
CHAPTER I. Irrigation of Agricultural Lands

This chapter presents statistics on irrigation practices and results as provided by farms and ranches in the 1974 Census of Agriculture.

The effect of changing the definition of a farm on the comparability of data for the 1974 census with those of earlier censuses is touched upon in this chapter. A more detailed explanation of the change in the definition of a farm can be found in volume II, part 1.

Part 1 also contains information on how the 1974 Census of Agriculture was taken and processed, and factors influencing the accuracy of the data. In the 50 States, there were 236 thousand farms which reported irrigating at least part of their land. Although this is a small number in relation to the 2.3 million farms and ranches in the entire Nation, irrigation is significantly important in the total agriculture production. While accounting for only 11.9 percent of the farms with sales of \$2,500 and over, irrigated farms accounted for 27.2 percent of the total value of agricultural products sold.

Availability of Data

Additional data for individual crops irrigated for farms with sales of \$2,500 and over are presented in volume II, part 6. Irrigation data on acres of fruits and nuts were not collected in the 1974 census, leaving irrigated land in orchards as the only data item published for orchard crops.

Farm irrigation data on a county basis are available but are not presented here due to space limitations. Most of the items of data presented in the tables of this report may be obtained for counties from Volume I, State and County Data, chapters II, III, and IV.

Definitions and Explanations

Most of the definitions needed for understanding the terms in the tables have been provided in volume II, part 1. Following are a few additional terms and concepts.

Irrigated farms—A farm with any agricultural land irrigated in the census year is classified as an irrigated farm. The acreage irrigated may vary from a very small portion of a farm to complete irrigation of all agricultural land.

Acres irrigated—Any land in farms or ranches to which water was artificially applied in the census year (1974) was counted as irrigated. Land irrigated prior to but not in the census year is not included. Irrigation may have been used for producing a harvested crop, for pasture or grazing lands, for cultivated summer fallow, or for land planted to a crop intended for future harvest. Land flooded during high water periods was to be included as irrigation only if water was diverted to agricultural lands by dams, canals, or other works.

Acre-feet—The amount of water required to cover 1 acre to a depth of 1 foot is an acre-foot. This is equivalent to 43,560 cubic feet or 325,850 gallons.

Wholly irrigated—If all of the acreage harvested for a specified crop was irrigated, the crop was counted as wholly irrigated. No measure of the adequacy of the applied water was obtained in the census.

Partly irrigated—If the acreage irrigated for a specified crop was less than the total acreage harvested for that crop, the crop was counted as partly irrigated.

Historical Comparability

Questions regarding irrigation of farm or ranch land have been included in each census of agriculture since 1890. The kinds of irrigation data collected in each census are summarized briefly.

1890—Total acres irrigated and number of flowing artesian wells.

1900—Acres irrigated by water, from natural streams, and from pumped or artesian wells.

1910—Acres of land irrigated and acres of pasture irrigated.

1920—Acres of land irrigated and expenditures for irrigation water.

1930—Acres of irrigated cropland and acres and quantity of each crop harvested on irrigated land.

1935—Total acres from which irrigated crops were harvested.

1940—Acres of land from which irrigated crops were harvested and total acres of irrigated land used only for pasture.

1945—Total acres of land irrigated.

1950—Total acres of land irrigated and acres irrigated by sprinklers.

1954—Total acres irrigated.

1959—Total acres irrigated and acres irrigated by sprinklers and acres of selected crops harvested from irrigated land.

1964—Total acres irrigated, acres of irrigated land used only for pasture or grazing, acres of harvested cropland irrigated, acres of selected crops harvested from irrigated land, and quantity of selected crops harvested from irrigated land.

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1969—Total acres irrigated available for all farms. Available for farms with sales of \$2,500 and over: Acres of harvested cropland irrigated; acres of cropland used only for pasture or grazing irrigated; other pastureland irrigated; any other land irrigated; acres irrigated by sprinklers; acres irrigated by furrows or ditches; acres irrigated by flooding; acres irrigated by subirrigation; percent of water obtained from well or spring; percent of water obtained from a surface supply not controlled by a water supply organization; percent of water obtained from water suppliers; total quantity of water used; farms that irrigated land since January 1965; and acres of individual harvested crops irrigated, 1969.

1974—Total land irrigated available for all farms. Available for farms with sales of \$2,500 and over: Acres of harvested cropland irrigated; acres of cropland used only for pasture or grazing irrigated; acres of cropland used for cover crops irrigated; acres of cropland on which all crops failed irrigated; acres of idle cropland irrigated; improved pasture irrigated; acres irrigated by furrows or ditches; acres irrigated by flooding; acres irrigated by subirrigation; acres irrigated by

self-propelled sprinkler systems; acres irrigated by other sprinkler systems; total quantity of water used for irrigation; no irrigation in census year, but irrigating during 1970 to 1973; most recent year in which acres were irrigated and total acres irrigated that year; and acres of individual harvested crops irrigated.

A facsimile of the irrigation items on the 1974 form A1 used for farms with sales of \$2,500 and over is presented in section 19. The facsimile of section 7 is an example of how the acres irrigated for individual crops were obtained. A facsimile of the entire form A-1 is shown in the appendix of volume II, part 1.

A facsimile of the irrigation item on the 1974 form A2 used to obtain the number of acres irrigated on farms with sales of under \$2,500 is presented in section 6.

Change in Farm Definition

For all final reports of the 1974 Census of Agriculture, the census definition of a farm was any place which during the census year had or normally would have had sales of agricultural products of \$1,000 or more. The 1974 definition differs from the earlier definition in only two respects:

(1) The criterion for number of "acres in place" has been deleted.

(2) The criterion for minimum value of agricultural products sold has been changed to \$1,000.

The effect of the change in farm definition was to reduce the number of irrigated farms and to a lesser extent, reduce the number of acres irrigated. As a result of the change in the definition of a farm, a total of 8,432 (3.6 percent) irrigated places with some agricultural operations, and 54,551 (1.0 percent) acres irrigated were excluded from the 1974 Census of Agriculture. Table 1 gives the number of places and acres irrigated that were excluded in 1974 and the farms and acres irrigated that would have been excluded in the 1969 census by the 1974 census definition of a farm.

Presentation of Data

As in 1969, two different report forms were used in 1974: A regular (A1) report form for farms with \$2,500 or more of sales, and a short (A2) report form for farms less than \$2,500 in value of sales. This difference in source of data is noted at the top of tables 6 through 19 of this chapter.

Section 19 Was any of the LAND in this place IRRIGATED in 1974? YES — Answer items 1 and 2 below

NO — Answer item 3 below

1. How many acres were irrigated in 1974 by each of these methods?

- a. Furrows or ditches
- b. Flooding
- c. Subirrigation
- d. Self-propelled sprinkler system (center pivot, traveling guns, traveling booms, etc.)
- e. All other sprinkler systems (solid set, move pipe, wheel lines, tow lines, etc.)

None	Acres irrigated in 1974
<input type="checkbox"/>	523
<input type="checkbox"/>	524
<input type="checkbox"/>	525
<input type="checkbox"/>	526
<input type="checkbox"/>	527

Estimated quantity of water used in 1974 (See separate Instructions for additional information on estimating quantity of water used.)

2. Please estimate the quantity of water used for irrigation in 1974 (Report in the unit or units of measure most convenient for you.)

- a. Acre-feet (One acre-foot covers one acre, one foot deep)
- b. Gallons (Pumping capacity per minute X 60 minutes X hours operated in season)
- c. If acre-feet or gallons cannot be estimated in a or b above, give depth in inches of all water applied

Water used in 1974	
531	Acres-foot Tenth / 10
532	Gallons
533	Total inches

3. If no land was irrigated in 1974, was there any land in this place irrigated at any time in 1970-1973?

- YES Complete a and b →
- NO Go to Section 20 on next page

- a. What was the most recent year in which acres were irrigated? 535 _____ Year
- b. How many acres were irrigated in that year? 536 _____ Acres

Section 7 Were any **SOYBEANS, PEANUTS, DRY BEANS, or DRY PEAS** harvested from this place in 1974?

- YES — Complete this section
- NO — Go to Section 8

	Acres harvested	Quantity harvested	Acres irrigated	Commercial fertilizer used				
				Acres fertilized	Dry		Liquid or gas	
					Whole tons	Tenths	Whole tons	Tenths
1. Soybeans for beans ^②	121	1 Bushels	2	3	4	/10	5	/10
2. Peanuts for nuts ^③	122	1 Pounds	2	3	4	/10	5	/10
3. Dry field and seed beans	123	1 100-lb bags	2	3	4	/10	5	/10
4. Dry lima beans	124	1 100-lb bags	2	3	4	/10	5	/10
5. Dry field and seed peas ^④	125	1 Pounds	2	3	4	/10	5	/10
6. Cowpeas for dry peas ^⑤	126	1 Bushels	2	3	4	/10	5	/10

- ② Soybean hay is to be reported in Section 10 and soybeans hogged or grazed, cut for silage, or plowed under in Section 16.
- ③ Peanut hay is to be reported in Section 10.
- ④ Austrian winter peas are to be reported in Section 11.
- ⑤ Cowpea hay is to be reported in Section 10, green cowpeas in Section 12, cowpeas hogged or grazed or cut for silage in Section 16.

Section 6 **LAND USE IN 1974**

The purpose of this section is to distribute all acres in "THIS PLACE" among items 1 through 5

NOTE: If the same land had more than one use in 1974, REPORT THAT LAND ONLY ONCE — in the first use that applies. For example, cropland that was harvested and pastured is to be reported only as "Cropland harvested."

- 1. Cropland harvested (Include all land from which crops were harvested or hay was cut, and all land in orchards, citrus groves, vineyards, and nursery and greenhouse products. If two crops were harvested from the same land in 1974, report the acres only once)
- 2. Cropland used only for pasture or grazing
- 3. All other cropland (Include cropland used for soil-improvement crops, crop failure, cultivated summer fallow, and idle cropland.)
- 4. Woodland (Include woodland pasture.)
- 5. All other land (Include pastureland other than cropland and woodland pasture, rangeland, and land in house lots, barn lots, ponds, roads, wasteland, etc.)
- 6. **TOTAL ACRES IN "THIS PLACE"** (Please add the acres reported in items 1 through 5 and enter the total in this space.)
(This total should be the same as the total in Section 3, item 4.)

Number of acres	
502	
503	
504	
510	
513	
517	

7. How much of the total land reported in item 6 was IRRIGATED in 1974? 528 Acres irrigated

Evaluation of Data

Comparison of irrigation data obtained for all farms in the 1974 census to noncensus irrigation data suggests some undercoverage in the census of irrigated farms and/or acres. The noncensus estimates are not necessarily directly comparable to those of the census because of differences in definitions used and lack of uniform procedure in collecting the figures. Some of the reasons for the

differences between census and non-census irrigation data are:

Irrigated land on farms missed in the census. An estimated 10.7 percent of all farms and 4.7 percent of the farms with sales of \$2,500 and over were not covered in the census.

The data collection form contained many questions to which some farm operators failed to respond completely.

Nonrespondents for farms or ranches with an expected sales of \$40,000 and over were telephoned to obtain the census data. In some cases, the irrigation data were not obtained.

Some farms and ranches failed to report some types of controlled flooding systems which are used to irrigate pasture and hay land in the Western United States.

The census does not include any irrigated areas such as lawns, golf courses,

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cemeteries, parks, woodland, and other areas not defined as farmland.

Only land in farms irrigated during the census year for agricultural production is included. Land which was irrigated in other years but not in the census year and land which could be irrigated if water and equipment were available are excluded.

Office Processing

Generally, the acreage for irrigated land was accepted as reported by the farm operator. Changes were made only when there were obvious reporting errors indicated by inconsistencies between irrigated land and other related entries.

A computer edit program based on specifications provided by the professional staff of the Agriculture Division checked the mathematical consistencies

of the acreage figures for each farm and automatically corrected or adjusted the figures when necessary.

Some crops are seldom grown commercially in arid areas without being irrigated. In order to compensate for the failure of some farm operators to report irrigation, provisions were made in the computer edit to impute irrigation data if it was not reported for specified crops in arid areas. For example, in Arizona, if lettuce was not reported as irrigated by the farm operator the computer edit would change the acres irrigated to agree with the acres harvested.

Large edit changes made by the computer and extremely large irrigation acreages reported by farm operators were reviewed by a staff statistician. After rechecking information on reports or by telephoning respondents, significant errors were corrected.

Conclusions

Historically, the numbers of irrigated farms in the United States enumerated by the census increased consistently over time through 1954. In the censuses of 1959, 1964, 1969, and 1974 the numbers declined. This decline can be attributed to the trend toward fewer but larger farms. Changes in farm definition between 1969 and 1974 (see table 1) and between 1954 and 1959 (see 1959 Census of Agriculture, volume II, Introduction), also had an effect on the number of farms reporting irrigation.

Tables 7 through 9 in this chapter present data for all farms and tables 10 through 19 contain data for farms with sales of \$2,500 and over.

The omission of farms with sales of under \$2,500 and of abnormal farms from tables 10 through 19 is an omission

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of the smaller irrigated farms. The irrigated farms with sales of \$2,500 and over numbered 34,600 less than all irrigated farms. However, 32,547 farms of this difference is accounted for by the farms having less than 50 acres irrigated. While irrigated farms with sales under \$2,500 and abnormal farms comprise 14.6 percent of all irrigated farms, they account for only 1.8 percent of all irrigated land.

The 1974 Census of Agriculture enumerated 236,733 farms with irrigated land in the 50 States. Of the total number of irrigated farms, 202,133 (85.4 percent) were farms with sales of \$2,500 and over. Irrigated farms counted in 1974 were 7.9 percent less than figures shown in the 1969 Census of Agriculture and 20.4 percent less than the 1964 Census of

Agriculture. Irrigated farms with sales of \$2,500 and over in 1974 showed decreases of 5.2 percent and 12.2 percent respectively, from the 1969 and 1964 censuses.

The States with the largest concentrations of irrigated farms, in proportion to the total number of farms, are located in the Western half of the United States.

The 17 Western States and Louisiana account for 83.1 percent of all irrigated farms. California, Texas, and Nebraska account for 45.8 percent of the irrigated farms in the West.

The 30 Eastern States, Alaska, and Hawaii, account for 16.9 percent of irrigated farms. Florida, Arkansas, North Carolina, Georgia, and Kentucky account for 51.0 percent of the irrigated farms in the East.

The number of farms applying water to crops or pasture can vary considerably from year-to-year due to uncontrollable conditions such as climate. The availability of water for irrigation depends on the quantity and timing of precipitation or on the fluctuation in the ground water table. Rain or the lack of it during the growing season determines the need for artificial application of water. The East Atlantic Coastal States and Midwestern States have the largest variation in year-to-year irrigation, while arid States of the Southwest consistently irrigate. The 1974 census collected data on the year and acres last irrigated for farms which irrigated during the period 1970 through 1973, but did not irrigate in the 1974 census year. Table 2 compares the 1974 data to similar data collected in the 1969 census.

Table 2. Farms Not Irrigated During Census Year but Reporting Irrigation in the Previous 4 Years: 1974 and 1969

Farms With Sales of \$2,500 and Over	Not irrigated in 1974 but irrigated between 1970 and 1973		Farms not irrigated in 1969 but irrigated between 1965 and 1968	Farms With Sales of \$2,500 and Over	Not irrigated in 1974 but irrigated between 1970 and 1973		Farms not irrigated in 1969 but irrigated between 1965 and 1968
	Farms	Acres			Farms	Acres	
United States.....	8,666	348,359	18,839	WEST NORTH CENTRAL--Con.			
REGIONS				South Dakota.....	108	9,488	156
Northeast.....	476	14,221	1,169	Nebraska.....	241	14,127	744
North Central.....	1,232	64,503	3,246	Kansas.....	224	12,762	458
South.....	5,053	170,453	9,364	SOUTH ATLANTIC			
West.....	1,905	99,182	5,060	Delaware.....	25	1,869	35
DIVISIONS				Maryland.....	39	1,154	89
New England.....	103	3,603	229	Virginia.....	337	5,439	825
Middle Atlantic.....	373	10,618	940	West Virginia.....	18	232	23
East North Central.....	408	12,827	1,080	North Carolina.....	943	12,010	2,219
West North Central.....	824	51,676	2,166	South Carolina.....	178	4,969	331
South Atlantic.....	2,463	48,895	5,269	Georgia.....	598	11,301	977
East South Central.....	1,063	16,826	1,394	Florida.....	325	11,921	770
West South Central.....	1,527	104,732	2,701	EAST SOUTH CENTRAL			
Mountain.....	655	47,718	1,565	Kentucky.....	814	4,510	869
Pacific.....	1,250	51,464	3,495	Tennessee.....	144	1,942	260
NEW ENGLAND				Alabama.....	31	1,640	111
Maine.....	27	2,073	46	Mississippi.....	74	8,734	154
New Hampshire.....	5	76	20	WEST SOUTH CENTRAL			
Vermont.....	29	688	26	Arkansas.....	223	13,676	352
Massachusetts.....	18	301	59	Louisiana.....	127	12,140	236
Rhode Island.....	2	16	6	Oklahoma.....	299	16,784	411
Connecticut.....	22	449	72	Texas.....	878	62,132	1,702
MIDDLE ATLANTIC				MOUNTAIN			
New York.....	144	4,420	358	Montana.....	252	19,411	442
New Jersey.....	79	2,575	237	Idaho.....	87	4,287	329
Pennsylvania.....	150	3,623	345	Wyoming.....	48	3,688	97
EAST NORTH CENTRAL				Colorado.....	148	10,937	293
Ohio.....	81	1,566	206	New Mexico.....	61	5,889	127
Indiana.....	51	1,200	212	Arizona.....	26	1,654	83
Illinois.....	47	2,436	195	Utah.....	26	1,462	175
Michigan.....	175	5,513	340	Nevada.....	7	390	19
Wisconsin.....	54	2,112	127	PACIFIC			
WEST NORTH CENTRAL				Washington.....	323	12,188	573
Minnesota.....	47	1,886	150	Oregon.....	329	11,328	743
Iowa.....	20	877	217	California.....	586	26,136	2,152
Missouri.....	132	10,052	294	Alaska.....	6	278	1
North Dakota.....	52	2,484	147	Hawaii.....	6	1,534	26

Irrigated Land in Farms

Although the number of irrigated farms increased up to 1954 then decreased in number since, each census since 1935 has marked an increase in acreage of land irrigated. In the 17 Western States and Louisiana, the 1974 acreage irrigated has nearly tripled since 1935. In the 30 Eastern States, Alaska, and Hawaii irrigated acreage increased nearly 17-fold in this time period. The difference in rate and timing of development reflects the differences in climate in the East and West. In much of the arid West, irrigation has been a prerequisite to cultivated crop production. While irrigation during short rainfall periods in the Eastern States can be a definite benefit to production, it is seldom required to prevent complete failure.

The 1974 census shows that 41.2 million acres were irrigated in the 50 States. In comparison with previous censuses, this represents an increase of 2.1 million acres irrigated, or 5.4 percent

since 1969, and an increase of 4.2 million acres irrigated, or 11.3 percent since 1964. Most of the acreage increase in irrigated land has occurred in the 17 Western States and Louisiana. This area has shown an increase of 1.9 million acres since 1969 and an increase of 3.6 million acres since 1964. However, in terms of percentage increase in irrigated land, the 30 Eastern States, Alaska, and Hawaii have shown the largest increase at 7.1 percent since 1969, and a 19.2 percent increase since 1964.

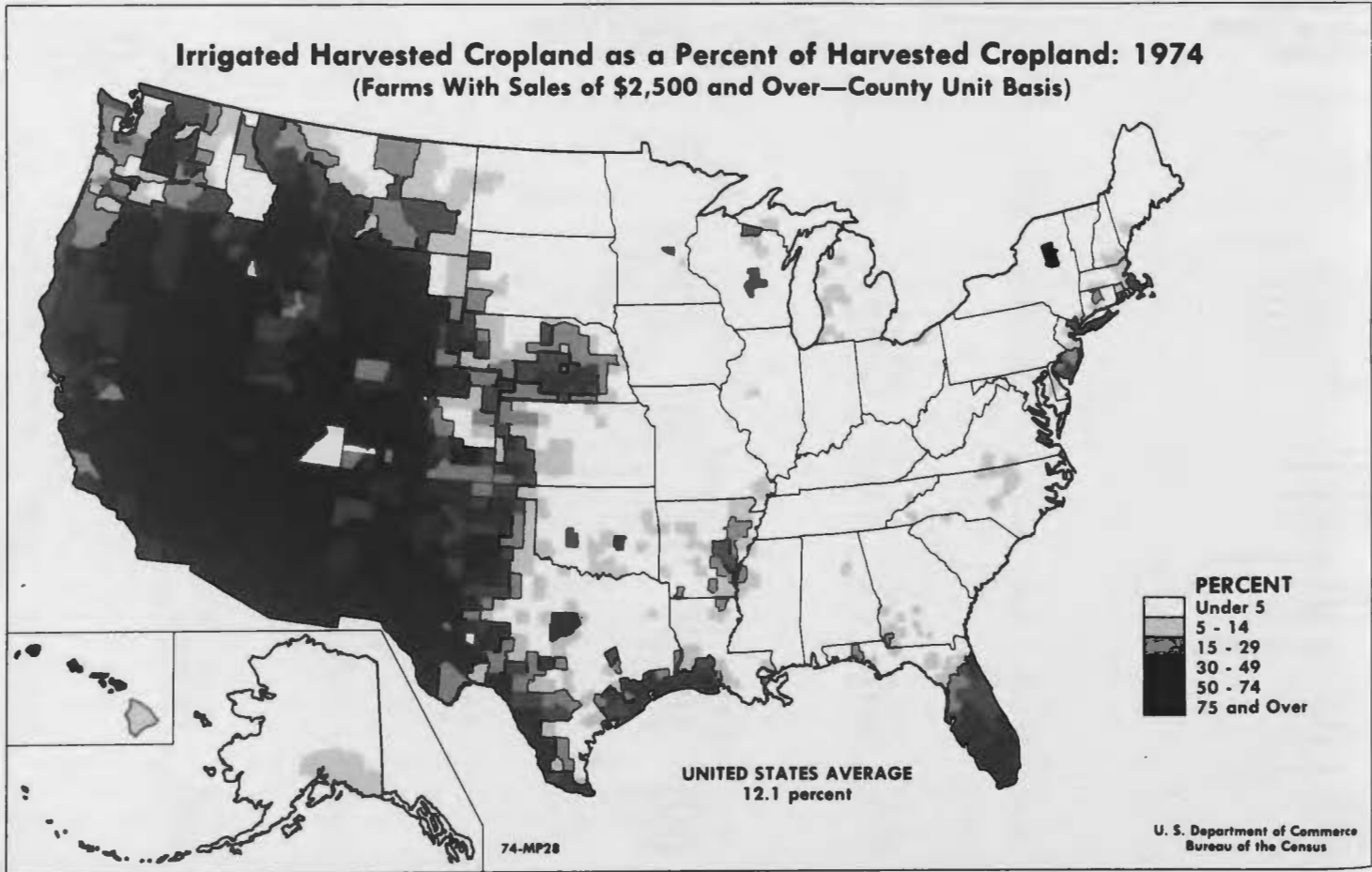
Crops by Acres Irrigated

The most common crops grown on irrigated land are listed in descending order in table 3 by percent of crop irrigated in 1974. Also shown are acres irrigated and acres harvested by crop. The importance of irrigation to the production of selected crops is clearly indicated by the percent of the total acreage of each crop that is grown under irrigation. In general, the crops which produce the greater monetary returns per

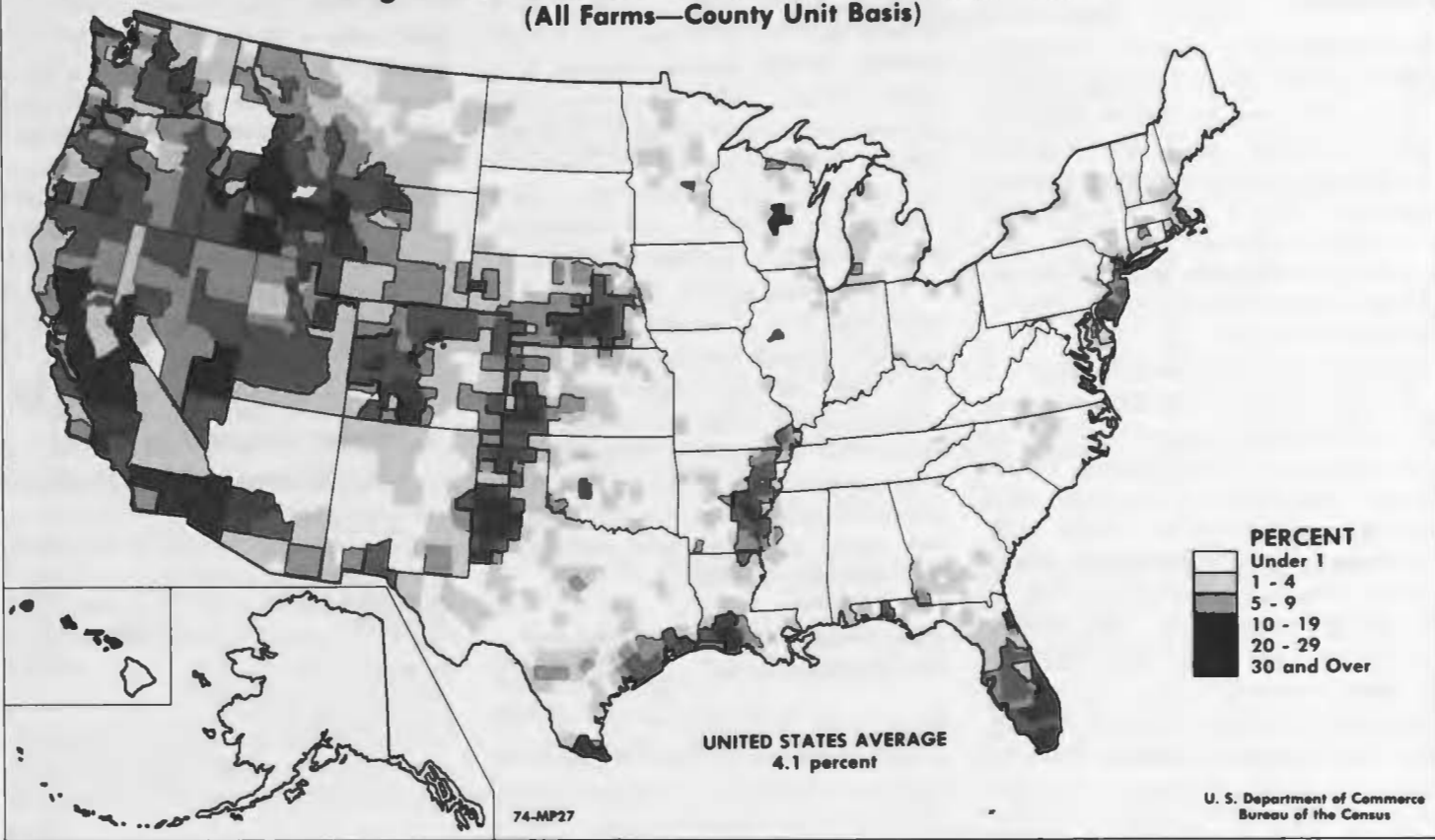
acre have a greater percentage of the total acreage irrigated, while the crops producing lower values per acre show a lower percentage of the total acreage irrigated.

Table 3. Percent of Crops Irrigated, Acres Irrigated, and Acres Harvested, for Selected Crops: 1974

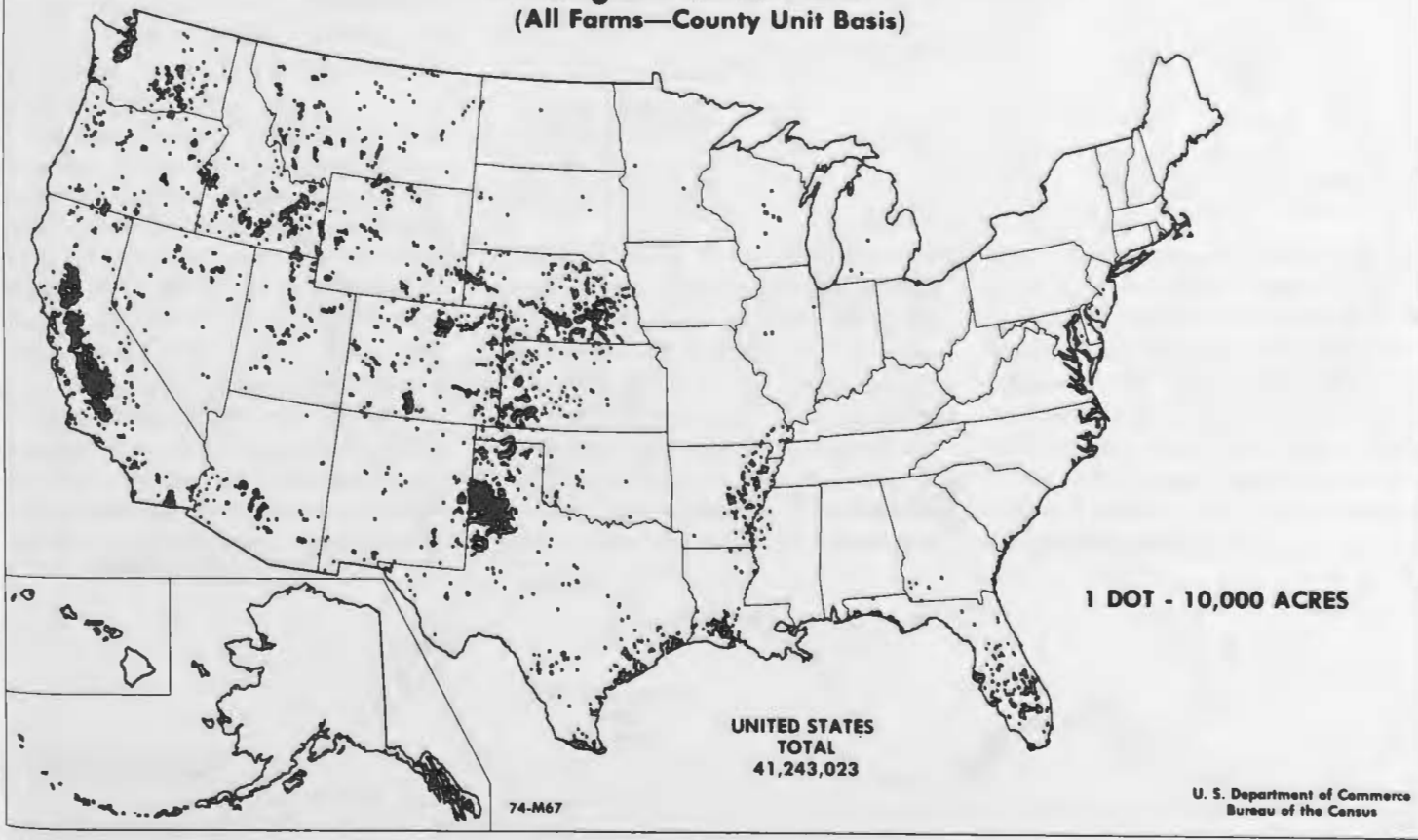
	Percent of crop irrigated	Acres irrigated (1,000)	Acres harvested (1,000)
Farms With Sales of \$2,500 and Over			
Land in orchards.....	62.9	2,547	4,048
Irish potatoes.....	57.6	769	1,334
Small grains.....	57.3	2,707	4,720
Vegetables, sweet corn, or melons for sale.....	52.1	1,601	3,070
Berries for sale.....	52.1	60	114
Cotton.....	30.5	3,699	12,129
Barley.....	18.4	1,340	7,286
Sorghums for all purposes.....	18.2	2,650	14,596
Field seed crops.....	15.8	278	1,759
Hay crops.....	15.1	7,861	52,068
Peanuts for nuts.....	13.2	179	1,359
Tobacco.....	10.6	89	842
Corn for all purposes.....	9.4	6,674	71,220
Wheat.....	5.2	3,236	62,594
Improved pasture.....	4.6	1,760	38,007
Cropland pasture.....	3.4	2,219	65,687
Rye.....	2.1	13	637
Oats.....	1.6	176	11,143
Soybeans for beans.....	1.0	474	47,788
Other crops.....	39.2	1,877	4,782



Irrigated Land as a Percent of Land in Farms: 1974 (All Farms—County Unit Basis)



Irrigated Land: 1974 (All Farms—County Unit Basis)



Method of Irrigation Water Distribution

The method used to distribute or apply irrigation water varies from one area to another. The four primary methods of applying irrigation water are: Furrows and ditches, flooding, sprinklers, and sub-irrigation. Of the four, furrows and ditches are used most extensively, particularly in the Western States. However, in the Eastern States, the sprinkler method predominates.

Of the 40.5 million acres irrigated on farms with sales of \$2,500 and over, furrow and ditch irrigation was used on 19.0 million acres (46.9 percent). Flooding was used on 11.4 million acres (28.0 percent), sprinklers on 9.9 million acres (24.5 percent), and subirrigation on 0.8 million acres (2.0 percent). The sum of the acreage irrigated by each method exceeds the total acres irrigated because on some farms more than one method was used to irrigate the same acreage. Most farms applied irrigation water by

only one method. Of the total acreage irrigated, 28.1 million acres (69.4 percent) were on farms reporting a single method. Of the acreage irrigated by a single method, 13.6 million acres (48.5 percent) were irrigated by furrows and ditches; 7.9 million acres (28.0 percent) by flooding, 6.2 million acres (22.1 percent) by sprinklers, and 0.4 million acres (1.4 percent) by subirrigation.

The methods used to apply irrigation water also have a definite effect on the quantity of water applied per acre (table 4). Water use was highest on farms utilizing flood irrigation. These farms reported an average of 2.22 acre-feet of water applied per acre. At the U.S. level, self-propelled sprinkler systems showed the lowest water use with averages of 1.37 acre-feet per acre.

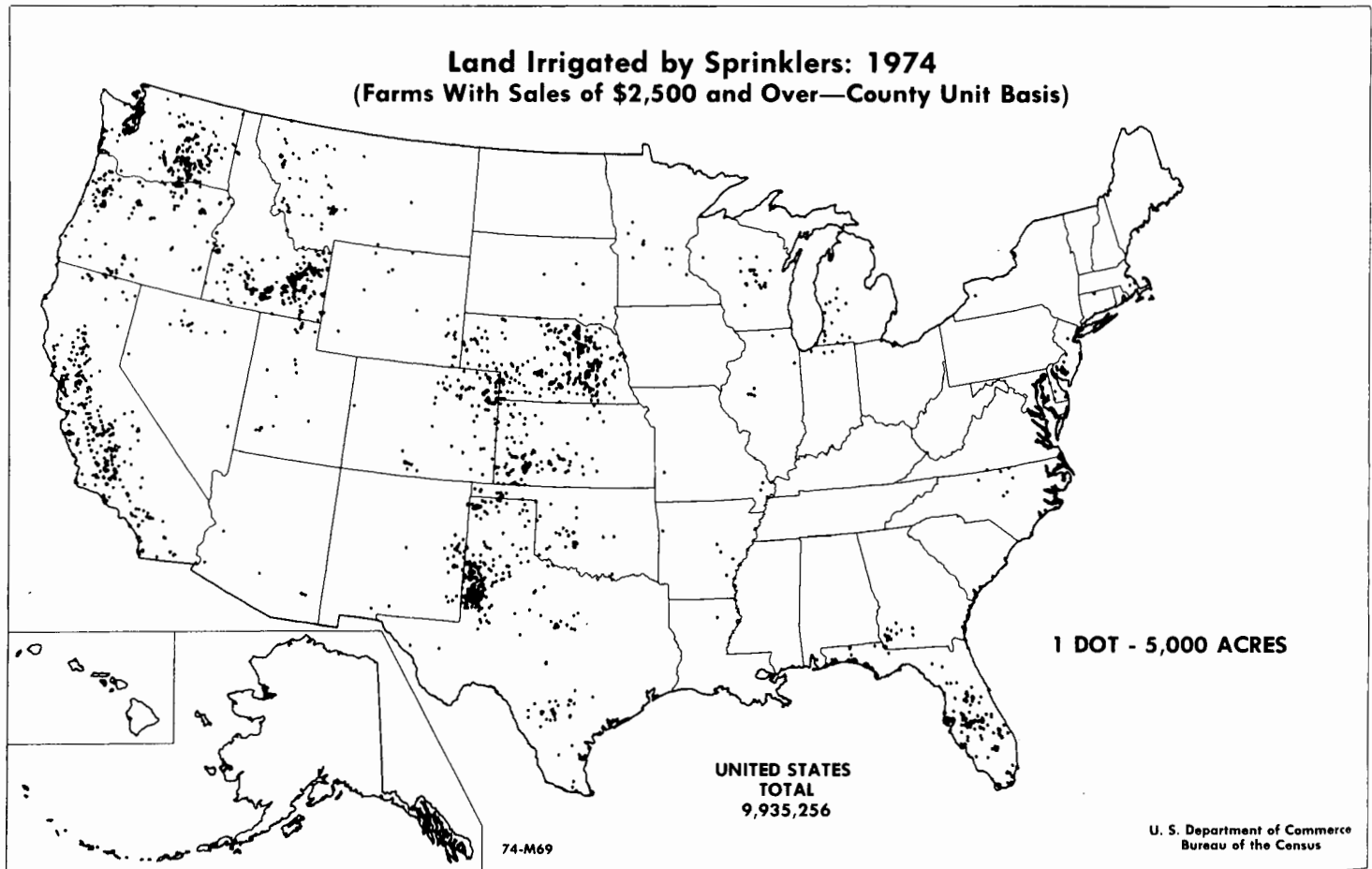
Crop Production on Irrigated and Nonirrigated Land

Since crop production is one of the leading indicators of the effects of irriga-

tion, data are provided for average yield for selected crops harvested from irrigated and nonirrigated land. Table 17 presents data for farms reporting, acres harvested of selected crops, and the average yield per acre for irrigated and non-irrigated land. The selected crops were tabulated as wholly irrigated, nonirrigated, and partly irrigated. The crop was classified "wholly irrigated" if the farm reported all acres harvested of the specified crop as being irrigated. Likewise, a

Table 4. Average Acre-Feet of Water Applied by Areas and Method of Application: 1974

	Farms With Sales of \$2,500 and Over		
	United States	17 Western States and Louisiana	30 Eastern States, Alaska, and Hawaii
Furrows and ditches...	2.07	2.14	1.09
Flooding.....	2.22	2.31	1.52
Sprinklers:			
Self-propelled.....	1.37	1.58	.70
Other sprinklers....	1.67	1.83	.80
Subirrigation.....	1.63	2.12	1.29



crop was tabulated as "nonirrigated" if none of the reported acres harvested for the crop was reported irrigated. The "partly irrigated" category included the crop acreage from those farms where only part of acres harvested of the specified crop was reported irrigated. The average yield per acre was computed for the acres harvested of each specified crop for each category. In most cases, particularly in the western part of the United States, the differences in average yields on wholly irrigated and nonirrigated acreage were striking.

To provide an overall view of the effect of irrigation, data are presented in table 5 concerning acreage yield indexes for the 17 Western States and Louisiana and for the 30 Eastern States, Alaska, and Hawaii. In computing the indexes, the U.S. average yield per acre for each specified crop was used as the base figure and set equal to 100. The index of average yields was then computed for the average yield of that portion of the crops that was wholly irrigated and the portion that was not irrigated for each of the two areas.

It is obvious that irrigation has a much greater effect on average production in the West than in the East. However, the percentage indexes vary considerably by crop and area.

Another measure of the effect of irrigation is the value of products produced on irrigated farms versus nonirrigated farms. In 1974, the total market value of products sold from all farms amounted to \$81.5 billion. Farms with sales of \$2,500 and over accounted for \$80.6 billion, or 99.0 percent of the total value of agricultural products. Table 19 provides detailed information for value of products sold from nonirrigated farms and from irrigated farms as well as selected expenditures for the same groups. The data in table 6 present the highlights.

Table 5. Index of Average Yield for Specified Harvested Crops From Wholly Irrigated Land: 1974

(U.S. average yield - 100)

Farms With Sales of \$2,500 and Over

	U.S. average yield per acre		Index for 17 Western States and Louisiana		Index for 30 Eastern States, Alaska, and Hawaii	
	Average yield	Index	Crop wholly irrigated	Crop non-irrigated	Crop wholly irrigated	Crop non-irrigated
Alfalfa hay.....tons..	2.6	100	154	67	115	105
Corn for grain.....bushels..	71.7	100	143	79	124	98
Corn for silage.....tons, green..	10.7	100	153	52	153	108
Sorghum for grain.....bushels..	43.0	100	164	85	149	109
Wheat.....bushels..	26.9	100	170	91	104	123
Barley.....bushels..	37.5	100	164	80	150	115
Oats.....bushels..	47.2	100	118	77	123	116
Soybeans for beans.....bushels..	23.9	100	123	98	112	100
Dry field and seed beans.....100-lb bags..	13.6	100	136	44	95	92
Alfalfa seed.....pounds..	240	100	183	33	8	22
Cotton.....bales..	.9	100	156	61	117	95
Tobacco.....pounds..	1986	100	-	42	106	100
Irish potatoes.....hundredweight..	236.1	100	118	66	103	84
Sugar beets for sugar.....tons..	18.5	100	116	62	89	73
Vegetables, sweet corn, or melons for sale.....dollars..	762	100	156	49	136	47
Land in orchards.....dollars..	676	100	122	57	78	84

Table 6. Percent of Selected Items on Nonirrigated and Irrigated Farms: 1974

Farms With Sales of \$2,500 and Over

	Farms	Acres (1,000)		Total production expenses (\$1,000)	Total value of agricultural products sold (\$1,000)
		All land, excluding cropland	Total cropland		
United States, total.....	1,695,047	905,640	412,998	59,855,727	80,598,305
Nonirrigated farms.....	1,492,914	702,914	339,018	43,200,876	58,680,299
Percent of total.....	88.1	77.6	82.1	72.2	72.8
Irrigated farms.....	202,133	202,726	73,980	16,654,851	21,918,006
Percent of total.....	11.9	22.4	17.9	27.8	27.2
17 Western States and Louisiana, total.....	563,385	605,563	212,270	28,064,847	35,887,169
Percent of United States.....	33.2	66.9	43.1	46.9	44.5
Nonirrigated farms.....	396,498	420,460	148,531	14,463,000	18,306,804
Percent of the 18 States.....	70.4	69.4	70.0	51.5	51.0
Irrigated farms.....	166,887	185,103	63,739	13,601,847	17,580,365
Percent of the 18 States.....	29.6	30.6	30.0	48.5	49.0
30 Eastern States, Alaska, and Hawaii, total.....	1,131,662	300,077	200,728	31,790,881	44,711,135
Percent of United States.....	66.8	33.1	40.6	53.1	55.5
Nonirrigated farms.....	1,096,416	282,454	190,487	28,737,877	40,373,494
Percent of the 32 States.....	96.9	94.1	94.9	90.4	90.3
Irrigated farms.....	35,246	17,623	10,241	3,053,004	4,337,641
Percent of the 32 States.....	3.1	5.9	5.1	9.6	9.7

Of the \$80.6 billion of agricultural products sold from farms with sales of \$2,500 and over, irrigated farms accounted for \$21.9 billion, or 27.2 percent. This \$21.9 billion worth of products results from only 11.9 percent of the farms, 17.9 percent of the cropland, and 22.4 percent of land in farms..

These figures also vary considerably between East and West. The 17 Western

States and Louisiana account for 44.5 percent of the \$80.6 billion worth of agricultural products sold, while the other States account for 55.5 percent. The West accounted for \$35.9 billion worth of agricultural products. Of this amount, 49.0 percent came from irrigated farms. In the East, irrigated farms accounted for only 9.6 percent of the \$44.7 billion of agricultural products sold.