

Part 4. Section C

Land Improvement Practices and Land Diversion

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PART 4

SECTION C. LAND IMPROVEMENT PRACTICES AND LAND DIVERSION

Data in This Part

Information is presented in this section of part 4, relative to the number of acres used for grain and row crops farmed on the contour, acres in stripcropping systems for soil-erosion control, and acres of cropland and pastureland having terraces for class 1-5 farms. Data are shown for acres diverted under soil-bank or other Federal programs for all farms.

Other Published Data

In addition to the information for land improvement practices and crop diversion, data for 1969 have been published in volume I and in other chapters of volume II. The location of the data are shown in table 1.

Land Improvement Practices and Land Diversion

Data obtained in the 1969 census for class 1-5 farms concerning land-use practices and land diversion under Federal programs are given in this section. The three land-use practices which are covered in this report are related to soil conservation and land

improvement. Information of this nature has been obtained in the last four censuses.

A facsimile of the three inquiries which appeared on the report form is shown below:

Information on acres diverted under Federal programs was obtained for the first time in 1969. Limited information on the number of farms participating in the wheat and in the feed grains program was obtained in the 1964 census. Data for diverted acres were not published at either the State or county level in the 1969 volume I. For 1969, the inquiry included on both the 69-A1 and the 69-A2 report forms was worded as follows:

"How many acres in THIS PLACE were diverted under soil bank or other Federal programs such as those for feed grains, wheat, etc.?"

It should be noted that there were no additional instructions or definitions provided for these inquiries. The farm operator was left to interpret what was to be reported. In the absence of other related data, there was very little basis for comprehensive editing or imputation of the data reported for this item. There was no attempt during the processing to impute data for this item.

Table 1. Other Published Data for Conservation Practices

Where found	Geographical area for which available	Period	Classification	Subjects covered
Volume I				
<u>State tables:</u>				
Class 1-5 farms				
10.....	State.....	1969 to 1959.....	Total farms.....	Farms reporting contouring, stripcropping and terracing.
24.....	State.....	1969.....	Tenure of operator and type of organization...	Farms reporting contouring, stripcropping and terracing.
25.....	State.....	1969.....	Age of operator.....	Farms reporting contouring, stripcropping and terracing.
26.....	State.....	1969.....	Farms by size.....	Farms reporting contouring, stripcropping and terracing.
27.....	State.....	1969.....	Farms by value of sales class.....	Farms reporting contouring, stripcropping and terracing.
28.....	State.....	1969.....	Farms by type.....	Farms reporting contouring, stripcropping and terracing.
29.....	State.....	1969.....	Farms by type and value of sales class.....	Farms reporting contouring, stripcropping and terracing.
30.....	State.....	1969.....	Large-scale farms by type.....	Farms reporting contouring, stripcropping and terracing.
<u>County tables:</u>				
9.....	County and State.....	1969 to 1964.....	Farms, land in farms and land use.....	Farms reporting contouring, stripcropping and terracing.
Volume II:				
Chapter 3.....	United States.....	1969.....	Farms by tenure and type of organization.....	Farms reporting and acres of contouring, stripcropping and terracing.
Chapter 7.....	United States.....	1969.....	Farms by value of sales class.....	Farms reporting and acres of contouring, stripcropping and terracing.
Chapter 8.....	United States.....	1969.....	Farms by type.....	Farms reporting and acres of contouring, stripcropping and terracing.

Facsimile of Section 7, Form 69-A1

Section 7 - Was CONTOUR PLANTING, STRIPCROPPING, or TERRACING in use on this place in 1969?

Yes - Complete this section

No - Go to Section 8

1. Grain or row crops farmed on the contour	083	Acres
2. Stripcropping systems to control erosion	084	Acres
3. Cropland and pastureland having terraces	085	Acres

Cropland Used for Grain or Row Crops Farmed on the Contour

Crops are planted on the contour when the rows or strips are laid out at right angles to the natural slope of the land. Generally, alternate strips or rows of different crops are used to retard soil and water losses. The usual arrangement is to alternate row crops with close seeded crops. The growing of crops on the contour is a widely used soil-conservation practice in the West North Central and the West South Central States. Contour farming also is a common practice in parts of Illinois, Wisconsin, Pennsylvania, and in parts of the cotton-producing area of the South.

The inquiry regarding cropland used for grain or row crops farmed on the contour was included on the report form for class 1-5 farms in the 1969 census for all States. A similar inquiry was included in the 1964 Census of Agriculture for all States except Alaska; in the 1959 census for all States except Hawaii and Alaska; and in the 1954 census for all States except Florida, Hawaii, and Alaska.

Cropland used for grain or row crops farmed on the contour was reported by 9 percent of the class 1-5 farms in the United States. The acreage farmed on the contour amounted to 14.6 million acres, or 6 percent of the cropland harvested on all class 1-5 farms. The acreage of cropland for grain or row crops farmed on the contour, which increased from 18.1 million acres reported for 1954 to almost 20.5 million acres in 1959, and showed a small decrease to 20.3 million acres in 1964, declined almost 28 percent between 1964 and 1969. The number of farms with cropland used for grain or row crops farmed on the contour and the acreage so used for the last four censuses is as follows:

	1969	1964 ¹	1959 ²	1954 ³
Number of farms	147,396	250,344	258,676	241,535
Number of acres	14,572,224	20,254,349	20,495,749	18,099,133
Average acres per farm	98.9	80.9	79.2	74.9
Percent of total farms	8.5	13.8	12.5	11.5

¹Data for Alaska not included.

²Data for Alaska and Hawaii not included.

³Data for Alaska, Florida, and Hawaii not included.

The sizeable decline in acreage of cropland used for grain or row crops farmed on the contour between 1964 and 1969 can be largely attributed to changes in farming practices, although part of the difference may be the result of the change in enumeration procedure from 1964.

Grain and row crops are concentrated on cash-grain and livestock farms. In 1969, over two-thirds of the cropland used for grain and row crops farmed on contour were on cash-grain farms and livestock farms other than poultry and dairy. Data by type of farm are shown in table 2.

Table 2. Cropland Used for Grain and Row Crops Farmed on the Contour by Type of Farm: 1969 and 1964

	Farms reporting		Acres	
	1969	1964	1969	1964
United States, total.	147,396	250,344	14,572,224	20,254,349
Cash-grain.....	31,925	45,977	4,645,275	5,883,458
Tobacco.....	3,769	14,400	72,742	231,123
Cotton.....	5,490	23,475	1,048,842	2,564,849
Other field crop.....	1,938	3,120	263,335	327,537
Vegetable.....	788	1,005	51,689	69,931
Fruit and nut.....	541	858	27,170	34,218
Poultry.....	2,006	6,565	97,770	221,837
Dairy.....	25,769	45,175	1,287,537	2,123,645
Livestock other than poultry and dairy.....	60,737	77,517	5,483,840	6,142,808
Livestock ranches.....	1,473	3,076	114,601	326,462
General.....	12,406	27,925	1,454,589	2,282,171
Miscellaneous.....	554	1,251	24,834	46,310

Data presented in chapter 7, of this volume indicate that the larger and more productive farms account for a large proportion of acreage involved in land-improvement practices. Three-fifths of the land reported as farmed on the contour was on farms with farm sales of \$20,000 and over. The following table shows data for the three land-use practices by class 1-5 farms.

	Percent distribution of acreage		
	Farmed on the contour	In strip-cropping	Having terraces
Total	100.0	100.0	100.0
Class 1	30.5	21.6	25.8
Class 2	29.6	35.0	27.6
Class 3	23.3	28.4	24.4
Class 4	11.5	11.1	14.4
Class 5	5.2	3.9	7.9

Land in Stripcropping Systems for Soil-Erosion Control

Stripcropping, although not defined in 1969, is usually considered as the practice of alternating close grown crops with strips or bands of row crops with bands of cultivated fallow land. Stripcropping, stubble mulching, and other conservation practices help control soil blowing. Wind stripcropping involves the planting of crops in strips of uniform width, which are arranged at right angles to the direction of prevailing wind. Small grain crops and cultivated summer fallow often occupy the alternating strips.

Since 1964, there has been a decrease of more than 20 percent in the acreage in stripcropping systems for soil-erosion control. The following figures indicate the magnitude of the change for the last three censuses:

	1969	1964	1959
Number of farms	62,672	102,049	105,786
Number of acres	12,447,013	16,029,231	15,349,750
Average acres per farm . .	198.6	157.1	145.1
Percent of total farms . . .	3.6	5.6	5.1

By type of farm, cash-grain farms contributed more than one-half of the total acreage in stripcropping systems. According to the data in table 3, all types of farms showed decreases in the acreage of land in stripcropping systems between 1964 and 1969. Data by type of farm are provided in table 3.

Table 3. Land in Stripcropping Systems for Soil Erosion Control by Type of Farm: 1969 and 1964

	Farms reporting		Acres	
	1969	1964	1969	1964
United States, total.	62,672	102,049	12,447,013	16,029,231
Cash grain.....	14,121	22,911	6,836,505	9,104,520
Tobacco.....	1,578	2,926	28,876	46,050
Cotton.....	669	2,341	126,128	274,050
Other field crop.....	784	1,499	103,984	147,031
Vegetable.....	335	427	27,637	29,250
Fruit and nut.....	276	562	13,010	24,428
Poultry.....	767	1,952	49,128	93,248
Dairy.....	20,795	35,978	1,445,633	2,126,410
Livestock other than poultry and dairy.....	17,876	22,516	2,927,055	3,015,280
Livestock ranches.....	907	1,235	200,266	268,160
General.....	4,300	9,232	675,264	874,200
Miscellaneous.....	264	470	13,527	26,560

The data on stripcropping for 1969 relate to class 1-5 farms for all States. The comparable data are available for 1964 and 1959 for all States except Alaska. The 1954 data relate to only 14 States and part of Texas.

The 63 thousand class 1-5 farms reporting the use of stripcropping systems for erosion control in 1969 accounted for between 3 and 4 percent of the class 1-5 farms in the United States. The acreage in stripcropping totaled 12.4 million or 5 percent of the cropland harvested in 1969.

This conservation practice is most important in the wheat-producing areas in the Great Plains. Of the 12.4 million acres in stripcropping systems in 1969 on class 1-5 farms, about 4.5 million acres were in Montana, and 2.8 million acres were in North Dakota.

Cropland and Pastureland Having Terraces

This item relates to the acreage in ridge-type or channel-type terraces constructed on sloping cropland or pastureland to control water erosion. The acreage served by terraces is generally considered to be the gross area which has been affected or improved by the construction of terraces. The inquiry regarding cropland and pastureland having terraces was included on the report form for class 1-5 farms in the 1969 census for all States. This inquiry was not included as part of the 1964 census; however, data are available from the 1959 census, for all States except Alaska and Hawaii.

There were 16.4 million acres of cropland and pastureland served by terraces in 1969. Kansas with 4.4 million acres, Texas with 3.7 million acres, and Oklahoma with 2.1 million acres were the three leading States. These three States account for three-fifths of the total acreage.

The number of farms reporting cropland and pastureland having terraces decreased by about 161,000 farms, or about 56 percent, from 1959 to 1969. The acres of cropland and pastureland having terraces decreased by about 10.2 million acres, or 38 percent, from 1959 to 1969. The comparative data are as follows:

	1969	1959
Number of farms	117,294	278,426
Number of acres	16,435,486	26,665,027
Average acres per farm	140.1	95.8
Percent of total farms	6.8	13.5

The decreasing amount of land terraced in recent years and the failure to improve and maintain older terraces account for a significant part of the decrease in the acreage served by terraces. Of the 10.2 million acre decrease, 3.5 million took place in Texas. Georgia and Alabama also show decreases of more than one million acres. Kansas, with an increase of 122,000 acres, was the only major State to show an increase.

By type of farm, the acreage in terraces on cotton farms declined 3.5 million acres, or about 75 percent. Changes in the acreage served by terraces from 1959 to 1969 by type of farm are shown in table 4.

Table 4. Cropland and Pastureland Having Terraces: 1969 and 1959

	Farms reporting		Acres	
	1969	1959	1969	1959
United States, total.	117,294	278,426	16,435,486	26,665,027
Cash-grain.....	24,411	41,327	4,735,565	5,491,235
Tobacco.....	4,024	19,996	130,991	523,591
Cotton.....	4,344	38,033	1,064,673	4,611,705
Other field crop.....	1,926	3,469	272,757	292,887
Vegetable.....	401	650	24,557	41,771
Fruit and nut.....	730	2,349	43,867	197,946
Poultry.....	2,127	12,109	122,488	537,939
Dairy.....	11,779	33,615	869,075	2,111,038
Livestock other than poultry and dairy.....	51,385	83,575	6,684,804	7,940,687
Livestock ranches.....	4,718	10,338	697,334	1,849,779
General.....	10,690	30,321	1,732,685	2,866,394
Miscellaneous.....	759	2,554	56,690	200,055

Land Diverted and Federal Programs

The 1969 census data indicates there were 1,130,000 farms reporting 53.3 million acres of land diverted under Federal farm programs. Of these farms with diverted acres, 851,000 reported receiving \$1.9 billion in government payments. Over one-half of the farms with diverted acres and about three fifths of the acres diverted were on farms in the North Central States. The size distribution for acres diverted for all farms are shown in table 5.

Table 5. Percent Distribution of Farms by Acres Diverted

	United States	The Northeast	The North Central	The South	The West
Total.....	100.0	100.0	100.0	100.0	100.0
1 to 9 acres.....	22.3	37.5	14.3	33.5	22.7
10 to 19 acres.....	20.4	27.6	18.8	23.2	12.0
20 to 39 acres.....	27.3	23.7	30.4	24.1	16.5
40 to 79 acres.....	16.2	8.1	20.6	10.1	15.6
80 to 119 acres.....	5.9	1.7	7.4	3.6	8.4
120 to 199 acres.....	4.2	1.0	4.9	2.9	8.8
200 to 399 acres.....	2.6	0.4	2.6	2.0	8.8
400 acres and over.....	1.1	0.1	1.0	0.8	7.1

During the processing of the data, no effort was made to impute for land diverted or for government payments or to reconcile the two data items. It was apparent during the processing of the data that some farm operators mistakenly reported their total allotted acreage in place of the diverted acreage. Because of the wide range in the acres a farm operator was allowed to divert under the program options, it was not feasible to check closely

the data reported or to detect errors which were within acceptable limits. Thus, there probably is an understatement in the number of farms with diverted acres reported. At the same time there may be an overstatement of the acreage diverted for those farms which did report.

According to the Agricultural Stabilization and Conservation Service of the Department of Agriculture, for 1969, there were 58 million acres of cropland withheld from production under specified programs. This acreage included some land which was devoted to substitute crops. Also, farms with all acreage idle under Federal programs during 1969 were not included in census data. The acreage withheld under each Federal program provides some indication of what constitutes the diverted acreage reported in the census.

	Millions of acres
Total cropland withheld	58.0
Conservation reserve	3.4
Feed grains	39.1
Corn	27.2
Sorghums for grain	7.5
Barley	4.4
Wheat	11.1
Cropland conversion	0.5
Cropland adjustment	3.8