested pasture and grazing land includes woodland pastured in farms and woodland and forest grazed or classified as usable for grazing not in farms.

5/ Total pasture and grazing land includes both grassland pasture and grazing land and woodland and forested land used for grazing.

Changes in Acreage of Cropland

Cropland used for crops.- For the country as a whole, the acreage of cropland used for crops increased for each 5-year period between 1910 and 1935. From 1935 to 1950, it averaged about 7 million acres less than the first peak of 381 million acres for the 1930-34 period. From 1950 to 1954, it totaled 380 million acres (table 14).

Marked regional differences in cropland trends have existed during the last half century. In the Northern States, cropland used for crops averaged more acres from 1950 to 1954 than in any previous 5-year period since 1909. Within this region, different trends exist. In the Northeast, a persistent decline - from 23 to 15 million acres - has been associated with expansion of urban, residential, recreational, and industrial uses and continued reversion of cropland to brush and forest. An increase of 20 million acres in the North Central States between 1910 and 1930 was followed by some decline in the 1930's, a subsequent increase in the 1940's, and a peak of 210 million acres for 1950-54. Much of this increase is concentrated in the Great Plains, where wheat is the major crop. In the South, the acreage of cropland used for crops reached a peak in the 1930's, but since that time a sharp decline has accompanied the lessened emphasis on production of cotton. The Western States have had a nearly uninterrupted increase, with accelerated gains during or following World Wars I and II. Large gains in production have followed the increase in acreage of irrigated cropland in the Western States.

Principal crops harvested.- Principal crops harvested averaged 339 million acres from 1950 to 1954. The 1955 acreage was only 333 million acres. An increase of 4 million acres in crop failure over the 1950-54 average, coupled with the effect of the crop-allotment program, largely explains the additional decline in acreage in 1955 from the average for the previous 5 years.

Among the regions, the greatest change in acreage occurred in the Southern Plains where a decrease of more than 5 million acres occurred between the 1945-49 and 1950-54 periods and where an additional decline of 2 million acres took place in 1955. Each of the other three Southern regions had decreases, as did the Northeastern and Northern Plains regions. Increases in acreages of cropland occurred in the Corn Belt, Lake States, Mountain, and Pacific regions (table 15).

Changes in Acreage of Pasture and Grazing Land

Substantial shifts in pasture and grazing land occurred between 1949 and 1954. Especially noteworthy was an increase in farm pasture and a decrease in grazing land not in farms. The changes consisted chiefly of a shift of cropland to pasture in farms and a decrease in woodland pasture both within and outside farms. A larger acreage of wild land is now reported in the agricultural census as pasture in farms than in former

Table 14.- Cropland used for crops, by major divisions, United States, averages 1910-54 1/

Major division	Average								
	1910-14	1915-19	1920-24	1925-29	1930-34	1935-39	1940-44	1945-49	1950-54
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Northern	207,870	217,429	219,767	218,820	219,065	214,013	215,611	222,414	224,758
Southern 2/	99,488	105,802	106,698	111,259	116,017	114,346	109,889	102,558	98,430
Western	29,776	36,155	40,067	43,643	45,452	45,019	46,014	50,622	56,738
United States	337,134	359,386	366,532	373,722	380,534	373,378	371,514	375,594	379,926

1/ Includes cropland harvested, crop failure, and cropland fallow.
2/ Includes Delaware, Maryland, and District of Columbia. Estimates by the former Bureau of Agricultural Economics and the Production Economics Research Branch, Agricultural Research Service, based on acreages reported by the Census of Agriculture for census years 1910-1950, and annual estimates of the former Bureau of Agricultural Economics and the Agricultural Marketing Service for principal crops planted and harvested, and supplemented by records and reports of various State and Federal agencies.

Table 15.- Acreage of principal crops harvested, by major divisions and regions, United States, averages 1930-54, annual 1955

Major division and region	Average				1955 3/
	1930-39 1/	1940-44 1/	1945-49 1/	1950-54 2/	
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Northern:					
Northeastern	19,325	18,896	18,224	17,234	16,964
Lake	36,023	36,720	37,585	37,462	37,757
Corn Belt	72,723	73,311	76,344	77,799	79,280
Northern Plains	69,474	74,839	80,863	80,311	78,467
Total	197,545	203,766	213,016	212,806	212,468
Southern:					
Appalachian	22,747	23,293	22,026	20,776	20,014
Southeastern	23,624	21,642	18,179	16,504	15,543
Mississippi Delta	17,369	17,359	15,114	13,912	13,335
Southern Plains	41,481	40,610	40,606	35,367	33,131
Total	105,221	102,904	95,925	86,559	82,023
Western:					
Mountain	19,581	22,163	24,288	25,105	24,567
Pacific	11,323	12,608	13,708	14,324	14,270
Total	30,904	34,771	37,996	39,429	38,837
United States	333,670	341,441	346,937	338,794	333,328

1/ U. S. Dept. of Agr., Agricultural Statistics, 1936, 1942, and 1952. For some years, especially 1936 to 1939, 44 and 45 crops, respectively, are included. If the acreages for the additional 7 to 8 crops were included, the total acreage for the 52 crops for these years would be approximately 1 million acres greater.

2/ Revised acreages, Bureau of Agricultural Economics and Agricultural Marketing Service, Crop Production, Annual Summary, 1951-54.

3/ Preliminary, Agricultural Marketing Service, Crop Production, Annual Summary, 1955.

years, thus increasing the acreage of grazing land in farms and decreasing that of outside farms.

The acreage in permanent grassland pasture and range, exclusive of cropland used only for pasture, remained about the same, at 633 million acres in 1954 and 631 million in 1949. Grassland range not in farms showed a decrease of 43 million acres. Permanent grassland pasture in farms, however, increased in this period by 44 million acres rising from 416 million to 460 million acres. This change occurred because of pasture improvement and the reporting of larger acreages of pasture in farms formerly considered outside farms.

Most of the increase from 1939 to 1954 in the acreage of improved pasture occurred in the South and West. The acreage of improved pasture in the South rose from an estimated 57 million acres in 1939 to 77 million in 1954, an increase of 20 million acres. In the West, the acreage of improved pasture was estimated at 39 million acres in 1939 and 58 million in 1954, an increase of 19 million acres. Although considerable improvement in pastures took place in the North from 1939 to 1954, the acreage rose by only 1 million acres, chiefly because of the large acreage of cultivated crops and the plow up of pastureland for cropping. The total acreage of improved pasture for continental United States was estimated at 175 million acres in 1939 and 215 million acres in 1954, an increase of about 23 percent (table 16).

Table 16.- Estimated acreage of improved pasture by major divisions, United States, 1939, 1949, and 1954

Major division	1939	1949	1954
	Mil. acres	Mil. acres	Mil. acres
Northern	79	80	80
Southern	57	66	77
Western	39	54	58
United States	175	200	215

Estimates based on various sources, including the U. S. Censuses of Agriculture; the National Resources Board Reports 1934-40; the U. S. Dept. of Agriculture Post War Planning Committee Reports 1942-43; the U. S. Dept. of Agriculture-Land Grant College Production Adjustment Reports 1944-47; the Land Grant College-U. S. Dept. of Agriculture Productive Capacity Survey Reports 1951-52; special studies made for the U. S. Dept. of Agriculture Yearbook (Grass) 1948; U. S. Agricultural Conservation Program Service Survey Reports; and other Federal and State reports and releases.

The acreage of cropland used only for pasture, as reported by the census of agriculture, declined from 69 million acres in 1949 to 66 million in 1954. This change, however, does not reflect the large acreage of cropland seeded to pasture in the last few years. Much of the newly seeded cropland evidently was classified by farmers in reporting in the agricultural census as open permanent pasture (other pasture not cropland and not woodland).

Woodland and forest land grazed shifted downward significantly between 1949 and 1954, declining from 319 million acres to 301 million, or by 18 million acres. This change probably is the result of more accurate estimates of woodland actually grazed or usable for grazing; of growth of trees on cutover lands, and old fields and pastures; as well as of greater compliance with stock laws and better timberland management through control of grazing in areas where it might be harmful to trees.

Changes in acreages of pastureland in the northern and southern regions, 1930-54.- From 1930 to 1954, pasture and grazing land increased by about 17 million acres in the southern pasture region that lies east of the western range. The acreage reported as pasture and grazing land, however, declined generally in the Northern States east of the western range, decreasing by 13 million acres as a whole from 1930 to 1954. Thus, in the East there was a total net increase of 4 million acres. In the South, there were substantial increases in the Southeastern States and the Southern Plains (table 17). Among the chief factors that influenced the decline in pasture and grazing acreages in certain regions were:

(1) The shift of some good soil areas in the Corn Belt and other Northern States formerly in pasture to the cropland rotation.

(2) An increase in acreage used for urban, industrial, and other special uses in and around several rapidly growing industrial centers.

(3) The natural reforestation of considerable acreages formerly pastured or classified as pasture in the Northeastern, Lake, and Appalachian States.

(4) Restriction of grazing in some forest areas in the South because grazing was considered harmful to growth of trees, or to protect watershed lands.

Changes in area of the western range 1930-54.- From the days of the first settlers, the grasslands of the West have supported domestic livestock. These lands were one of the first resources of the West to be used. In many instances, they were overused. Because of the long and heavy use, the livestock industry and the general public have been greatly interested in the extent and productive capacity of the range area.

In 1936, the U. S. Department of Agriculture made a comprehensive analysis of the range situation in a report entitled "The Western Range."

Table 17.- Pasture and grazing land in the Northern and Southern pasture regions, 1930 and 1954 1/

Major division and region	Total pasture and grazing land 2/		
	1930	1954	Change
	1,000 acres	1,000 acres	1,000 acres
Northern:			
Northeastern	24,665	16,551	-8,114
Corn Belt	51,705	49,053	-2,652
Lake States	29,963	23,160	-6,803
Northern Plains 3/	24 586	28,972	4,386
Total	130,919	117,736	-13,183
Southern:			
Appalachian	50,136	37,640	-12,496
Southeastern	49,513	54,370	4,857
Mississippi Delta	50,372	49,690	-682
Southern Plains 4/	31,204	56,915	25,711
Total	181 225	198,615	17,390
Northern and Southern divisions	312,144	316,351	4,207

1/ The Northern and Southern pasture regions comprise the territory east of an irregular line following county boundaries (between the 98th and 100th meridians of longitude) and extending south through the Northern and Southern Plains States, including North Dakota, South Dakota, Nebraska, Kansas, Oklahoma and Texas. The Western range area is the territory west of this line.

2/ Total pasture and grazing land includes the following: (a) In 1930: plowable pasture, open permanent pasture and woodland pasture in farms and all grazing land not in farms; (b) in 1954: cropland used only for pasture, open permanent pasture (other pasture not cropland and not woodland), woodland pasture in farms, and all grazing land not in farms.

3/ The eastern portion of the Northern Plains States. See footnote 1.

4/ The eastern portion of the Southern Plains States. See footnote 1.

The history of range use, areas in different cover types, classes of ownership, and capabilities of the land were exhaustively treated according to the data available from 1930 to 1935. Use of the range has continued and will remain important because of the increased demand for meat and other livestock products. This fact makes it desirable to bring together comparable statistics on the extent of the range area after the lapse of approximately a quarter century.

About 683 million acres now make up the range area as compared with 728 million acres reported for 1930 (table 18 and also appendix tables 41 to 43). This represents a decrease of 45 million acres, of which 20 million were in private ownership; 18.4 million were public land; and 6.4 million were Indian land. 10/ This change in acreage was made up in large part of the following: (1) Development and plow up of certain range areas for cultivated crops; (2) absorption of rangeland for urban and industrial uses and for airfields and national defense purposes; (3) restocking and closing to grazing of certain forest areas formerly grazed; (4) closing of depleted areas and spots of poisonous plants to grazing; and possibly (5) refinement in statistics of arid areas and forest lands actually used for grazing. Irrigation development, homesteading, reservation of scenic areas for national parks, and the setting apart of wilderness and wildlife refuges also were factors in the changes in land ownership and use in the region.

About 355 million acres are now in private ownership; 42 million are in Indian ownership; and 286 million are publicly owned. Of the latter, 244 million acres are in Federal, and 42 million in State ownership. In 1930, 376 million acres were privately owned; 48 million were Indian owned; 239 million acres were Federally owned; and 65 million acres were State owned.

Examination of the statistics on Federal grazing land in 1930 and 1954 indicates the following reasons for the 5 million-acre increase in Federal land reported grazed or usable for grazing: (1) Purchase of the land-utilization project lands, (2) development of the grazing-district program,

10/ U. S. Department of Agriculture, Report on the Western Range, Senate Doc. 199, 74th Cong., 2d Sess., 620 pp., illus., 1936. The Western Range area of 728 million acres reported included plowable and irrigated pasture, open permanent pasture or nonforested pasture and woodland pasture in farms and ranches, from the 1930 Census of Agriculture, plus all grassland, woodland, and forest land not in farms or ranches classified as usable and open for grazing (except for certain national park areas); as of the various dates such data were available from 1930 to 1935. In order to make the 1954 data comparable, the following items were included: Cropland used only for pasture and irrigated pasture, as well as open permanent pasture (pasture not cropland and not woodland); and woodland pasture in farms and ranches, plus all grassland, woodland, and forest land usable for grazing not in farms and ranches classed as usable and open for grazing. Because of the dates when data were assembled, the comparisons in text and tables have been labeled 1930 and 1954.

Table 18.- All pasture and range in the Western Range region, 1930 and 1954 1/

Grassland, woodland, and forest pasture and range

Cover classes	1930 2/	1954 3/	Change 1930-1954
	1 000 acres	1 000 acres	1 000 acres
Grassland or nonforest pasture and range 4/	574,014	536,534	-37,480
Woodland and forest range 5/	154 182	146,855	-7,327
Total pasture and range 6/	728,196	683,389	-44,807

Ownership of pasture and range land

Ownership classes	1930 2/	1954 3/	Change 1930-1954
	1 000 acres	1 000 acres	1 000 acres
Public land	304,259	285,847	-18,412
Indian land	48,391	42,035	-6,356
Private land	375,546	355,507	-20,039
Total	728,196	683,389	-44,807

1/ The Western Range region is defined as the 11 Western States plus the counties of the Great Plains States west of an irregular line near the 100th meridian.

2/ From basic tables prepared for the Western Range Report, U. S. Senate Doc. 199. A substantial part of the acreage data used were as of 1930 and the rest were from various dates 1930 to 1935. For the western range area see map, page 2 (fig. 1), and tables 1 to 5 inclusive of the Western Range Report.

3/ Compiled from 1954 Census of Agriculture reports, and records and reports of Federal and State land management, conservation, and other agencies. Includes range areas closed to grazing for conservation and restoration purposes for both periods, 1930 and 1954.

4/ Grassland or nonforested pasture and range includes plowable pasture, irrigated pasture, cropland used only for pasture and open permanent pasture (pasture not cropland and not woodland), in farms; and nonforested grassland or open grazing land not in farms.

5/ Forest and woodland pasture and range includes farm woodland pastured and nonfarm woodland and forest land usable for the grazing of domestic livestock.

6/ For more details on acreages by cover and ownership classes, refer to tables 46 to 50.

and possibly (3) an increase stemming from more complete reporting of all Federal acreage open to grazing or usable for grazing. 11/ About the same acreage of Federal land was closed to grazing in both years. The total acreage of public land grazed (that is, Federal, State, and county land combined) declined in the same period. The amount of State land decreased because of sales and transfers to other uses, such as those for forest and institutional purposes. Private land and Indian land grazed also showed decreases in acreages because of development for farming and reduction in acreages of forest areas grazed.

Seeding of pasture.- Financial aid was given by the Agricultural Conservation Program in the seeding and reseeding of 6.1 million acres of pasture in 1952, and 4.6 million acres in 1953. The Southern States from Virginia to Texas had 4.7 million acres of the total pasture seeded and reseeded in 1952 and 3.7 million acres in 1953. Only part of the acreage seeded was cropland, as a considerable part of it was reseeding or improvement of existing pasture areas and part represented newly cleared land in forested and brushland areas.

Artificial seeding and reseeding of pasture and rangeland averaged 5.8 million acres per year from 1951 to 1953 (table 19). An average of nearly 400,000 farmers participated in this program for these years. Plowing up of sod and its incorporation in the cropland rotation has added to the cropland area, but it has made necessary additional pasture seedings to maintain pasture production.

Review of current information on pasture seeding indicates that possibly as much as 1 1/2 million acres of cropland were seeded to pasture per year in 1953 and 1954. Statistics are not available as to the exact acreages seeded to pasture, but data on production and disappearance of pasture seed indicate that acreage seeded changed very little from 1953 to 1954.

Severe droughts in 1953 and 1954 in the South and the Great Plains prevented or discouraged pasture seeding. In the North and Midwest, a plentiful supply of feed grain, hay, and pasture feed were factors in making it unnecessary to increase pasture seeding. The acreages of hay reported harvested in 1953 and 1954 were affected by the same factors. Probably they are indicative of the pasture situation with respect to seeding during the last 2 years.

An estimated 80 million acres of pasture were seeded or reseeded on farms under the agricultural conservation program in 20 years from 1936 to 1955, inclusive (fig. 6). Operators of many small, part-time and

11/ Increases in Federal land used for grazing from 1930 to 1954 are indicated in the public domain acreages of Arizona, California, Montana, and Oregon, and on the land-utilization project lands acquired in Montana, North Dakota, and South Dakota.

Table 19.- Artificial seeding or reseeding of pasture and rangeland under the Agricultural Conservation Program, by major divisions, United States, 3-year averages 1936-53

Period	Major division			Total
	Northern	Southern	Western	
	1,000 acres	1,000 acres	1,000 acres	1,000 acres
1936-38	280	611	118	1,009
1939-41	1,800	641	854	3,295
1942-44	1,412	1,604	390	3,406
1945-47	835	3,070	705	4,610
1948-50	533	3,825	500	4,858
1951-53	633	4,642	561	5,836
1936-53	916	2,399	521	3,836
Total 1936-53	16,479	43,179	9,386	69,044

U. S. Dept. of Agr., Agricultural Program Conservation Summaries 1936-49, 1947-51, 1952, and 1953.

SEEDING AND RESEEDING OF PASTURE*

3-Year Averages, United States

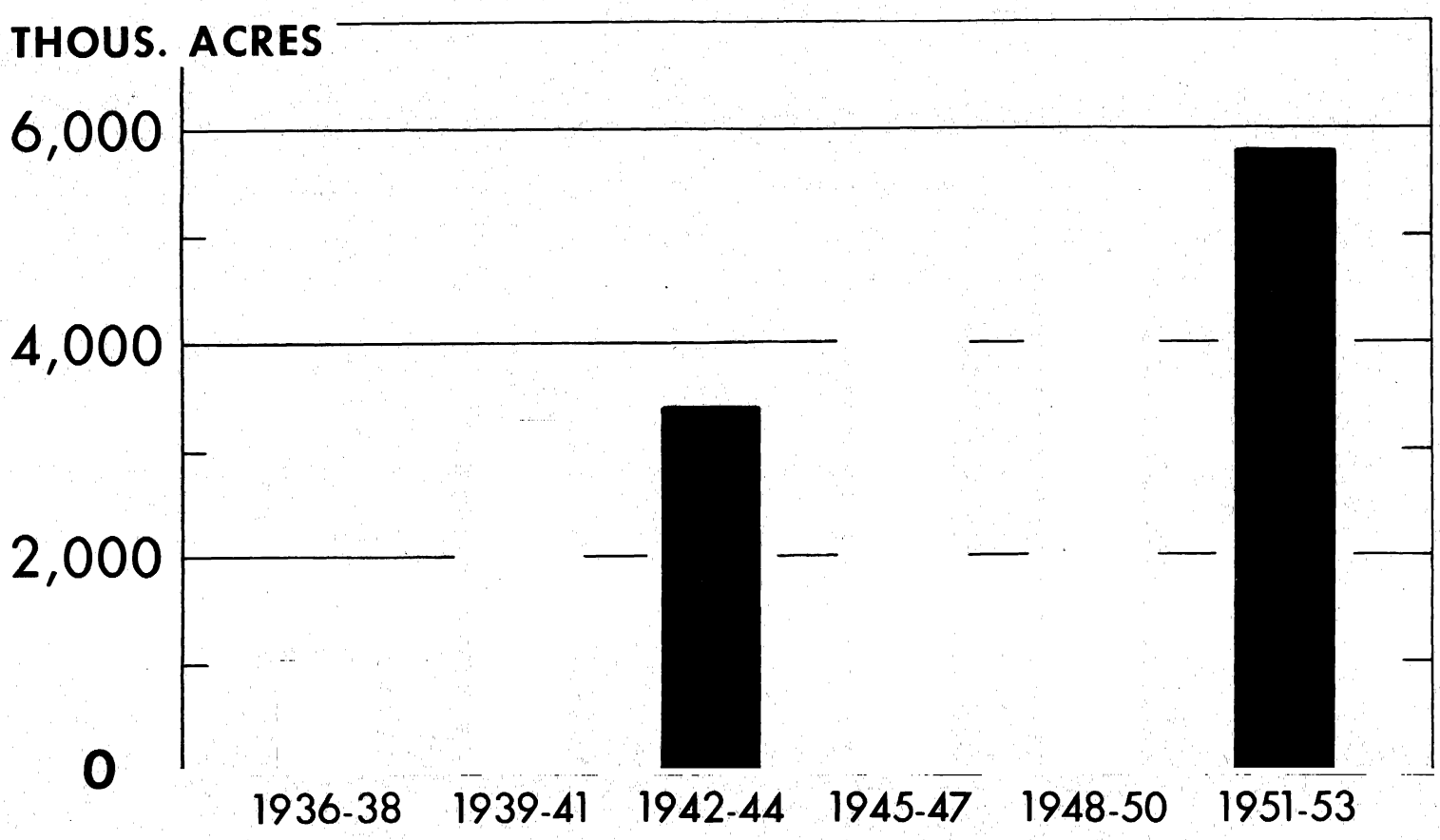


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Figure 6

specialized farms did not take part in the program and there is reason to believe that considerable acreages of improved pasture seeded or reseeded on these farms are not included in the foregoing totals. As much as 20 million acres is estimated to have been seeded outside the program, thus making a total of 100 million acres seeded and otherwise improved in the last 2 decades.

Trends in Drainage, Clearing, and Irrigation

Drainage, flood control, clearing, irrigation, and pasture development have all been important in adding to acreages of cropland and improved pasture and to their productivity per acre. Irrigated land increased by 8 million acres from 1940 to 1950 or 800,000 acres per year. The trend toward irrigation continued upward from 1950 to 1954 with a gain of 3.8 million acres in 4 years, an increase of 950,000 acres per year (table 20). However, close examination of figures by States show large increases in irrigated acreage in the Pacific States, and in Texas and and several Eastern States. Notable increases occurred in the big public projects such as the Columbia Basin of Washington and the Central Valley of California. Individual private development by pump irrigation from wells accounted for much of the increase in Texas, although there has been growth in the Lower Rio Grande and other Western Valley areas. Among the Mountain States, Arizona, Idaho, and Montana had significant increases, but an appreciable decline occurred for Colorado, Wyoming, and Nevada, chiefly because of a shortage of water in these States. As in the Pacific States the increases in the Mountain States were significant in the public project areas (fig. 7).

Land in drainage enterprises increased by 15.7 million acres from 1940 to 1950, or more than 1.5 million acres per year (table 21). Many drainage and flood control improvements have been made since 1950, especially in the Mississippi River Delta States. Land cleared from 1950 to 1955 ranged from 750,000 to 900,000 acres per year.

Studies of land development in the Southeastern and Gulf Coastal Plains and the Lower Mississippi Delta show a considerable increase in acreage of new cropland and improved pastureland. 12/ This land development was made possible in part by flood-control and drainage projects undertaken over an extended period by local district groups and Federal agencies. Records of levee building and levee districts in Mississippi, drainage and clearing of land in Arkansas, and drainage of swampland in Louisiana show that local groups and private individuals have made large investments in such developments.

12/ Anderson, James R., Land Use and Development, Southeastern Coastal Plain, U.S. Dept. Agr., Agr. Inf. Bul. 154, 90 pp., illus., 1956; reports of State Productive Capacity Committees, November 1951; and reports and records of the U.S. Agricultural Conservation and Soil Conservation Programs.

Table 20.- Irrigated land in farms, by major divisions and regions, United States, specified years, 1939-54

Major division and region	1939	1944	1949	1954
	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Northern:				
Northeastern	20	43	87	188
Lake	8	8	28	51
Corn Belt	9	8	16	69
Northern Plains	631	804	1,128	1,631
Total	668	863	1,259	1,939
Southern:				
Appalachian	2	2	6	85
Southeastern	127	223	375	490
Mississippi Delta	573	824	1,004	1,698
Southern Plains	899	1,322	3,166	4,815
Total	1,601	2,371	4,551	7,088
Western:				
Mountain	9,913	10,703	11,643	11,208
Pacific	5,801	6,602	8,334	9,317
Total	15,714	17,305	19,977	20,525
United States	17,983	20,539	25,787	29,552

As reported by the Census of Agriculture, 1940-1945, 1950, and 1954.

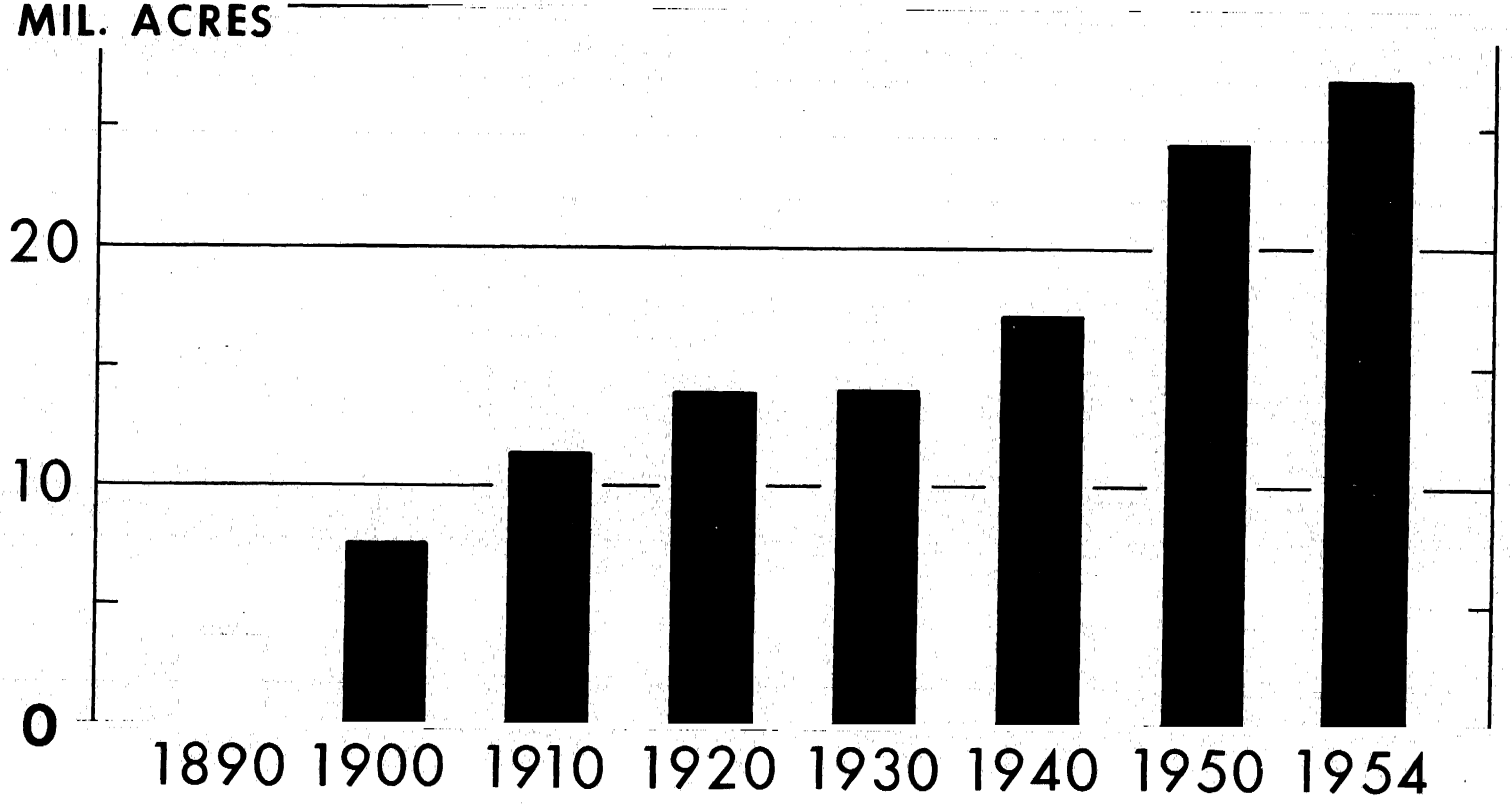
IRRIGATED ACREAGE IN
17 WESTERN STATES
MIL. ACRES
20
10
0
1890 1900 1910 1920 1930 1940 1950 1954
BASED ON DATA FROM CENSUSES OF AGRICULTURE - EXCEPT THAT DATA FOR AREAS IRRIGATED
IN 1910 AND 1920 ARE INTERPOLATED FROM CENSUSES OF IRRIGATION FOR THOSE YEARS
U. S. DEPARTMENT OF AGRICULTURE
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Figure 7

Table 21.- Land in organized drainage enterprises, by major divisions and regions, United States, specified years, 1920-50 1/

Major division and region	1920	1930	1940	1950	Change 1940-50
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Northern:					
Northeastern	---	---	578	744	166
Lake States	19,757	21,548	20,730	21,979	1,249
Corn Belt	28,924	32,700	32,194	35,194	3,000
Northern Plains	2,164	2,929	3,227	3,457	230
Total	50,845	57,177	56,729	61,374	4 645
Southern:					
Appalachian	1,265	1,873	1,908	2,750	842
Southeastern	1,843	6,247	6,016	6,506	490
Mississippi Delta	7,347	11,275	11,703	19,886	8,183
Southern Plains	2,178	3,054	4,416	6,096	1 680
Total	12,633	22,449	24,043	35,238	11 195
Western:					
Mountain	810	1,970	2,773	2,671	-102
Pacific	1,207	2,812	3,422	3 405	-17
Total	2,017	4,782	6,195	6,076	-119
United States	65,495	84,408	86,967	102,688	15,721

1/ Including irrigation enterprises that have their own drainage.

U. S. Bureau of the Census, Census of Agriculture, 1950. Drainage of Agricultural Lands, 1950, vol. 4.

Altogether, it is estimated that from 1945 to 1950 more than a million acres of new land were developed for farming in the Lower Mississippi River Delta. Among the factors assigned by local people as contributing to successful land development in recent years have been (1) incorporation of larger areas in plans for drainage outlets, and improvements in channels and levees; (2) adaptation of power machinery to local needs for drainage and clearing; (3) selection of land suitable for the intended uses; and (4) availability of more technical information on soils, drainage, and improved farm practices adapted to the needs of the region. Another 7 to 8 million acres are scattered in the Coastal Plains and other parts of the Southeast. Although limited data suggest that some of this acreage may be economically suited to development under present conditions, additional research on the costs of and returns from alternative uses for this land is needed in order to determine economic feasibility.

As an indication of the importance of land development and improvement, average acreages of farmland drained, leveled for irrigation, and cleared per year from 1949 to 1953 with the technical assistance of the Soil Conservation Service and the Agricultural Conservation Program Service are cited below. For example, technical assistance was provided for drainage of 1,263,000 acres and financial aid for drainage of 2,490,000 acres (fig. 8). On the average, 356,000 acres were leveled for irrigation with technical aid and 394,000 acres with financial aid. The operators on much of the land for which technical aid was furnished also received financial aid. Accordingly, the acreages reported under the two programs are not mutually exclusive. Less financial assistance has been given for land clearing than for other practices. The acreage cleared from 1949 to 1953 with financial help averaged 363,000 acres. In 1953, 890,000 acres were cleared with technical assistance. Reports for these programs show that somewhat larger acreages were drained and leveled for irrigation from 1945 to 1949 than from 1950 to 1954. Acreages of land cleared, drained, and leveled for irrigation by regions from 1936 to 1953 with financial assistance under the Agricultural Conservation Program are shown in the appendix, table 36.

Technical help in regard to soil, slope and erosion hazards is important in selecting suitable land for clearing, drainage, or irrigation, as well as in the setting up of procedures for doing the work properly.

FARM DRAINAGE IN U. S.*

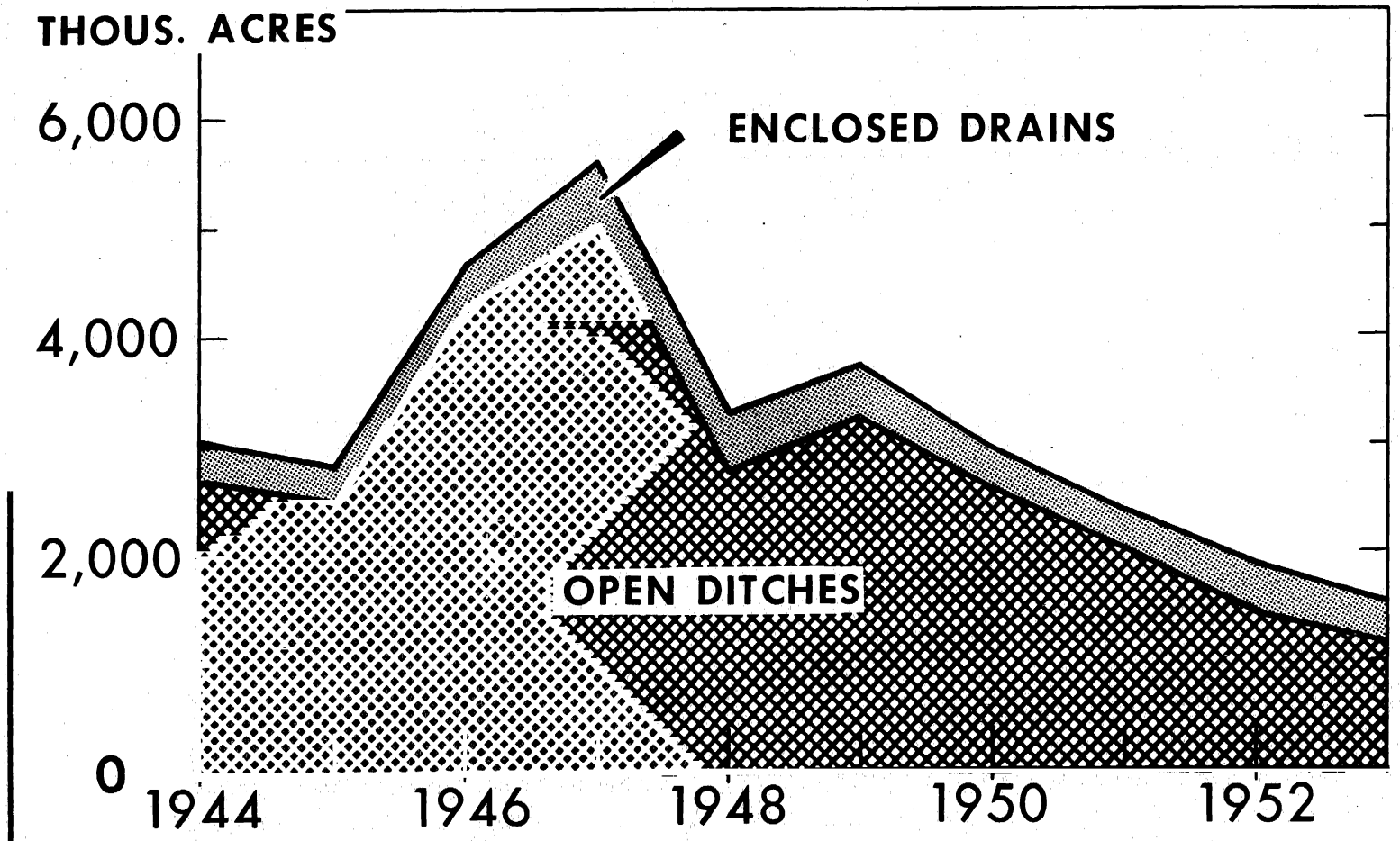

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Figure 8

Additional acreages of land were developed and improved by individuals without technical or financial assistance. 13/

Development of land for cropland and pasture and improvement of present cropland and pasture land, through clearing, drainage, irrigation and in other ways, is an important means of obtaining increased agricultural production. Little information is available on the costs of different types of land development under current prices and by various alternative methods. Neither is there sufficient information on alternative uses for the land that is developed. Comparisons are needed of the relative costs of land development in different areas as well as of the returns in alternative uses, such as cropland, pasture, and forest.

Most land suitable for development and improvement is in established farms. For the most part, current development is designed to fill out and make present farms more efficient by enlarging and improving the layout of fields and pastures. Larger and better shaped fields make it possible to use machinery more effectively. Much of the new cropland developed in recent years has been more productive than the land taken out of cultivation in the soil-conservation and crop-allotment programs, or that which has been left idle and abandoned for field crops. Although the changes in land use are small percentagewise, they indicate an effort to improve layouts and increase production on present farms.

13/ Financial assistance for clearing, drainage, and irrigation practices has varied between States and regions, depending to some extent on their rating in importance by State committees as a means of encouraging conservation farming. In some States, financial assistance was not given for clearing or for drainage and irrigation practices where it was judged that other practices were more suitable to the needs of the area. For example, in many instances, financial aid was given for clearing brush from pastureland, and not for clearing cropland. In most instances, when assistance was granted for clearing cropland, it was restricted to clearing suitable land to permit shift of steep or badly eroded land to grass or trees. Thus, while the acreages improved with financial assistance are indicative of such work they do not represent the total acreages improved.

APPENDIX

Tables

Table 22. - Major uses of land, by regions and States, 1954

State and region	Cropland 1/	Pasture and grazing land nonforested 2/	Forest and woodland 3/	Special uses 4/	Miscellaneous other land 5/	Approximate land area 6/
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Maine	1,274	254	16,901	584	853	19,866
New Hampshire	385	157	4,761	232	236	5,771
Vermont	1,072	744	3,720	155	247	5,938
Massachusetts	561	153	3,270	795	256	5,035
Rhode Island	69	12	430	145	21	677
Connecticut	467	168	1,979	424	97	3,135
New York	7,864	3,222	12,073	4,507	3,018	30,684
New Jersey	1,096	94	1,941	1,111	572	4,814
Pennsylvania	7,399	1,939	15,108	2,961	1,422	28,829
Delaware	519	26	454	118	149	1,266
Maryland	2,124	417	2 900	7/ 602	320	7/ 6,363
Northeast	22,830	7,186	63,537	11,634	7,191	112,378
Ohio	13,054	3,009	5,396	2,214	2,567	26,240
Indiana	13,877	1,314	4,045	1,678	2,257	23,171
Illinois	24,050	2,083	3,947	2,738	2,980	35,798
Iowa	26,170	3,799	2,505	2,125	1,270	35,869
Missouri	18,117	6,625	15,140	2,096	2,327	44,305
Corn Belt	95,268	16,830	31,033	10,851	11,401	165,383
Michigan	10,836	1,045	19,045	2,761	2,807	36,494
Wisconsin	12,766	2,520	16,497	2,239	989	35,011
Minnesota	22,295	2,722	18,909	3,931	3,349	51 206
Lake States	45,897	6,287	54,451	8,931	7,145	122,711
Virginia	4,886	2,771	15,527	1,567	781	25,532
West Virginia	1,835	2,277	9,866	555	878	15,411
North Carolina	7,264	1,534	19,160	2,149	1,315	31,422
Kentucky	10,641	1,759	11,167	1,446	500	25,513
Tennessee	9,096	1,808	12,301	1,883	1,662	26,750
Appalachian	33,722	10,149	68,021	7,600	5,136	124,628
South Carolina	4,891	781	11,894	1,281	548	19,395
Georgia	9,009	1,851	23,567	2,399	503	37,429
Florida	3,443	4,881	21,787	3,234	1,383	34,728
Alabama	7,481	2,454	20,766	1,562	427	32,690
Southeast	24,824	9,967	78,114	8,476	2,861	124,242
Mississippi	7,805	3,482	16,440	1,312	1,200	30,239
Arkansas	8,863	2,298	19,295	1,425	1,831	33,712
Louisiana	5,494	2,721	15,906	1,634	3,149	28,904
Delta States	22,162	8,501	51,641	4,371	6,180	92,855

See footnotes at end of table.

- Continued

Table 22.- Major uses of land, by regions and States, 1954 - Continued

State and region	Cropland 1/	Pasture and grazing land nonforested 2/	Forest and woodland 3/	Special uses 4/	Miscellaneous other land 5/	Approximate land area 6/
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Oklahoma	14,774	16,203	10,289	2,044	870	44,180
Texas	37 346	88,150	32,810	5,487	4,855	168,648
Southern Plains	52,120	104,353	43,099	7,531	5,725	212,828
North Dakota	27,872	13,300	551	2,152	961	44,836
South Dakota	19,692	24,764	2,133	1,846	548	48,983
Nebraska	23,269	22,542	1,080	1,788	385	49,064
Kansas	30,210	17,796	1,664	2,050	829	52,549
Northern Plains	101,043	78,402	5,428	7,836	2,723	195,432
Montana	15,005	54,742	19,803	3,310	502	93,362
Idaho	5,540	25,766	17,410	1,954	2,302	52,972
Wyoming	2,582	48,484	7,720	2,845	773	62,404
Colorado	11,257	33,237	19,523	1,977	516	66,510
New Mexico	2,504	50,178	20,369	2,596	2,120	77,767
Arizona	1,615	44,838	18,412	5,086	2,737	72,688
Utah	2,037	27,577	15,409	3,351	4,327	52,701
Nevada	678	46,070	11,509	5,019	6,989	70,265
Mountain	41,218	330,892	130,155	26,138	20,266	548,669
Washington	7,710	7,628	21,576	3,121	2,708	42,743
Oregon	5,282	25,561	28,931	1,580	288	61,642
California	13 251	26,661	39,398	12,129	8,875	100,314
Pacific	26,243	59,850	89,905	16,830	11,871	204,699
United States	465,327	632,417	615,384	110,198	80,499	1,903,825

1/ Cropland harvested, crop failure, cultivated summer fallow, cropland idle, cropland used for cover or soil-improvement crops, and cropland used only for pasture in 1954. An upward adjustment of about 2 percent in the acreage of cropland harvested reported by the U. S. Census of Agriculture was made to compensate for some of the underenumeration indicated by the postenumeration survey conducted by the U. S. Bureau of the Census.

2/ Nonforested pasture in farms excluding cropland used only for pasture, plus estimates of open or nonforested grazing land not in farms from Federal and State public land-management and conservation agencies.

3/ Woodland and forest areas as reported by the U. S. Forest Service in the preliminary report, Timber Resource Review, 1955, exclusive of reserved woodland and forest areas in parks and certain other special-use areas and some nonstocked areas duplicated in cropland and pasture areas reported by the U. S. Census of Agriculture, 1954.

4/ Estimates of areas in highways, roads, and railroad rights-of-way; airports; farmsteads and farm roads and lanes; urban and town areas; parks; wildlife refuges; national defense areas; and flood-control areas.

5/ Miscellaneous unaccounted-for areas not included among other major uses, including marshes, sand dunes, bare rock areas, and deserts.

6/ As reported by the U. S. Census of Agriculture, 1954.

7/ Includes data for District of Columbia.

Table 23. - Major uses of land in farms, by regions and States, 1954

State and region	Cropland 1/	Pasture 2/	Total woodland not pastured	Other land 3/	Total	
					Acreage 4/	Percentage of land area
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	Percent
Maine	1,274	484	1,712	144	3,614	18.2
New Hampshire	385	345	681	46	1,457	25.2
Vermont	1,072	1,372	804	70	3,318	55.9
Massachusetts	561	280	504	94	1,439	28.6
Rhode Island	69	23	52	11	155	22.9
Connecticut	467	263	343	65	1,138	36.3
New York	7,864	4,284	2,109	814	15,071	49.1
New Jersey	1,096	133	283	153	1,665	34.6
Pennsylvania	7,399	2,693	2,403	667	13,162	45.7
Delaware	519	49	192	54	814	64.3
Maryland	2,124	611	939	223	3,897	61.2
Northeast	22,830	10,537	10,022	2,341	45,730	40.7
Ohio	13,054	4,360	1,457	1,121	19,992	76.2
Indiana	13,877	2,882	1,212	1,262	19,233	83.0
Illinois	24,050	4,033	966	1,349	30,398	84.9
Iowa	26,170	5,583	350	1,942	34,045	94.9
Missouri	18,117	12,907	2,003	1,168	34,195	77.2
Corn Belt	95,268	29,765	5,988	6,842	137,863	83.4
Michigan	10,836	2,679	1,675	1,277	16,467	45.1
Wisconsin	12,766	6,261	2,114	1,366	22,507	64.3
Minnesota	22,295	5,583	1,537	2,870	32,285	63.0
Lake States	45,897	14,523	5,326	5,513	71,259	58.1
Virginia	4,886	4,325	5,032	443	14,686	57.5
West Virginia	1,835	3,552	1,763	202	7,352	47.7
North Carolina	7,264	2,790	7,733	473	18,260	58.1
Kentucky	10,641	3,521	3,088	784	18,034	70.7
Tennessee	9,096	4,027	3,716	816	17,655	66.0
Appalachian	33,722	18,215	21,332	2,718	75,987	61.0
South Carolina	4,891	2,028	3,916	234	11,069	57.1
Georgia	9,009	6,452	8,085	473	24,019	64.2
Florida	3,443	11,932	1,825	962	18,162	52.3
Alabama	7,481	7,051	5,737	542	20,811	63.7
Southeast	24,824	27,463	19,563	2,211	74,061	59.6
Mississippi	7,805	8,624	3,544	730	20,703	68.5
Arkansas	8,863	6,006	2,526	549	17,944	53.2
Louisiana	5,494	3,780	1,690	477	11,441	39.6
Delta States	22,162	18,410	7,760	1,756	50,088	53.9

See footnotes at end of table.

- Continued

Table 23. - Major uses of land in farms, by regions and States, 1954 - Continued

State and region	Cropland 1/	Pasture 2/	Total woodland not pastured	Other land 3/	Total	
					Acreage 4/	Percentage of land area
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	Percent
Oklahoma	14,774	19,710	458	688	35,630	80.6
Texas	37,346	106,083	1,152	1,232	145,813	86.5
Southern Plains	52,120	125,793	1,610	1,920	181,443	85.3
North Dakota	27,872	11,780	205	2,019	41,876	93.4
South Dakota	19,692	23,882	113	1,263	44,950	91.8
Nebraska	23,269	22,973	192	1,053	47,487	96.8
Kansas	30,210	18,431	345	1,037	50,023	95.2
Northern Plains	101,043	77,066	855	5,372	184,336	94.3
Montana	15,005	45,895	192	377	61,469	65.8
Idaho	5,540	7,877	262	685	14,364	27.1
Wyoming	2,582	32,006	29	372	34,989	56.1
Colorado	11,257	26,152	169	807	38,385	57.7
New Mexico	2,504	46,065	269	613	49,451	63.6
Arizona	1,615	39,085	54	1,036	41,790	57.5
Utah	2,037	9,713	49	463	12,262	23.3
Nevada	678	7,385	16	153	8,232	11.7
Mountain	41,218	214,178	1,040	4,506	260,942	47.6
Washington	7,710	8,613	822	496	17,641	41.3
Oregon	5,282	14,454	791	520	21,047	34.1
California	13,251	22,014	712	1,818	37,795	37.7
Pacific	26,243	45,081	2,325	2,834	76,483	37.4
United States	465,327	581,031	75,821	36,013	1,158,192	60.8

1/ Cropland harvested, crop failure, cultivated summer fallow, cropland idle, cropland used for cover or soil-improvement crops, and cropland used only for pasture, in 1954. An upward adjustment of about 2 percent in the acreage of cropland harvested reported by the U. S. Census of Agriculture was made to compensate for some of the underenumeration indicated by the postenumeration survey conducted by the U. S. Bureau of the Census.

2/ Open permanent pasture (not cropland and not woodland) and woodland pastured as reported by the U. S. Census of Agriculture, 1954. Cropland used only for pasture is included with total cropland.

3/ Other land includes farmsteads, farm roads and lanes, ditches, and wasteland. The upward adjustment in cropland harvested was compensated for by a reduction in the acreage of other land in farms reported by the U. S. Census of Agriculture, 1954.

4/ As reported by the U. S. Census of Agriculture, 1954.

Table 24.- Major uses of land not in farms, by regions and States, 1954

State and region	Grazing land not in farms 1/	Woodland and forest not grazed 2/	Other land 3/	Total 4/
	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Maine	350	14,609	1,293	16,252
New Hampshire	160	3,732	422	4,314
Vermont	468	1,820	332	2,620
Massachusetts	121	2,518	957	3,596
Rhode Island	0	367	155	522
Connecticut	40	1,501	456	1,997
New York	552	8,350	6,711	15,613
New Jersey	0	1,619	1,530	3,149
Pennsylvania	546	11,405	3,716	15,667
Delaware	0	239	213	452
Maryland	0	1,767	5/699	5/2,466
Northeast	2,237	47,927	16,484	66,648
Ohio	560	2,028	3,660	6,248
Indiana	0	1,265	2,673	3,938
Illinois	0	1,031	4,369	5,400
Iowa	0	371	1,453	1,824
Missouri	5,012	1,843	3,255	10,110
Corn Belt	5,572	6,538	15,410	27,520
Michigan	1,019	14,717	4,291	20,027
Wisconsin	859	9,783	1,862	12,504
Minnesota	1,056	13,455	4,410	18,921
Lake States	2,934	37,955	10,563	51,452
Virginia	1,518	7,423	1,905	10,846
West Virginia	2,060	4,768	1,231	8,059
North Carolina	1,914	8,257	2,991	13,162
Kentucky	1,981	4,336	1,162	7,479
Tennessee	1,646	4,720	2,729	9,095
Appalachian	9,119	29,504	10,018	48,641
South Carolina	1,827	4,904	1,595	8,326
Georgia	5,610	5,371	2,429	13,410
Florida	9,459	3,452	3,655	16,566
Alabama	5,384	5,048	1,447	11,879
Southeast	22,280	18,775	9,126	50,181
Mississippi	5,592	2,162	1,782	9,536
Arkansas	9,102	3,959	2,707	15,768
Louisiana	10,695	2,462	4,306	17,463
Delta States	25,389	8,583	8,795	42,767

See footnotes at end of table.

- Continued

Table 24.- Major uses of land not in farms, by regions and States, 1954 - Continued

State and region	Grazing land not in farms 1/	Woodland and forest not grazed 2/	Other land 3/	Total 4/
	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Oklahoma	4,043	2,281	2,226	8,550
Texas	8,723	5,002	9,110	22,835
Southern Plains	12,766	7,283	11,336	31,385
North Dakota	1,866	---	1,094	2,960
South Dakota	2,065	837	1,131	4,033
Nebraska	333	124	1,120	1,577
Kansas	120	564	1,842	2,526
Northern Plains	4,384	1,525	5,187	11,096
Montana	18,600	9,858	3,435	31,893
Idaho	25,532	9,505	3,571	38,608
Wyoming	20,395	3,774	3,246	27,415
Colorado	18,365	8,074	1,686	28,125
New Mexico	22,332	1,881	4,103	28,316
Arizona	23,913	198	6,787	30,898
Utah	32,656	568	7,215	40,439
Nevada	49,824	354	11,855	62,033
Mountain	211,617	34,212	41,898	287,727
Washington	7,747	12,022	5,333	25,102
Oregon	26,157	13,090	1,348	40,595
California	22,437	20,896	19,186	62,519
Pacific	56,341	46,008	25,867	128,216
United States	352,639	238,310	154,684	745,633

1/ Grazing land not in farms includes some public and private land suitable for grazing which is not necessarily grazed each year. An exception is grass and other forage of value for grazing in national defense areas, national parks, and national wildlife areas, for which permits were not issued for grazing domestic livestock in 1954. Grazing land temporarily leased or used by permit in 1954 in national defense areas, national parks, and national wildlife areas is included in the acreage of grazing land, although the grazing of domestic livestock does not constitute the primary use for these areas.

2/ Woodland and forest land not in farms not grazed excludes reserved woodland and forest areas in parks and certain other special-use areas and woodland and forest land grazed. Total forest areas as reported by the U. S. Forest Service in the preliminary report, Timber Resource Review, 1955.

3/ Other land not in farms includes urban and town areas; parks; wildlife refuges; national defense areas; flood-control areas; airports; part of areas in highways, roads, and railroad rights-of-way; other special uses, and miscellaneous land areas not otherwise accounted for.

4/ Total land area minus land in farms as reported by the U. S. Census of Agriculture, 1954.

5/ Includes data for District of Columbia.

Table 25. - Acreage of all cropland, including cropland used for crops and cropland used only for pasture, by regions and States, 1954 1/

State and region	Cropland used for crops 2/	Cropland used for soil improvement crops and idle 3/	Cropland used only for pasture 4/	Total
	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Maine	818	220	236	1,274
New Hampshire	252	45	88	385
Vermont	813	63	196	1,072
Massachusetts	342	76	143	561
Rhode Island	36	11	22	69
Connecticut	293	48	126	467
New York	5,622	833	1,409	7,864
New Jersey	810	102	184	1,096
Pennsylvania	5,641	812	946	7,399
Delaware	423	32	64	519
Maryland	1,585	176	363	2,124
Northeast	16,635	2,418	3,777	22,830
Ohio	10,644	700	1,710	13,054
Indiana	11,441	469	1,967	13,877
Illinois	21,048	509	2,493	24,050
Iowa	22,799	210	3,161	26,170
Missouri	13,422	310	4,385	18,117
Corn Belt	79,354	2,198	13,716	95,268
Michigan	7,838	1,086	1,912	10,836
Wisconsin	10,053	458	2,255	12,766
Minnesota	19,787	972	1,536	22,295
Lake States	37,678	2,516	5,703	45,897
Virginia	3,243	527	1,116	4,886
West Virginia	1,089	233	513	1,835
North Carolina	5,868	694	702	7,264
Kentucky	4,786	975	4,880	10,641
Tennessee	5,079	922	3,095	9,096
Appalachian	20,065	3,351	10,306	33,722
South Carolina	3,730	473	688	4,891
Georgia	6,700	902	1,407	9,009
Florida	2,140	425	878	3,443
Alabama	5,108	719	1,654	7,481
Southeast	17,678	2,519	4,627	24,824
Mississippi	5,855	437	1,513	7,805
Arkansas	5,868	576	2,419	8,863
Louisiana	3,127	408	1,959	5,494
Delta States	14,850	1,421	5,891	22,162

See footnotes at end of table.

- Continued

Table 25. - Acreage of all cropland, including cropland used for crops and cropland used only for pasture, by regions and States, 1954 1/ - Continued

State and region	Cropland used for crops 2/	Cropland used for soil-improvement crops and idle 3/	Cropland used only for pasture 4/	Total
	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Oklahoma	12,253	196	2,325	14,774
Texas	29 050	898	7,398	37,346
Southern Plains	41,303	1,094	9,723	52,120
North Dakota	26,624	494	754	27,872
South Dakota	18,851	119	722	19,692
Nebraska	21,929	223	1,117	23,269
Kansas	28 414	437	1,359	30,210
Northern Plains	95,818	1,273	3,952	101,043
Montana	14,135	132	738	15,005
Idaho	4,846	149	545	5,540
Wyoming	2,035	102	445	2,582
Colorado	10,108	141	1,008	11,257
New Mexico	1,870	170	464	2,504
Arizona	1,226	188	201	1,615
Utah	1,637	125	275	2,037
Nevada	373	52	253	678
Mountain	36,230	1,059	3,929	41,218
Washington	6,887	202	621	7,710
Oregon	4,252	223	807	5,282
California	9 792	441	3,018	13,251
Pacific	20,931	866	4,446	26,243
United States	380,542	18,715	66,070	465,327

1/ Cropland, including cropland used only for pasture, represents the cropland available for crops, or in the rotation.

2/ Cropland harvested, crop failure, and cultivated summer fallow. An upward adjustment of about 2 percent in the acreage of cropland harvested reported by the U. S. Census of Agriculture was made to compensate for some of the underenumeration indicated by the postenumeration survey conducted by the U. S. Bureau of the Census.

3/ Cropland idle and cropland used for cover or soil-improvement crops not harvested and not pastured.

4/ Acreages are from the U. S. Census of Agriculture, 1954.

Table 26. - All grassland and woodland pasture and grazing land by regions and States, 1954

State and region	Grassland pasture and grazing land 1/	Woodland and forest pastured or grazed 2/	Total 3/
	1,000 acres	1,000 acres	1,000 acres
Maine	490	580	1,070
New Hampshire	245	348	593
Vermont	940	1,096	2,036
Massachusetts	296	248	544
Rhode Island	34	11	45
Connecticut	294	135	429
New York	4,631	1,614	6,245
New Jersey	278	39	317
Pennsylvania	2,885	1,300	4,185
Delaware	90	23	113
Maryland	780	194	974
Northeast	10,963	5,588	16,551
Ohio	4,719	1,911	6,630
Indiana	3,281	1,568	4,849
Illinois	4,576	1,950	6,526
Iowa	6,960	1,784	8,744
Missouri	11,010	11,294	22,304
Corn Belt	30,546	18,507	49,053
Michigan	2,957	2,653	5,610
Wisconsin	4,775	4,600	9,375
Minnesota	4,258	3,917	8,175
Lake States	11,990	11,170	23,160
Virginia	3,887	3,072	6,959
West Virginia	2,790	3,335	6,125
North Carolina	2,236	3,170	5,406
Kentucky	6,639	3,743	10,382
Tennessee	4,903	3,865	8,768
Appalachian	20,455	17,185	37,640
South Carolina	1,469	3,074	4,543
Georgia	3,258	10,211	13,469
Florida	5,759	16,510	22,269
Alabama	4,108	9,981	14,089
Southeast	14,594	39,776	54,370
Mississippi	4,995	10,734	15,729
Arkansas	4,717	12,810	17,527
Louisiana	4,680	11,754	16,434
Delta States	14,392	35,298	49,690

See footnotes at end of table. - Continued

Table 26. - All grassland and woodland pasture and grazing land, by regions and States, 1954 - Continued

State and region	Grassland pasture and grazing land 1/	Woodland and forest pastured or grazed 2/	Total 3/
	1,000 acres	1,000 acres	1,000 acres
Oklahoma	18,528	7,550	26,078
Texas	95,548	26,656	122,204
Southern Plains	114,076	34,206	148,282
North Dakota	14,054	346	14,400
South Dakota	25,486	1,183	26,669
Nebraska	23,659	764	24,423
Kansas	19,155	755	19,910
Northern Plains	82,354	3,048	85,402
Montana	55,480	9,753	65,233
Idaho	26,311	7,643	33,954
Wyoming	48,929	3,917	52,846
Colorado	34,245	11,280	45,525
New Mexico	50,642	18,219	68,861
Arizona	45,039	18,160	63,199
Utah	27,852	14,792	42,644
Nevada	46,323	11,139	57,462
Mountain	334,821	94,903	429,724
Washington	8,249	8,732	16,981
Oregon	26,368	15,050	41,418
California	29,679	17,790	47,469
Pacific	64,296	41,572	105,868
United States	698,487	301,253	999,740

1/ Includes cropland used only for pasture; grassland and other nonforested pasture in farms (pasture not cropland and not woodland); and grassland and other nonforested grazing land not in farms.

2/ Woodland and forest pastured or grazed, in farms and not in farms. Woodland and forest land actually grazed, or useful for grazing consists principally of open woodland or forest; scattered, cleared and cutover areas; abandoned fields; brush-grown pasture; and other land within forested areas that has grass or other forage growth.

3/ All pasture and grazing land in farms and not in farms. Includes some public and private land suitable for grazing which is not necessarily grazed every year. An exception is grass and other forage of value for grazing in national defense areas, national parks, national wildlife areas, and so on, for which permits were not issued for grazing domestic livestock in 1954. Grazing land temporarily leased or used by permit in 1954 in national defense areas, national parks, and national wildlife areas is included in the grazing land area, although the grazing of domestic livestock does not constitute the primary use for these areas.

Table 27.-Pasture in farms by type of pasture, by regions and States, 1954

State and region	Cropland used only for pasture	Open permanent pasture 1/	Woodland pasture	Total 2/
	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Maine	236	204	280	720
New Hampshire	88	117	228	433
Vermont	196	669	703	1,568
Massachusetts	143	113	167	423
Rhode Island	22	12	11	45
Connecticut	126	128	135	389
New York	1,409	3,072	1,212	5,693
New Jersey	184	94	39	317
Pennsylvania	946	1,849	844	3,639
Delaware	64	26	23	113
Maryland	363	417	194	974
Northeast	3,777	6,701	3,836	14,314
Ohio	1,710	2,909	1,451	6,070
Indiana	1,967	1,314	1,568	4,849
Illinois	2,493	2,083	1,950	6,526
Iowa	3,161	3,799	1,784	8,744
Missouri	4,385	6,325	6,582	17,292
Corn Belt	13,716	16,430	13,335	43,481
Michigan	1,912	937	1,742	4,591
Wisconsin	2,255	2,445	3,816	8,516
Minnesota	1,536	2,600	2,983	7,119
Lake States	5,703	5,982	8,541	20,226
Virginia	1,116	2,771	1,554	5,441
West Virginia	513	2,277	1,275	4,065
North Carolina	702	1,284	1,506	3,492
Kentucky	4,880	1,759	1,762	8,401
Tennessee	3,095	1,808	2,219	7,122
Appalachian	10,306	9,899	8,316	28,521
South Carolina	688	581	1,447	2,716
Georgia	1,407	1,851	4,601	7,859
Florida	878	4,781	7,151	12,810
Alabama	1,654	2,454	4,597	8,705
Southeast	4,627	9,667	17,796	32,090

See footnotes at end of table.

- Continued

Table 27.- Pasture in farms by type of pasture, by regions and States, 1954 - Continued

State and region	Cropland used only for pasture	Open permanent pasture 1/	Woodland pasture	Total 2/
	1 000 acres	1 000 acres	1 000 acres	1,000 acres
Mississippi	1,513	3,290	5,334	10,137
Arkansas	2,419	1,998	4,008	8,425
Louisiana	1,959	1,521	2,259	5,739
Delta States	5,891	6,809	11,601	24,301
Oklahoma	2,325	15,021	4,689	22,035
Texas	7,398	87,211	18,872	113,481
Southern Plains	9,723	102,232	23,561	135,516
North Dakota	754	11,434	346	12,534
South Dakota	722	23,554	328	24,604
Nebraska	1,117	22,542	431	24,090
Kansas	1,359	17,796	635	19,790
Northern Plains	3,952	75,326	1,740	81,018
Montana	738	43,923	1,972	46,633
Idaho	545	6,712	1,165	8,422
Wyoming	445	31,383	623	32,451
Colorado	1,008	24,318	1,834	27,160
New Mexico	464	41,034	5,031	46,529
Arizona	201	30,188	8,897	39,286
Utah	275	8,733	980	9,988
Nevada	253	7,338	47	7,638
Mountain	3,929	193,629	20,549	218,107
Washington	621	5,726	2,887	9,234
Oregon	807	10,607	3,847	15,261
California	3,018	16,871	5,143	25,032
Pacific	4,446	33,204	11,877	49,527
United States	66,070	459,879	121,152	647,101

1/ Grassland and other nonforested pasture (not cropland and not woodland).
2/ All pastureland in farms, as reported by the U. S. Census of Agriculture, 1954.

Table 28.- Pasture and grazing land in farms and not in farms, by regions and States, 1954

State and region	In farms 1/	Not in farms 2/	Total
	1,000 acres	1,000 acres	1,000 acres
Maine	720	350	1,070
New Hampshire	433	160	593
Vermont	1,568	468	2,036
Massachusetts	423	121	544
Rhode Island	45	0	45
Connecticut	389	40	429
New York	5,693	552	6,245
New Jersey	317	0	317
Pennsylvania	3,639	546	4,185
Delaware	113	0	113
Maryland	974	0	974
Northeast	14,314	2,237	16,551
Ohio	6,070	560	6,630
Indiana	4,849	0	4,849
Illinois	6,526	0	6,526
Iowa	8,744	0	8,744
Missouri	17,292	5,012	22,304
Corn Belt	43,481	5,572	49,053
Michigan	4,591	1,019	5,610
Wisconsin	8,516	859	9,375
Minnesota	7,119	1,056	8,175
Lake States	20,226	2,934	23,160
Virginia	5,441	1,518	6,959
West Virginia	4,065	2,060	6,125
North Carolina	3,492	1,914	5,406
Kentucky	8,401	1,981	10,382
Tennessee	7,122	1,646	8,768
Appalachian	28,521	9,119	37,640
South Carolina	2,716	1,827	4,543
Georgia	7,859	5,610	13,469
Florida	12,810	9,459	22,269
Alabama	8,705	5,384	14,089
Southeast	32,090	22,280	54,370

See footnotes at end of table. - Continued

Table 28.- Pasture and grazing land in farms and not in farms, by regions and States, 1954 - Continued

State and region	In farms 1/	Not in farms 2/	Total
	1,000 acres	1 000 acres	1,000 acres
Mississippi	10,137	5,592	15,729
Arkansas	8,425	9,102	17,527
Louisiana	5,739	10,695	16,434
Delta States	24,301	25,389	49,690
Oklahoma	22,035	4,043	26,078
Texas	113,481	8,723	122,204
Southern Plains	135,516	12,766	148,282
North Dakota	12,534	1,866	14,400
South Dakota	24,604	2,065	26,669
Nebraska	24,090	333	24,423
Kansas	19,790	120	19,910
Northern Plains	81,018	4,384	85,402
Montana	46,633	18,600	65,233
Idaho	8,422	25,532	33,954
Wyoming	32,451	20,395	52,846
Colorado	27,160	18,365	45,525
New Mexico	46,529	22,332	68,861
Arizona	39,286	23,913	63,199
Utah	9,988	32,656	42,644
Nevada	7,638	49,824	57,462
Mountain	218,107	211,617	429,724
Washington	9,234	7,747	16,981
Oregon	15,261	26,157	41,418
California	25,032	22,437	47,469
Pacific	49,527	56,341	105,868
United States	647,101	352,639	999,740

1/ Cropland used only for pasture; grassland and other nonforested pasture (pasture not cropland and not woodland), and woodland pastured in farms. Acreages of pasture in farms are from the U. S. Census of Agriculture, 1954.

2/ Grassland or nonforested land grazed; and woodland forest land grazed not in farms. Acreages of grazing land not in farms were compiled from various reports and records of Federal and State agencies.

Table 29.- Woodland and forest in farms and not in farms, by regions and States, 1954

State and region	In farms 1/	Not in farms	Total 2/
	1,000 acres	1,000 acres	1,000 acres
Maine	1,992	14,909	16,901
New Hampshire	909	3,852	4,761
Vermont	1,507	2,213	3,720
Massachusetts	671	2,599	3,270
Rhode Island	63	367	430
Connecticut	478	1,501	1,979
New York	3,321	8,752	12,073
New Jersey	322	1,619	1,941
Pennsylvania	3,247	11,861	15,108
Delaware	215	239	454
Maryland	1,133	1,767	2,900
Northeast	13,858	49,679	63,537
Ohio	2,908	2,488	5,396
Indiana	2,780	1,265	4,045
Illinois	2,916	1,031	3,947
Iowa	2,134	371	2,505
Missouri	8,585	6,555	15,140
Cornbelt	19,323	11,710	31,033
Michigan	3,417	15,628	19,045
Wisconsin	5,930	10,567	16,497
Minnesota	4,520	14,389	18,909
Lake States	13,867	40,584	54,451
Virginia	6,586	8,941	15,527
West Virginia	3,038	6,828	9,866
North Carolina	9,239	9,921	19,160
Kentucky	4,850	6,317	11,167
Tennessee	5,935	6,366	12,301
Appalachian	29,648	38,373	68,021
South Carolina	5,363	6,531	11,894
Georgia	12,686	10,981	23,667
Florida	8,976	12,811	21,787
Alabama	10,334	10,432	20,766
Southeast	37,359	40,755	78,114

See footnotes at end of table. - Continued

Table 29.- Woodland and forest in farms and not in farms, by regions and States, 1954 - Continued

State and region	In farms 1/	Not in farms	Total 2/
	1,000 acres	1,000 acres	1,000 acres
Mississippi	8,878	7,562	16,440
Arkansas	6,534	12,761	19,295
Louisiana	3,949	11,957	15,906
Delta States	19,361	32,280	51,641
Oklahoma	5,147	5,142	10,289
Texas	20,024	12,786	32,810
Southern Plains	25,171	17,928	43,099
North Dakota	551	0	551
South Dakota	441	1,692	2,133
Nebraska	623	457	1,080
Kansas	980	684	1,664
Northern Plains	2,595	2,833	5,428
Montana	2,164	17,639	19,803
Idaho	1,427	15,983	17,410
Wyoming	652	7,068	7,720
Colorado	2,003	17,520	19,523
New Mexico	5,300	15,069	20,369
Arizona	8,951	9,461	18,412
Utah	1,029	14,380	15,409
Nevada	63	11,446	11,509
Mountain	21,589	108,566	130,155
Washington	3,709	17,867	21,576
Oregon	4,638	24,293	28,931
California	5,855	33,543	39,398
Pacific	14,202	75,703	89,905
United States	196,973	418,411	615,384

1/ All woodland in farms, as reported by the U.S. Census of Agriculture, 1954.

2/ All woodland and forest areas as reported by the U.S. Forest Service in the preliminary report, Timber Resource Review, 1955, exclusive of reserved woodland and forest areas in parks and certain other special-use areas and some nonstocked areas duplicated in cropland and pasture areas.

Table 30. - Land in special-use areas, by regions and States, 1954

State and region	Urban areas 1/	Rural highways, railroads, and airports 2/	Farmsteads, farm roads and lanes 3/	Parks 4/	Wildlife areas 5/	National Defense and Atomic Energy 6/	State-owned institutions and miscellaneous other uses 7/	Total 8/
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1 000 acres
Maine	113	172	42	206	31	18	2	584
New Hampshire	67	89	17	41	1	14	3	232
Vermont	45	65	28	9	4	2	2	155
Massachusetts	479	149	31	21	11	94	10	795
Rhode Island	102	18	4	8	3	8	2	145
Connecticut	253	101	23	20	6	4	17	424
New York	1,057	542	200	2,426	92	175	15	4,507
New Jersey	776	116	42	20	68	77	12	1,111
Pennsylvania	967	651	234	136	886	70	17	2,961
Delaware	38	27	12	1	21	18	1	118
Maryland	240	102	53	26	46	9/132	3	9/602
Northeast	4,137	2,032	686	2,914	1,169	612	84	11,634
Ohio	1,006	520	482	54	38	89	25	2,214
Indiana	416	495	449	47	22	210	39	1,678
Illinois	890	1,039	522	22	86	149	30	2,738
Iowa	445	909	588	28	48	91	16	2,125
Missouri	496	624	553	62	123	208	30	2,096
Corn Belt	3,253	3,587	2,594	213	317	747	140	10,851
Michigan	819	909	413	301	243	29	47	2,761
Wisconsin	524	847	457	17	279	101	14	2,239
Minnesota	493	1 124	562	80	1,599	33	40	3,931
Lake States	1,836	2,880	1,432	398	2,121	163	101	8,931
Virginia	369	287	174	274	30	384	49	1,567
West Virginia	175	182	76	40	27	27	28	555
North Carolina	410	565	239	343	224	323	45	2,149
Kentucky	219	404	338	66	74	317	28	1,446
Tennessee	335	398	314	316	121	329	70	1,883
Appalachian	1,508	1,836	1,141	1,039	476	1,380	220	7,600

See footnotes at end of table.

- Continued

Table 30. - Land in special-use areas, by regions and States, 1954 - Continued

State and region	Urban areas 1/	Rural highways, railroads, and airports 2/	Farmsteads, farm roads and lanes 3/	Parks 4/	Wildlife areas 5/	National Defense and Atomic Energy 6/	State-owned institutions and miscellaneous other uses 7/	Total 8/
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
South Carolina	254	375	118	49	140	331	14	1,281
Georgia	495	501	195	58	381	752	17	2,399
Florida	634	513	116	852	204	732	183	3,234
Alabama	475	507	190	42	26	218	104	1,562
Southeast	1,858	1,896	619	1,001	751	2,033	318	8,476
Mississippi	212	357	260	28	116	285	54	1,312
Arkansas	213	397	211	17	151	434	2	1,425
Louisiana	390	335	176	9	474	235	15	1,634
Delta States	815	1,089	647	54	741	954	71	4,371
Oklahoma	237	587	347	43	245	538	47	2,044
Texas	1 534	1,442	672	732	192	898	17	5,487
Southern Plains	1,771	2,029	1,019	775	437	1,436	64	7,531
North Dakota	55	1,100	296	70	189	433	9	2,152
South Dakota	78	862	254	224	50	376	2	1,846
Nebraska	137	955	376	22	145	142	11	1,788
Kansas	242	1,133	444	19	22	174	16	2,050
Northern Plains	512	4,050	1,370	335	406	1,125	38	7,836
Montana	58	644	143	1,125	717	601	22	3,310
Idaho	63	270	153	84	46	1,325	13	1,954
Wyoming	39	346	53	2,205	62	135	5	2,845
Colorado	151	639	172	518	67	414	16	1,977
New Mexico	155	389	83	240	211	1,450	68	2,596
Arizona	82	324	49	1,464	29	3,135	3	5,086
Utah	197	217	88	288	139	2,415	7	3,351
Nevada	41	350	15	128	231	4,251	3	5,019
Mountain	786	3,179	756	6,052	1,502	13,726	137	26,138

See footnotes at end of table.

- Continued

Table 30. - Land in special-use areas, by regions and States, 1954 - Continued

State and region	Urban areas 1/	Rural highways, railroads, and airports 2/	Farmsteads, farm roads and lanes 3/	Parks 4/	Wildlife areas 5/	National Defense and Atomic Energy 6/	State-owned institutions and miscellaneous other uses 7/	Total 8/
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Washington	330	330	180	1,185	246	837	13	3,121
Oregon	184	380	164	203	467	163	19	1,580
California	1,571	1,206	400	4,555	147	4,219	31	12,129
Pacific	2,085	1,916	744	5,943	860	5,219	63	16,830
United States	18,561	24,494	11,008	18,724	8,780	27,395	1,236	110,198

1/ Areas occupied by towns and cities of 1,000 population and over are as of December 1954. Estimates are based on annexations since 1950 as reported by the Municipal Yearbook and the Bureau of the Census. Estimates of unincorporated areas added to urban areas since 1950 were based on the proportion of unincorporated to incorporated areas in 1950. Revision of the 1950 urban area as reported in U. S. Dept. Agr. Tech. Bul. 1082 was made on the basis of 2 subsequent reports released by the Bureau of the Census. For places not reported by the Bureau of the Census, estimates were made by measurement of built-up areas on recent topographic maps and aerial photographs and by comparison with areas reported in 1940. Adjustments in census areas for incorporated places were made to exclude large non-built-up areas from urban land, particularly in the New England States. Approximately 10 million additional acres are occupied by rural villages and towns, with populations of 100 to 1,000. The estimated acreage in these villages and towns is now included in other major uses of land such as forest, grazing, farm, and other land. Separation would call for revision of accepted major land use areas of many counties and States.

2/ Estimates of acreage in highways as of 1954 were derived by applying average right-of-way widths reported by State highway departments to the mileage in different highway systems reported by the Bureau of Public Roads.

Estimates of acreage in railroad rights-of-way are based on State-by-State changes in mileage reported by the Interstate Commerce Commission, 1945-53.

Airports used strictly for personal use or for military purposes are excluded as such areas are largely duplicated in agricultural and military uses of land respectively. Airports within corporate limits of cities and those surrounded by built-up areas in unincorporated places were also excluded.

3/ Rural homesites outside towns and villages and not located on farms occupy an undetermined acreage, particularly along major highways near cities. The number of such homesites has been increasing. In some areas, many of the homesites on former farms are in this category, and the decline in acreage in farmsteads in these areas merely indicates that such homesites are no longer located on farms as defined by the Bureau of the Census.

4/ As of June 30, 1954. National recreation areas are excluded as these areas are reported by the Bureau of Reclamation. Major water areas in national parks as compiled by the National Park Service as of March 1953 were deducted from the total area reported. Areas in State parks exclude water bodies of 40 acres or more. Adirondack and

- Continued

Table 30.- Land in special-use areas, by regions and States, 1954 - Continued

Catskill parks or forest-preserve areas are included in the acreage reported for New York.

5/ Does not include areas under the primary jurisdiction of another agency or land leased for wildlife purposes. Excludes 1,520,000 acres in the Cabeza Prieta and Kofa areas in Arizona and 2,728,711 acres in the Desert Game and Charles Sheldon areas in Nevada, which were reported in grazing districts by the Bureau of Land Management. State wildlife areas are as reported in U. S. Dept. Agr. Circular 909 plus lands acquired since 1950 by the States for wildlife purposes under the Pittman-Robinson and Dingel-Johnson acts and by the States themselves without assistance from Federal funds.

6/ As reported in Senate Doc. 100, 84th Cong., 2d Sess., Inventory Report on Federal Real Property in the United States as of June 30, 1955.

7/ State-owned rural land held for institutional sites and miscellaneous other uses, such as National Guard camps and rifle ranges, fairgrounds, airports, radio stations, flood-control areas, and watershed-protection areas. Data are incomplete for some States.

8/ The following special uses of rural land are not included in the totals: Reservoirs, industrial and commercial sites in rural areas, mining areas, clay, sand, and stone quarry sites, powerline rights-of-way, cemeteries, and golf courses. Water area in reservoirs, exclusive of most natural lakes with controlled water levels, totaled approximately 7 million acres as of December 31, 1953. As the approximate land area of the United States excludes all natural or artificial water bodies of 40 acres or more, the area in reservoirs is considered separately from other special uses. Most reservoirs have protective belts or areas surrounding them. For some reservoirs, this area may be nearly equal to the water area of the reservoir, while for others it may be considerably less. These areas are often forested for watershed protection and may also be used for recreation and for wildlife protection.

9/ Includes data for District of Columbia.

Table 31. - Federal, State, private, and other land, by regions and States, 1955

State and region	Federal land 1/		State land 2/		Private and other land not owned by Federal and State Governments 3/		Total acreages
	Acreage	Percentage of land area 4/	Acreage	Percentage of land area 4/	Acreage	Percentage of land area 4/	
	1,000 acres	Percent	1,000 acres	Percent	1,000 acres	Percent	1,000 acres
Maine	124	0.6	183	0.9	19,559	98.5	19,866
New Hampshire	691	12.0	58	1.0	5,022	87.0	5,771
Vermont	233	3.9	81	1.4	5,624	94.7	5,938
Massachusetts	111	2.2	202	4.0	4,722	93.8	5,035
Rhode Island	8	1.2	10	1.4	659	97.4	677
Connecticut	6	.2	158	5.1	2,971	94.7	3,135
New York	267	.9	3,107	10.1	27,310	89.0	30,684
New Jersey	95	2.0	172	3.6	4,547	94.4	4,814
Pennsylvania	551	1.9	2,825	9.8	25,453	88.3	28,829
Delaware	32	2.5	9	.7	1,225	96.8	1,266
Maryland	180	2.9	110	1.7	6,034	95.4	6,324
Dist. of Columbia	12	30.8	0	0	27	69.2	39
Northeast	2,310	2.1	6,915	6.2	103,153	91.7	112,378
Ohio	241	.9	240	.9	25,759	98.2	26,240
Indiana	348	1.5	198	.9	22,625	97.6	23,171
Illinois	413	1.2	101	.3	35,284	98.5	35,798
Iowa	123	.3	72	.2	35,674	99.5	35,869
Missouri	1,625	3.7	274	.6	42,406	95.7	44,305
Corn Belt	2,750	1.7	885	.5	161,748	97.8	165,383
Michigan	2,830	7.8	4,403	12.1	29,261	80.1	36,494
Wisconsin	1,839	5.3	531	1.5	32,642	93.2	35,012
Minnesota	3,079	6.0	5,507	10.8	42,619	83.2	51,205
Lake States	7,748	6.3	10,441	8.5	104,522	85.2	122,711
Virginia	2,117	8.3	89	.3	23,325	91.4	25,531
West Virginia	932	6.0	148	1.0	14,331	93.0	15,411
North Carolina	1,881	6.0	333	1.1	29,208	92.9	31,422
Kentucky	957	3.8	46	.2	24,510	96.0	25,513
Tennessee	1,649	6.2	350	1.3	24,752	92.5	26,751
Appalachian	7,536	6.0	966	.8	116,126	93.2	124,628

See footnotes at end of table.

- Continued

Table 31. - Federal, State, private, and other land, by regions and States, 1955 - Continued

State and region	Federal land 1/		State land 2/		Private and other land not owned by Federal and State Governments 3/		Total acreages
	Acreage	Percentage of land area 4/	Acreage	Percentage of land area 4/	Acreage	Percentage of land area 4/	
	1,000 acres	Percent	1,000 acres	Percent	1,000 acres	Percent	1,000 acres
South Carolina	1,055	5.4	1,011	5.2	17,329	89.4	19,395
Georgia	1,931	5.2	90	.2	35,408	94.6	37,429
Florida	3,520	10.1	1,074	3.1	30,134	86.8	34,728
Alabama	1 101	3.4	321	1.0	31,268	95.6	32,690
Southeast	7,607	6.1	2,496	2.0	114,139	91.9	124,242
Mississippi	1,511	5.0	155	.5	28,572	94.5	30,238
Arkansas	3,114	9.2	393	1.2	30,205	89.6	33,712
Louisiana	1 062	3.7	284	1.0	27,558	95.3	28,904
Delta States	5,687	6.1	832	.9	86,335	93.0	92,854
Oklahoma	996	2.3	1,170	2.6	42,013	95.1	44,179
Texas	2 585	1.5	3,280	2.0	162,784	96.5	168,649
Southern Plains	3,581	1.7	4,450	2.1	204,797	96.2	212,828
North Dakota	1,886	4.2	1,820	4.1	41,130	91.7	44,836
South Dakota	3,028	6.2	2,525	5.2	43,430	88.6	48,983
Nebraska	688	1.4	1,659	3.4	46,718	95.2	49,065
Kansas	324	.6	60	.1	52,165	99.3	52,549
Northern Plains	5,926	3.0	6,064	3.1	183,443	93.9	195,433
Montana	27,952	29.9	5,498	5.9	59,912	64.2	93,362
Idaho	34,548	65.2	2,961	5.6	15,463	29.2	52,972
Wyoming	29,851	47.8	3,647	5.8	28,906	46.4	62,404
Colorado	24,120	36.3	3,181	4.8	39,209	58.9	66,510
New Mexico	26,218	33.7	11,504	14.8	40,045	51.5	77,767
Arizona	32,322	44.5	9,940	13.7	30,426	41.8	72,688
Utah	37,000	70.2	3,027	5.7	12,674	24.1	52,701
Nevada	61 176	87.1	58	.1	9,031	12.8	70,265
Mountain	273,187	49.8	39,816	7.3	235,666	42.9	548,669

See footnotes at end of table.

- Continued

Table 31. - Federal, State, private, and other land, by regions and States, 1955 - Continued

State and region	Federal land 1/		State land 2/		Private and other land not owned by Federal and State Governments 3/		Total acreage
	Acreage	Percentage of land area 4/	Acreage	Percentage of land area 4/	Acreage	Percentage of land area 4/	
	1,000 acres	Percent	1,000 acres	Percent	1,000 acres	Percent	1,000 acres
Washington	12,788	29.9	2,942	6.9	27,013	63.2	42,743
Oregon	31,602	51.3	1,609	2.6	28,431	46.1	61,642
California	47,174	47.0	2,932	2.9	50,208	50.1	100,314
Pacific	91,564	44.7	7,483	3.7	105,652	51.6	204,699
United States	407,896	21.4	80,348	4.2	1,415,581	74.4	1,903,825

1/ Senate Doc. 100, 84th Cong., 2d Sess., Inventory Report on Federal Real Property in the United States as of June 30, 1955.

2/ U. S. Dept. **Agr. Cir. 909.**

3/ Acreage not owned by Federal and State Governments consists of privately owned land, Indian land, and county, municipal and other local government land. Private and public land areas each include a share of the public road rights-of-way, drainage and irrigation ditches, and levees.

4/ Percentages **calculated** from unrounded data.

Table 32.- Federal and State-owned land used for farming and grazing, by regions and States, 1954 1/

State and region	Federal			State		
	Farming	Grazing 2/	Total used for farming and grazing 3	Farming	Grazing 2/	Total used for farming and grazing
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Maine	0	1	1	0	0	0
New Hampshire	2	0	2	0	0	0
Vermont	1	2	3	0	1	1
Massachusetts	4/	0	0	0	1	1
Rhode Island	0	0	0	0	0	0
Connecticut	4/	0	0	0	0	0
New York	4	10	14	0	2	2
New Jersey	4/	1	1	0	0	0
Pennsylvania	13	18	31	0	1	1
Delaware	1	1	2	0	0	0
Maryland	3	6	9	0	0	0
Northeast	24	39	63	0	5	5
Ohio	10	5	15	0	0	0
Indiana	20	11	31	0	0	0
Illinois	46	21	67	0	0	0
Iowa	24	6	30	0	0	0
Missouri	57	864	921	0	11	11
Corn Belt	157	907	1,064	0	11	11
Michigan	2	5	7	0	1	1
Wisconsin	6	4	10	0	1	1
Minnesota	3	5	8	0	0	0
Lake States	11	14	25	0	2	2
Virginia	25	55	80	0	4	4
West Virginia	2	15	17	0	5	5
North Carolina	8	336	344	0	4	4
Kentucky	20	14	34	0	5	5
Tennessee	50	66	116	0	3	3
Appalachian	105	486	591	0	21	21
South Carolina	5	217	222	0	6	6
Georgia	3	8	11	0	7	7
Florida	6	830	836	0	60	60
Alabama	33	108	141	0	0	0
Southeast	47	1,163	1,210	0	73	73

- Continued

See footnotes at end of table.

Table 32.- Federal and State-owned land used for farming and grazing, by regions and States, 1954 1/ - Continued

State and region	Federal			State		
	Farming	Grazing 2/	Total used for farming and grazing 3/	Farming	Grazing 2/	Total used for farming and grazing
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Mississippi	80	977	1,057	0	5	5
Arkansas	39	1,176	1,215	0	52	52
Louisiana	4	604	608	0	80	80
Delta States	123	2,757	2,880	0	137	137
Oklahoma	86	294	380	573	265	838
Texas	106	1,064	1,170	0	2,760	2,760
Southern Plains	192	1,358	1,550	573	3,025	3,598
North Dakota	206	1,223	1,429	0	923	923
South Dakota	53	1,928	1,981	3	1,968	1,971
Nebraska	93	504	597	2	1,626	1,628
Kansas	48	125	173	3	0	3
Northern Plains	400	3,780	4,180	8	4,517	4,525
Montana	62	16,908	16,970	444	4,211	4,655
Idaho	10	21,142	21,152	88	2,255	2,343
Wyoming	15	21,260	21,275	20	3,572	3,592
Colorado	11	15,355	15,366	143	2,775	2,918
New Mexico	2	21,082	21,084	76	11,265	11,341
Arizona	1	24,900	24,901	303	8,514	8,817
Utah	22	27,402	27,424	40	1,800	1,840
Nevada	1	49,693	49,694	0	36	36
Mountain	124	197,742	197,866	1,114	34,428	35,542
Washington	28	2,925	2,953	125	729	854
Oregon	22	21,704	21,726	0	891	891
California	190	19,003	19,193	0	131	131
Pacific	240	43,632	43,872	125	1,751	1,876
United States	1,423	251,878	253,301	1,820	43,970	45,790

1/ Federal and State rural land used for farming and grazing under lease or permit or otherwise used for farming or grazing. Includes Federal and State land used for farming and grazing which is reported in farms, as well as land not in farms and ranches.

2/ Includes grassland, shrub and brush land, and forest land used for grazing.

3/ Does not include 48 million acres of Indian land used for farming and grazing.

4/ Less than 500 acres.

Table 33.- Indian land used for farming and grazing, by regions and States, 1954 1/

State and region	Indian land		
	Farming	Grazing	Total used for farming and grazing
	1 000 acres	1 000 acres	1 000 acres
Maine	0	0	0
New Hampshire	0	0	0
Vermont	0	0	0
Massachusetts	0	0	0
Rhode Island	0	0	0
Connecticut	0	0	0
New York	0	0	0
New Jersey	0	0	0
Pennsylvania	0	0	0
Delaware	0	0	0
Maryland	0	0	0
Northeast	0	0	0
Ohio	0	0	0
Indiana	0	0	0
Illinois	0	0	0
Iowa	4	0	4
Missouri	0	0	0
Corn Belt	4	0	4
Michigan	2	13	15
Wisconsin	17	221	238
Minnesota	31	432	463
Lake States	50	666	716
Virginia	0	0	0
West Virginia	0	0	0
North Carolina	5	28	33
Kentucky	0	0	0
Tennessee	0	0	0
Appalachian	5	28	33
South Carolina	1	1	2
Georgia	0	0	0
Florida	0	160	160
Alabama	0	0	0
Southeast	1	161	162

See footnotes at end of table.

- Continued

Table 33.- Indian land used for farming and grazing, by regions and States, 1954 1/ - Continued

State and region	Indian land		
	Farming	Grazing	Total used for farming and grazing
	1,000 acres	1,000 acres	1,000 acres
Mississippi	5	8	13
Arkansas	0	0	0
Louisiana	0	0	0
Delta States	5	8	13
Oklahoma	1,208	1,149	2,357
Texas	0	2	2
Southern Plains	1,208	1,151	2,359
North Dakota	144	814	958
South Dakota	572	4,748	5,320
Nebraska	53	7	60
Kansas	29	6	35
Northern Plains	798	5,575	6,373
Montana	828	5,396	6,224
Idaho	164	692	856
Wyoming	57	1,791	1,848
Colorado	8	685	693
New Mexico	56	5,834	5,890
Arizona	269	15,669	15,938
Utah	58	1,835	1,893
Nevada	33	972	1 005
Mountain	1,473	32,874	34,347
Washington	222	1,780	2,002
Oregon	75	1,470	1,545
California	25	397	422
Pacific	322	3,647	3,969
United States	3,866	44,110	47,976

1 Indian land (chiefly tribal and trust-allotted lands), used for farming and grazing including all land operated by Indians, as well as land operated under lease or permit by non-Indians. It also includes land reported in farms and land not so reported. Both irrigated and dry land is included. Included are 583,000 acres of irrigated farming land and 3,283,000 acres of dry farming land. Excluded are 4,071,000 acres of forest and woodland not reported grazed and 3,512,000 acres of miscellaneous other areas not farmed or grazed. Total Indian tribal lands and lands held in trust comprised 55,559,000 acres in 1954.

Table 34.- Changes in cropland and all pasture and grazing land, by major divisions and regions, United States, 1949-54

Major division and region	Cropland 1/			Open permanent pasture in farms 2/			Woodland pasture in farms 3/		
	1949	1954	Change	1949	1954	Change	1949	1954	Change
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Northern:									
Northeastern	24,557	22,830	-1,727	6,928	6,701	-227	4,297	3,836	-461
Corn Belt	95,956	95,268	-688	16,563	16,430	-133	13,014	13,335	321
Lake States	46,410	45,897	-513	6,151	5,982	-169	9,918	8,541	-1,377
Northern Plains	100 666	101,043	377	71,326	75,326	4,000	2,267	1,740	-527
Total	267,589	265,038	-2,551	100,968	104,439	3,471	29,496	27,452	-2,044
Southern:									
Appalachian	37,363	33,722	-3,641	9,115	9,899	784	7,496	8,316	820
Southeastern	27,919	24,824	-3,095	6,776	9,667	2,891	16,578	17,796	1,218
Delta	24,283	22,162	-2,121	5,017	6,809	1,792	9,532	11,601	2,069
Southern Plains	53 986	52,120	-1,866	85,062	102,232	17,170	35,609	23,561	-12,048
Total	143,551	132,828	-10,723	105,970	128,607	22,637	69,215	61,274	-7,941
Western:									
Mountain	39,675	41,218	1,543	179,696	193,629	13,933	23,663	20,549	-3,114
Pacific	27,023	26,243	-780	29,015	33,204	4,189	12,341	11,877	-464
Total	66,698	67,461	763	208,711	226,833	18,122	36,004	32,426	-3,578
United States	477,838	465,327	-12,511	415,649	459,879	44,230	134,715	121,152	-13,563

See footnotes at end of table.

- Continued

Table 34.- Changes in cropland and all pasture and grazing land, by major divisions and regions, United States, 1949-54 - Continued

Major division and region	Grazing land not in farms 4/			Total pasture and grazing land		
	1949	1954	Change	1949	1954	Change
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Northern:						
Northeastern	2,800	2,237	-563	14,025	12,774	-1,251
Corn Belt	5,300	5,572	272	34,877	35,337	460
Lake States	6,200	2,934	-3,266	22,269	17,457	-4,812
Northern Plains	6,529	4,384	-2,145	80,122	81,450	1,328
Total	20,829	15,127	-5,702	151,293	147,018	-4,275
Southern:						
Appalachian	11,800	9,119	-2,681	28,411	27,334	-1,077
Southeastern	25,615	22,280	-3,335	48,969	49,743	774
Delta	28,120	25,389	-2,731	42,669	43,799	1,130
Southern Plains	15,700	12,766	-2,934	136,371	138,559	2,188
Total	81,235	69,554	-11,681	256,420	259,435	3,015
Western:						
Mountain	227,365	211,617	-15,748	430,724	425,795	-4,929
Pacific	70,735	56,341	-14,394	112,091	101,422	-10,669
Total	298,100	267,958	-30,142	542,815	527,217	-15,598
United States	400,164	352,639	-47,525	950,528	933,670	-16,858

1/ Cropland includes cropland harvested, failure, fallow, soil-improvement crops, idle land and cropland used only for pasture.

2/ Open permanent pasture includes all grassland pasture and other pasture not cropland and not woodland in farms.

3/ Woodland pasture in farms as reported by the 1950 and 1954 Census of Agriculture.

4/ Grazing land not in farms includes all private and public land not in farms estimated as usable for grazing, including grassland, woodland, and forest land.

Table 35.- Cropland and improved pasture, by major divisions and regions, United States, 1939 and 1954

Major division and region	1939		1954	
	Cropland 1/	Improved pasture 2/	Cropland 1/	Improved pasture 2/
	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Northern:				
Northeastern	21,897	9,430	19,053	8,906
Corn Belt	76,921	26,170	81,552	25,624
Lake States	39,437	8,474	40,194	9,348
Northern Plains	90,113	34,590	97,091	35,601
Total	228,368	78,664	237,890	79,479
Southern:				
Appalachian	27,912	11,693	23,416	13,133
Southeastern	25,540	6,577	20,197	9,203
Mississippi Delta	20,244	8,914	16,271	9,526
Southern Plains	48,850	29,877	42,397	44,860
Total	122,546	57,061	102,281	76,722
Western:				
Mountain	28,915	26,568	37,289	39,528
Pacific	18,922	12,816	21,797	18,807
Total	47,837	39,384	59,086	58,335
United States	398,751	175,109	399,257	214,536

1/ Cropland includes cropland harvested, failure, fallow, soil-improvement crops, and idle land.

2/ Improved pasture includes cropland used only for pasture and other grassland pasture in farms estimated to have been improved by having had applied 2 or more improvement practices or maintenance practices in recent years.

Table 36.- Land cleared, drained, and leveled for irrigation, by major divisions and regions, cumulative totals, United States, 1936-53 1/

Major division and region	Cleared	Drained	Leveled for irrigation
	1,000 acres	1,000 acres	1,000 acres
Northern:			
Northeastern	292	659	0
Corn Belt	72	5,913	0
Lake States	1,296	7,854	0
Northern Plains	63	2,968	373
Total	1,723	17,394	373
Southern:			
Appalachian	110	1,373	0
Southeastern	623	1,726	0
Mississippi Delta	144	8,353	649
Southern Plains	32	892	615
Total	909	12,344	1,264
Western:			
Mountain	385	1,021	3,213
Pacific	483	1,933	1,228
Total	868	2,954	4,441
United States	3,500	32,692	6,078

1/ Acreages cleared, drained, and leveled for irrigation with financial assistance from the Agricultural Conservation Program.

Table 37.- Major uses of private land, continental United States, specified years, 1930-54 1/

Land use	1930	1945	1950	1954
	Mil. acres	Mil. acres	Mil. acres	Mil. acres
Cropland	407	398	402	392
Pasture and grazing land, including forest and woodland grazed	700	704	680	660
Forest land and woodland not grazed	167	150	176	205
Special uses	23	26	27	33
Miscellaneous	62	60	57	53
Total	1,359	1,338	1,342	1,343

1/ All land, excluding public and Indian tribal and trust-allotted land.

Table 38.-Major uses of public land (Federal, State, county, and local Government land), continental United States, specified years, 1930-54

Land use	1930 1/	1945 2/	1950 3/	1954 4/
	Mil. acres	Mil. acres	Mil acres	Mil acres
Cropland	2	2	4	3
Pasture and grazing land, including forested grazing land	297	5/ 304	6/ 296	296
Forest land not classified as grazing land	105	109	102	103
Special uses	41	74	78	77
Miscellaneous other land	49	20	25	26
Total	494	509	505	505

1/ National Resources Board, Supplementary Report of the Land Planning Committee, Vol. 1, Part III, sec. VI, 1935.
2/ U. S. Dept. Agr., Misc. Pub. 663, 1948.
3/ U. S. Dept. Agr., Tech. Bul. 1082.
4/ Production Economics Research Branch Land Use Inventory 1955.
5/ U. S. Dept. Agr., Bur. Agr. Econ., Federal Rural Lands, June 1947.
6/ U. S. Dept. Agr., Cir. 909.

Table 39.-Major uses of Indian land (tribal and trust-allotted land), continental United States, specified years, 1930-54

Land use 1/	1930	1945	1950	1954
	Mil. acres	Mil. acres	Mil. acres	Mil. acres
Cropland used chiefly for crops	4	3	3	4
Pasture and grazing land, including woodland and forest land	45	44	44	44
Forest and woodland not grazed	1	6	8	6
All other land	2	4	2	2
Total 2/	52	57	57	56

1/ Land use classifications for the different years are not strictly comparable especially for cropland, forest and woodland, and all other land. Accordingly, it is estimated that a considerable part of the changes indicated are the result of differences in classification rather than actual changes in use.

2/ From about 1935 to 1942, purchases of land for Indian use and transfers of public domain land to this use increased Indian holdings by 5 million acres. In round numbers from 1945 to 1954, 17 million acres of the Indian land was trust-allotted land, which is owned by individuals under guardianship of the Federal Government. An additional 39 million acres were owned collectively by Indian tribes. The remaining 1 million acres were federally owned land reserved specifically for the benefit or use of the Indians. Thus, although the Indian land is under general administration or guardianship of the Federal Government and is sometimes included in statistics of Federal land, in the ordinary sense use and management of Indian land is more similar to use and management of private than of public land.

National Resources Board, Supplementary Report of the Land Planning Committee, Vol. II, 1935; U. S. Dept. Agr., Bur. Agr. Econ., Federal Rural Lands, June 1947; U. S. Dept. Agr. Cir. 909; and records of the Bureau of Indian Affairs, 1952 to 1956.

Table 40.- Ownership of grazing land not in farms, by major divisions and regions, United States, 1954 1/

Major division and region	Federal	State	Indian	Private	Total
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Northern:					
Northeastern	22	5	0	2,210	2,237
Corn Belt	851	11	0	4,710	5,572
Lake States	8	2	667	2,257	2,934
Northern Plains	2,787	565	784	248	4,384
Total	3,668	583	1,451	9,425	15,127
Southern:					
Appalachian	423	21	28	8,647	9,119
Southeastern	1,012	43	100	21,125	22,280
Delta States	2,707	137	0	22,545	25,389
Southern Plains	924	407	975	10,460	12 766
Total	5,066	608	1,103	62,777	69,554
Western:					
Mountain	189,366	5,758	3,802	12,691	211,617
Pacific	40,764	1,751	2,997	10,829	56 341
Total	230,130	7,509	6,799	23,520	267,958
United States	238,864	8,700	9,353	95,722	352,639

1/ Grazing land not in farms includes primarily acreages of publicly owned land grazed by permit, privately owned and Indian forest land, woodland, and other areas, used for grazing or suitable for grazing which are not reported as land in farms. Sources of information on grazing land not in farms are records and reports of public land management and conservation agencies supplemented by spot inquiries.

Table 41.- Pasture and grazing land, by regions, Western Range Area, United States, 1930 and 1954 1/

Region	1930	1954	Change	
			Acreage	Percentage
	Farm and ranch pasture 2/			
	1,000 acres	1,000 acres	1,000 acres	Percent
Southern Plains	73,968	89,304	+15,336	20.7
Northern Plains	40,878	52,499	+11,621	28.4
Mountain	121,392	218,107	+96,715	79.7
Pacific	37,611	49,527	+11,916	31.7
Total	273,849	409,437	+135,588	49.5
	Grazing land not in farms and ranches 3/			
Southern Plains	23,782	2,063	-21,719	-91.3
Northern Plains	21,509	3,931	-17,578	-81.7
Mountain	323,751	211,617	-112,134	-34.6
Pacific	85,305	56,341	-28,964	-34.0
Total	454,347	273,952	-180,395	-39.7
	Total pasture and range 4/			
Southern Plains	97,750	91,367	-6,383	-6.5
Northern Plains	62,387	56,430	-5,957	-9.5
Mountain	445,143	429,724	-15,419	-3.5
Pacific	122,916	105,868	-17,048	-13.9
Total	728,196	683,389	-44,807	-6.2

See footnotes at end of table.

- Continued

Table 41.- Pasture and grazing land, by regions, Western Range Area, United States, 1930 and 1954 1/

1/ The Western Range area is defined as the 11 Western States plus the counties of the Great Plains States west of an irregular line near the 100th meridian as indicated by map (fig. 1), the Western Range Report, U. S. Senate Doc. 199, 74th Cong., 2d Sess. The 1930 data are from the Western Range Report and basic antecedent tables. The 1954 data are from reports of the 1954 Census of Agriculture and from records and reports of public land management, conservation, and statistical agencies.

The Western Range area of 728 million acres reported in the Western Range Report in 1936 included plowable and irrigated pasture, open permanent pasture, or nonforested pasture, and woodland pasture in farms and ranches from the 1930 Agricultural Census, plus all grassland, woodland, and forest land not in farms or ranches, classified as usable and open for grazing, as of various dates. Such data were available from 1930 to 1935 (with the exception of certain National Park areas). Because of the dates when the data were assembled, the comparisons between years in footnotes and tables have been labeled 1930 and 1954.

2/ Pasture in farms and ranches includes plowable pasture, cropland used only for pasture, irrigated pasture, open permanent pasture, or other pasture (not cropland and not woodland), and woodland pasture in farms.

3/ Grazing land not in farms and ranches consists chiefly of Federal and State land and privately owned woodland and forest land. It includes grassland, or open land as well as woodland, brush, and forested land containing forage of value for grazing domestic livestock.

4/ All pasture and range includes both pasture in farms and ranches and grazing land not in farms and ranches.

Table 42.- Ownership of all pasture and grazing land, by regions, Western Range area, United States, 1930-45 1/

Region	1930	1954	Change	
			Acreage	Percentage
	1,000 acres	1,000 acres	1,000 acres	Percent
Public Land 2/				
Southern Plains	16,659	3,344	-13,315	-79.9
Northern Plains	8,752	6,904	-1,848	-21.1
Mountain	231,383	231,218	-165	-0.1
Pacific	47,464	44,381	-3,083	-6.5
Total	304,258	285,847	-18,411	-6.1
Indian Land 3/				
Southern Plains	201	13	-188	-93.5
Northern Plains	5,895	5,501	-394	-6.7
Mountain	38,387	32,874	-5,513	-14.4
Pacific	3,908	3,647	-261	-6.7
Total	48,391	42,035	-6,356	-13.1
Private Land 4/				
Southern Plains	80,890	88,010	7,120	8.8
Northern Plains	47,740	44,025	-3,715	-7.8
Mountain	175,373	165,632	-9,741	-5.6
Pacific	71,544	57,840	-13,704	-19.2
Total	375,547	355,507	-20,040	-5.3

See footnotes at end of table.

- Continued

Table 42.- Ownership of all pasture and grazing land, by regions, Western Range area, United States, 1930-45 1/ - Continued

Total pasture and grazing land 5/

Region	1930	1954	Change	
			Acreage	Percentage
	1,000 acres	1,000 acres	1,000 acres	Percent
Southern Plains	97,750	91,367	-6,383	-6.5
Northern Plains	62,387	56,430	-5,957	-9.5
Mountain	445,143	429,724	-15,419	-3.5
Pacific	122,916	105,868	-17,048	-13.9
Total	728,196	683,389	-44,807	-6.2

1/ The Western Range area is defined as the 11 Western States plus the counties of the Great Plains States west of an irregular line near the 100th meridian as indicated by map (fig. 1), the Western Range Report, U. S. Senate Doc. 199, 74th Cong., 2d Sess. 1936. The 1930 data are from the Western Range Report, and basic antecedent tables. The 1954 data are from 1954 Census of Agriculture reports and from records and reports of public land management, conservation, and statistical agencies.

2/ Public land includes Federal, State, county, and municipal land. (The estimates for county and municipal land are less complete than for Federal and State land).

3/ Indian land includes tribal and trust-allotted land.

4/ Private land includes all rangeland not included under public and Indian land.

5/ Total pasture and grazing land includes public, Indian, and private land.

Table 43.- Pasture and range land in farms and not in farms, by regions, Western Range Area, 1930 and 1954 - Summary

Regions	Grassland or nonforest 1/			Forest and woodland 2/			Total farm pasture and range		
	1930	1954	Change	1930	1954	Change	1930	1954	Change
	Farm Pasture and Range								
	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres	1,000 acres
Southern Plains	67,014	80,391	13,377	6,954	8,913	1,959	73,968	89,304	15,336
Northern Plains	40,074	51,887	11,813	804	612	-192	40,878	52,499	11,621
Mountain	114,553	197,558	83,005	6,839	20,549	13,710	121,392	218,107	96,715
Pacific	29,557	37,650	8,093	8,054	11,877	3,823	37,611	49,527	11,916
Total	251,198	367,486	116,288	22,651	41,951	19,300	273,849	409,437	135,588
	Nonfarm grazing and range land								
Southern Plains	23,372	2,063	-21,309	410	0	-410	23,782	2,063	-21,719
Northern Plains	20,295	3,076	-17,219	1,213	855	-358	21,508	3,931	-17,577
Mountain	231,185	137,263	-93,922	92,566	74,354	-18,212	323,751	211,617	-112,134
Pacific	47,964	26,646	-21,318	37,342	29,695	-7,647	85,306	56,341	-28,965
Total	322,816	169,048	-153,768	131,531	104,904	-26,627	454,347	273,952	-180,395
	Total pasture and range								
Southern Plains	90,386	82,454	-7,932	7,364	8,913	1,549	97,750	91,367	-6,383
Northern Plains	60,369	54,963	-5,406	2,017	1,467	-550	62,386	56,430	-5,956
Mountain	345,738	334,821	-10,917	99,405	94,903	-4,502	445,143	429,724	-15,419
Pacific	77 521	64,296	-13,225	45,396	41,572	-3,824	122,917	105,868	-17,049
Total	574,014	536,534	-37,480	154,182	146,855	-7,327	728,196	683,389	-44,807

1/ Grassland or nonforest pasture and range includes cropland used only for pasture or plowable pasture, and open permanent pasture (not cropland and not woodland) in farms, and nonforested grassland or open grazing land not in farms.

2/ Forest and woodland pasture and range includes farm woodland pastured and nonfarm woodland and forest usable for grazing.

1930 data compiled from basic tables prepared for the Western Range Report, U. S. Senate Doc. 199, 74th Cong. 2d. Sess. 1936. 1954 data compiled from 1954 Census of Agriculture reports and from records and reports of Federal and State land-management and conservation agencies.

Definitions and Explanations

Cropland.- Total cropland available for crops includes cropland used for crops, cropland used only for pasture, cropland in soil-improvement crops, and idle cropland. The acreage of cropland used only for pasture may also be included with the acreage of other pasture or nonforested pasture if the acreage of all improved land used for pasture is desired.

Cropland used for crops is defined as the acreage actually used and in preparation for crops. It is made up of three components - acreage of cropland harvested (land from which one or more crops were harvested), crop failure, and cultivated summer fallow. Certain areas of newly seeded crops and soil-improvement crops not harvested or pastured are not included, as data relating to them are not now available. Nor is idle cropland included, as the cropland-used-for-crops series is intended to measure changes in the land area in crops or in preparation for crops the following year.

Idle and fallow cropland and cropland used only for pasture are usually considered in the crop-rotation system as land that is used for crops, though not necessarily in each year. Fallow land often is cultivated to conserve moisture and kill weeds in preparation for crops. Much of the idle land is left unplanted for a year or two only, although some of it is the poorer cropland that represents abandonment for crop purposes.

The series on cropland used for crops is based on the series of principal crops harvested and crop losses of the former Bureau of Agricultural Economics and the Agricultural Marketing Service and on data from the Census of Agriculture. The acreages of cropland harvested were used for the 6 censuses taken at 5-year intervals from 1925 to 1950. Interpolations were made for the intervening years, based on the former Bureau of Agricultural Economics series on principal crops harvested. For earlier years, the former Bureau of Agricultural Economics series on principal crops harvested and acreages of specified crops harvested reported by the 10-year censuses were used, and adjustments were made for crops not reported. Additions were made to the acreage of cropland harvested reported by the 1950 and 1954 Censuses of Agriculture to cover some of the underenumeration of cropland harvested that was indicated by postenumeration surveys. 14/ This adjustment was necessary in order to account satisfactorily for the total acreage of crops harvested, as reported by the Agricultural Estimates Division of the Agricultural Marketing Service.

14/ Before the Agricultural Adjustment Administration program began in 1933, farmers usually thought in terms of "gross areas," which did not allow for land occupied by ditches, fencerows, turnrows, or building sites. In later years, their thinking has been more in terms of "net acres." No doubt this change in method of reporting has affected to some extent recent estimates of acreages of individual crops and of total cropland. It has reduced these acreages by an estimated 2 to 3 percent from what they would have been under the definitions of cropland that prevailed prior to 1933. For an estimate on changes in acreage of cropland in the South see Langsford, E. L., Changes in Cotton Production in War and Peace - Analyses by Production Areas. U. S. Dept. Agr., Bur. Agr. Econ. F. M. 45. 33 pp., illus. Washington, D. C., 1944. (Mimeographed.)

Acreages of crop failure as given in census reports were used for census years from 1925 to 1945 when reported, and interpolations for intervening years were based on the crop losses or differences between planted and harvested acreages of principal crops as estimated by the former Bureau of Agricultural Economics. Acreages of crop failure for recent years are based chiefly on crop losses as reported by the Agricultural Marketing Service. Reported acreages of crop losses are adjusted for the replanting of part of the acreage on which winter wheat is abandoned. Hay land that produced nothing but pasture in some dry seasons is not included in crop failure in recent years.

Estimates of acreage of cultivated summer fallow were made only for the geographic divisions that lie west of the Mississippi River. From 1945 to 1948, estimates of fallow were based chiefly on acreages seeded to wheat on summer fallow land, as estimated in the former Bureau of Agricultural Economics and according to data issued by the Great Plains Council. For 1949 and subsequent years, estimates of fallow were based partly on the 1950 and 1954 Censuses of Agriculture, estimates of wheat seeded on summer fallow made by the Agricultural Marketing Service, and information obtained from the Great Plains Council. Estimates for years prior to 1945 were built up from fragmentary data available in the Production Economics Research Branch, Agricultural Research Service.

Pasture and grazing land.- Estimates of the acreage of all pasture and grazing land include open permanent pasture in farms, cropland used only for pasture, farm woodland pastured, and all land grazed not in farms. Grazing land not in farms is part grassland, part shrubs and other nonforest growth, and part brushland and woodland.

In the study reported here, pasture and grazing land is classified in two different ways. One breakdown includes grassland pasture and grazing land and woodland and forest pastured or grazed. The second breakdown separates pasture in farms from grazing land not in farms.

Grassland pasture and grazing land.- Grassland pasture and grazing land includes all land used primarily for pasture and grazing, exclusive of the woodland and forest pastured or grazed. It includes the shrub and brushland types of pasture and grazing land such as sagebrush, scattered mesquite, and some other shrub types in the West, and some scattered brushland pasture in the East, and all tame and wild or native grasses and legumes and other forage used for pasture or grazing.

Woodland and forest pastured or grazed.- Only rough approximations can be made of the total acreage of woodland and forest not in farms which contains some areas that have forage subject to grazing or that have value for grazing at some time during the year. Woodland and forest land actually grazed, or useful for grazing, consists principally of open woodland or forest, scattered cleared and cutover areas, abandoned fields, brush-grown pasture, and other land within forested areas that has grass or other forage growth.

In the Northern States, the woodland areas grazed, or subject to grazing, usually include woodland adjacent to farms in the Corn Belt, the Lake States, and the Northeastern States. Much of the forest land in the Missouri Ozark area is subject to grazing. The acreage of woodland grazed in New England and other sections of the Northeast includes many abandoned fields and brush-grown pastures.

In the Southern States, the woodland and forest lands estimated to be subject to grazing, or useful for grazing, contain areas covered by switch cane, abandoned fields (not reforested), cutover land, and grass and other forage areas within forests, such as the open longleaf-slash pine belt of the Coastal Plain, the Arkansas Ozark area, and some semiprairie, open grassland, and marshland areas near the Atlantic and Gulf coasts.

The chief woodland and forest areas in the Western States that are subject to or useful for grazing include arid woodlands, brush and shrub lands, woodland-grasslands, open forests, and some cutover areas that have grass or other forage growth.

Land use and cover classes of land grazed and in open grassland, shrubs, woodland, and forest are not always mutually exclusive. Grassland includes some brushland, while woodland and forest include many areas of open grass and other forage.

Pastureland in farms.- Farm pastureland consists of open or non-forested pasture, including cropland used only for pasture and other open grassland pasture (not cropland and not woodland), and woodland pastured. (Cropland used only for pasture is also included as a part of the cropland area in arriving at the total acreage of cropland available for crops.)

Improved pasture includes cropland used only for pasture and other grassland pasture in farms. Ordinarily the improved pasture is in tame grasses and legumes, either seeded or natural growth, but it may include native forage. All classes have had two or more improvement or conservation practices applied, such as weed and brush control, seeding or reseeding, either artificial or natural, fertilization, drainage, irrigation, or other similar practices that improve yields.

Grazing land not in farms.- Grazing land not in farms comprises the open grassland and shrub grazing lands and the woodland and forest area grazed. Most of the grazing land not in farms is public land in the Western States, and privately owned nonfarm woodlands in the South.

Forest and woodland.- Forest land and woodland as defined by the U. S. Forest Service includes (1) lands that are at least 10 percent stocked by trees of any size and capable of producing timber or other wood products, or of influencing the climate or the water regime; (2) land from which the trees described in (1) have been removed to less than 10 percent stocking and which have not been developed for other use; (3) afforested areas; and (4) chaparral areas.

Land that is grazed and that bears sparse forest growth - only 10 to 30 percent covered by trees - or from which the forest has been removed to less than 10-percent stocking but which has not been developed for uses other than timber production, or for pasture, may in some areas overlap the acreages reported by farmers as open pasture and grazing land in farms (grassland pasture, or pasture other than cropland and woodland).

Most of the available forest land in the East, North, and South is commercial in character, whereas about two-thirds of such forest land in the Great Plains and half of that in the West is classed as noncommercial woodland growth. Noncommercial woodland includes inaccessible alpine ranges, chaparral, mesquite, pinon-juniper, and semi-arid shrub and brush growth.

Special-use areas.- The specified special uses in this report include those for highways, roads, and railroad rights-of-way, airports, farmsteads, and farm roads and lanes, urban and town areas; parks; wildlife refuges, national defense areas, flood-control areas; and State-owned land held for institutional sites and miscellaneous other uses, such as National Guard Corps and rifle ranges, fairgrounds, airports, radio stations, flood-control areas, and watershed-protection areas.

Special uses of rural land for which estimates are not available include those for industrial and commercial sites in rural areas, mining areas, clay, sand, and stone quarry sites, powerline rights-of-way, cemeteries, and golf courses.

Areas in rural villages and towns with populations of 100 to 1,000 are not included in the area of special uses. At present, the acreage in these villages and towns is included in other major uses of land such as forest, grazing, farm, and other land. Separation would call for revision of accepted major land use areas of many counties and States.

Water area in reservoirs is not included among the special uses of land as the approximate land area of the United States excludes all natural or artificial water bodies of 40 acres or more.

Miscellaneous other areas.- Miscellaneous unaccounted-for areas not found among other major uses include marshes, sand dunes, bare rock areas, and deserts.

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