

crop production



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HIGHLIGHTS OF U. S. CROP REPORT AS OF JANUARY 1, 1971

Citrus production is expected to be 14 percent more than last season. This is down 2 percent from last month. The citrus production forecasts in this report are based on reports and observations as of January 1 and do not reflect any damage that may have occurred during the first week of January from low temperatures in Arizona and California.

Orange production is forecast at 205.8 million boxes, down 3.0 million boxes (1.4 percent) from the December 1 forecast, but 11 percent (20.1 million boxes) above last season. Texas, Arizona, and California are unchanged, but the Florida Early and Midseason crop is down.

Grapefruit production, forecast at 64.1 million boxes, is down 2.5 million boxes (3.8 percent) from a month earlier, but 19 percent (10.2 million boxes) more than last season. Prospects are down because of projected smaller crops in Florida, Texas, and California.

Lemon prospects at 18.0 million boxes are unchanged from last month, 16 percent (2.5 million boxes) above the 1969-70 crop and 14 percent (2.2 million boxes) larger than the 1968-69 crop.

Winter potato production for 1971 is estimated at 3,541,000 cwt., 4 percent (140,000 cwt.) more than forecast on December 1. This is 1 percent less than last year and 7 percent below 1969.

Intended 1971 plantings for the late spring potato crop are estimated at 83,000 acres. This is 2 percent more than the 81,500 acres planted last year but 10 percent less than 1969 plantings of 92,300 acres.

Hay stocks on farms totaled 88.1 million tons, down 2 percent from the 90.3 million tons a year earlier.

UNITED STATES DEPARTMENT OF AGRICULTURE

STATISTICAL REPORTING SERVICE CROP REPORTING BOARD
CrPr 2-2 (1-71) WASHINGTON, D.C. 20250

CITRUS FRUITS PRODUCTION 1/

Crop	1968-69	1969-70	Indicated 1970-71	
			Dec. 1, 1970	Jan. 1, 1971
1,000 boxes				
Oranges	183,880	185,660	208,800	205,800
Grapefruit	54,170	53,910	66,600	64,100
Lemons	15,810	15,520	18,000	18,000

1/ Season begins with bloom of the first year shown and ends with the completion of harvest the following year.

IRISH POTATOES

Seasonal group	Acreage		Yield per harv. acre			Production			
	Harv. 1970	For harv. 1971	1969	1970	Ind. cated 1971	1969	1970	Indicated 1971 Dec. 1, 1970 : Jan. 1, 1971	
1,000 acres Cwt. 1,000 cwt.									
Winter	18.8	17.7	193	191	200	3,828	3,582	3,401	3,541
Planted acreage Yield per planted acre Production									
	1969	1970	Indi- cated 1971	1969	1970	1969	1970	1971	
1,000 acres Cwt. 1,000 cwt.									
Early spring	33.0	30.0	29.7	172	159	5,687	4,757	April 9	
Late spring	92.3	81.5	83.0	231	259	21,308	21,070	May 10	

HAY: STOCKS ON FARMS

Crop	1969	1970	1971
1,000 tons			
January 1	90,406	90,328	88,117
May 1	23,873	1/24,302	

i/ Revised.

APPROVED:

Richard Lyng

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GENERAL CROP SUMMARY AS OF JANUARY 1, 1971

Dry and mild weather before mid-December highly favored winding up the 1970 crop harvest, according to the Crop Reporting Board. December temperatures averaged above normal from the Southwest to the Middle Atlantic States and were near normal in California. Cold conditions, generally 2 to 6 degrees below normal, extended from the Pacific Northwest eastward into New England. Precipitation was well below normal over much of the country during December. The brunt of the dry conditions occurred in Texas, Oklahoma, Kansas, and New Mexico where there was little or no rainfall. Snow and light rain in this area in early January should supply some badly needed moisture, but the extremely cold weather after the rain and snow is causing many problems. Moisture in December was slightly above normal in the Northwest and Northeast sections of the Nation.

Corn picking was still active as December started but good conditions allowed growers to have the bulk of the crop in by mid-month. Wet conditions delayed the windup of cotton picking in California and Arizona, but the dry weather helped Texas growers to finish early. Starting the New Year some scattered corn, cotton, and soybean fields were still left for harvest, but in most States harvest was virtually complete. Livestock were in generally good condition. The mild December weather favored extra grazing of pastures and fall crop residues.

Citrus crop prospects as of January 1 were slightly below a month earlier because of reduced orange prospects in Florida and fewer grapefruit forecast for Florida, Texas and California. Citrus prospects were unchanged in Arizona. Florida's citrus trees are mostly in good condition despite prolonged dry weather, however, some damage from the November freeze is showing up in Florida. In Arizona, subfreezing weather every night from January 2-7 has set a record of a prolonged nighttime period in the low 20's. Temperatures in the Salt River Valley ranged from 28° to 32° on the morning of January 3 to 15° to 28° on the morning of January 7. In the Yuma area temperatures have not been quite as low and the use of irrigation water, wind machines, and smudge pots have been somewhat effective. Cold weather also occurred in California during January 2-7. The coldest night was January 4, when temperatures for 12 to 14 hours were below 30°, and the low was 22°. A gradual warming trend began on January 5 and was continuing on January 7. These freezing temperatures occurred in the Central Valley and the Desert Valleys. In Texas, irrigation has been widespread, because of scant rainfall in the last three months.

Winter wheat received very light precipitation in the Great Plains from Texas to southern Nebraska. Temperatures were above normal in that area as well as in the Eastern Corn Belt and the Southeastern quarter of the Nation. Wind damage has been light but much acreage is vulnerable because of below-average top growth. However, protective snow covered most of the northern half of the country in early January. In Kansas, wheat was in mostly good condition, but in late December the western and south central areas needed surface moisture. A general snowstorm the first few days of January temporarily protected wheat from the severe cold. As the snow melts it will supply needed moisture. Small grain condition declined during December in the western two-thirds of Oklahoma where surface moisture was short, leaving the crop in only fair condition. Condition is mostly good to fair in the eastern third. The Texas dryland wheat crop suffered from a severe shortage of moisture following a dry fall, but irrigated wheat was progressing well. Nebraska wheat was in mostly good to fair condition, but topsoils were dry in some areas. The crop will benefit from an early January snowstorm. The Colorado crop

is in generally good to excellent condition, but very light precipitation in December left topsoils very dry. Some localized wind damage occurred. Precipitation was normal or greater during December in most of the Montana-Pacific Northwest area. Montana's important north central district reported only fair to good condition, although the rest of the State is in good condition. Winter grains in Washington and Oregon also were in generally good condition. In the Corn Belt soil moisture supplies were adequate and winter wheat progressed normally during December.

HAY STOCKS ON FARMS: January 1 stocks of hay on farms are estimated at 88.1 million tons, down 2 percent from the 90.3 million on hand a year earlier. Even though stocks are lower, the tonnage available should be sufficient to meet the needs in most areas of the Nation. Supplemental feeding was necessary early in some States this year because snow cover and shortage of moisture limited the growth of pastures and small grains. However, in some areas open weather allowed maximum use of pastures, ranges, and crop residues.

Disappearance from May 1, 1970 through January 1, 1971 totaled 64.1 million tons compared with 61.2 million a year earlier.

ORANGES: The Nation's 1970-71 orange crop is forecast at a record high 205.8 million boxes, as of January 1, 11 percent above last season and 12 percent above the 1968-69 crop. All Citrus States except California expect larger orange crops than last year.

Prospective production of oranges in Florida is 160.0 million boxes, down 3.0 million from the December 1 forecast. This is 16 percent above last season and well above the previous record crop of 139.5 million boxes. The decrease is due to smaller sizes for the Early and Midseason crop. In the past six seasons, when methods were comparable, Florida's January 1 orange forecasts have differed from actual production, an average of 4.45 million boxes; ranging from 1.5 to 6.5 million boxes. Most of Florida's oranges are in good condition despite the long dry spell. Harvest of early oranges for fresh market continued through December 21, when the shipping holiday reduced commercial shipments. Deliveries to processing plants stepped up the second week in December and stayed up until interrupted by Christmas and New Year observances.

Indicated production in California remains at 35.5 million boxes, 9 percent less than last season. The Navel orange harvest was delayed by wet fields in December but is generally on schedule. Both fruit color and quality is good. The Valencia crop is developing quite well. Growth to date has been good with large sizes expected. Central and southern California suffered a series of cool frosty nights the first week of January. Weather began to moderate on January 7.

Production of Texas oranges continues at 5.1 million boxes, 21 percent more than last year. Harvest of Early and Midseason varieties continued in early December. Heavy movement of fruit into both fresh market and processing channels is expected during January. Valencia harvest should be underway in February. Groves in the lower Rio Grande Valley are being irrigated because of scant rainfall in the past three months.

Arizona's 1970-71 orange crop continues to be forecast at 5.2 million boxes, 9 percent more than last year. Harvest of navels and other early oranges continued through December, but cool, wet weather slowed the harvest in the last week. By January 1, approximately 70 percent of the navels and other early oranges had been picked. Weather was subfreezing every night during January 3-7. The nights of January 6 and January 7 brought temperatures in the low 20's or high teens to the Salt River Valley. In the Yuma area, temperatures were not quite so low. At this time, it is too early to assess damage to the orange crop.

FLORIDA FROZEN CONCENTRATED ORANGE JUICE YIELD: The projected season average FCOJ yield adjusted to reflect current juice factors and plant recovery rates remains at 1.32 gallons per box. Last season's yield was 1.24 gallons per box. The projected yield is based on past relationships between pounds solids yield for oranges reported in "The Maturity Test Results" and the season average yield per box of 45 degree Brix frozen concentrated orange juice reported by the Florida Cannery Association. This yield can differ from the final yield because of sampling error, weather, harvest schedule, and changes in factors or recovery rates.

GRAPEFRUIT: The 1970-71 grapefruit crop is forecast at 64.1 million boxes, down 2.5 million from the December 1 estimate. This is still 19 percent above last season and 18 percent more than the 1968-69 crop.

Florida's crop is placed at 47.0 million boxes, 2.0 million below the December 1 forecast, but 26 percent above last season's crop. Changes in Florida's production between the January 1 forecast and final production have averaged 1.25 million boxes over the past six seasons, when comparable methods were used, ranging from 0.1 million boxes to 4.1 million boxes. Most of Florida's trees are in good condition despite the long period of below normal rainfall. Scattered showers in late December brought temporary relief. Harvest for processing continued in volume during December.

The Texas crop, forecast at 8.5 million boxes, is 300,000 boxes below last month. Harvest was active in early December as fresh market shipments were heavy in the pre-holiday period. Movement of grapefruit is expected to be active in January for both fresh market and processing. Irrigation is active as the Lower Rio Grande Valley has received very little rainfall in the past three months.

Arizona's prospects, at 3.2 million boxes, are unchanged from December 1 and indicate a slightly larger crop than last season. It is too early to assess damage that may have occurred from the below freezing temperatures in the grapefruit producing areas from January 2 to January 7. By January 1, about 5 percent of the grapefruit had been harvested.

California's grapefruit crop is placed at 5.4 million boxes, 200,000 boxes less than on December 1, but 3 percent above last season. Freezing temperatures from January 2 through January 7 in the Central Valley and in the Desert Valley may have damaged some grapefruit, but it is too early to assess the damage at this time. Movement from the Desert Valley through December 19 had been well below last season. December rains delayed picking from the Other Areas. Quality is good from all areas.

LEMONS: Lemon production prospects in California and Arizona remain at 18.0 million boxes, 16 percent more than last season's production. In California, damage is expected in the Central Valley crop from the cold temperatures experienced January 2-7. The new crop has sized well due to recent rains. Wet fields delayed harvest in December, but by January 1 groves were beginning to dry. Thus, picking is expected to increase sharply during January.

In Arizona temperatures much below freezing occurred from January 2 through January 7. By January 1 about 69 percent of lemons had been harvested.

TANGELOS: Florida's tangelo prospects remain at 3.3 million boxes, 0.8 million boxes above last year's production. Although tangelo harvest is well advanced generally, picking in West Coast counties is lagging. Fruit in this latter area may not be completely utilized because of internal damage from low temperatures November 25.

TANGERINES: The estimated U. S. tangerine crop is 5,920,000 boxes, unchanged from last month--about 50 percent more than last season. In California and Arizona cold weather since January 1 may have damaged the crop. In Arizona, 60 percent of the crop had been harvested prior to January 1. Florida's tangerine forecast reflects available supply of marketable sizes. Unfavorable price-cost ratios will prevent complete utilization of the crop. *The highest volume harvested in recent years was 4.1 million boxes.*

TEMPLES: In Florida, a record high 6.5 million boxes is expected, unchanged from the December 1 forecast. This is 25 percent more than last season and 44 percent above the 1968-69 crop. Heavy drop of temples noted in areas of low temperatures on November 25, and growers' intentions not to harvest some damaged blocks, suggest the crop may not be fully utilized.

POTATOES: Production of winter crop potatoes for 1971 is estimated at 3,541,000 cwt. compared with the 1970 crop of 3,582,000 cwt. and 1969 of 3,828,000 cwt.

In Florida, crop prospects are generally favorable although irrigation has been needed to maintain soil moisture. Harvest of "red" types is expected to increase in late January, reaching peak volume during March and April. About three-fourths of the crop is planted to "red" potatoes. Wet fields have slowed the California harvest in both the San Joaquin Valley and in Riverside County. Harvesting is expected to increase during January, with a good volume being supplied from the San Joaquin Valley.

Intended plantings for the 1971 late spring potato crop are estimated at 83,000 acres, up 2 percent from the 1970 planted acreage of 81,500 acres.

In California, intended 1971 plantings of 39,700 acres are up 4 percent from last year but 9 percent less than the 1969 plantings. Intended plantings for Alabama, at 8,700 acres, are up 10 percent and Texas, at 5,400 acres, is 6 percent above 1970 plantings. Arizona, estimated at 10,300 acres, is down 9 percent from the 11,300 acres planted last year and a small decline in acreage is indicated for Louisiana. In California, planting is nearing completion in the early Edison district of Kern County. Planting is getting underway in Arizona and should become general by late January.

CROP REPORTING BOARD

HAY STOCKS ON FARMS - JANUARY 1

State	1969	1970	1971
		1,000 tons	
Maine	270	256	220
New Hampshire	134	122	141
Vermont	672	619	624
Massachusetts	163	157	153
Rhode Island	16	18	16
Connecticut	136	137	120
New York	3,853	3,756	3,595
New Jersey	199	199	189
Pennsylvania	2,778	2,696	2,989
Ohio	2,142	1,860	1,777
Indiana	1,649	1,605	1,477
Illinois	2,843	2,569	2,534
Michigan	2,163	2,052	1,989
Wisconsin	7,979	8,321	7,739
Minnesota	5,180	5,461	5,219
Iowa	6,117	6,169	5,597
Missouri	5,021	4,552	4,483
North Dakota	3,337	3,492	3,619
South Dakota	4,768	5,077	4,868
Nebraska	4,843	5,839	4,553
Kansas	3,588	3,579	2,912
Delaware	46	52	49
Maryland	418	426	456
Virginia	1,415	1,313	1,369
West Virginia	693	703	707
North Carolina	417	468	439
South Carolina	256	260	257
Georgia	523	668	604
Florida	216	226	200
Kentucky	2,237	2,400	2,570
Tennessee	1,331	1,537	1,547
Alabama	470	535	570
Mississippi	837	797	817
Arkansas	1,046	720	971
Louisiana	413	295	424
Oklahoma	2,401	2,022	1,992
Texas	2,798	2,036	2,463
Montana	3,836	3,727	3,906
Idaho	2,208	2,445	2,612
Wyoming	1,579	1,679	1,890
Colorado	2,177	2,358	2,523
New Mexico	524	436	418
Arizona	411	329	474
Utah	1,104	1,057	987
Nevada	523	626	584
Washington	1,236	1,379	1,284
Oregon	1,550	1,649	1,635
California	1,890	1,649	1,555
United States	90,406	90,328	88,117

CITRUS FRUITS, PRODUCTION 1/

Crop and State	1968-69	1969-70	Indicated:	1968-69	1969-70	Indicated
	1,000 boxes 2/			Equivalent tons		
			1970-71			1970-71
ORANGES:						
EARLY, MIDSEASON & NAVEL VARIETIES: 3/:						
Calif.	18,600	21,200	15,500	698,000	795,000	581,000
Fla.	69,700	72,900	89,000	3,136,000	3,281,000	4,005,000
Texas	2,800	2,800	3,500	126,000	126,000	158,000
Ariz.	1,270	1,120	1,000	47,600	42,000	37,500
Total Above Varieties	92,370	98,020	109,000	4,007,600	4,244,000	4,781,500
VALENCIAS:						
Calif.	25,700	17,800	20,000	964,000	668,000	750,000
Fla.	60,000	64,800	71,000	2,700,000	2,916,000	3,195,000
Texas	1,700	1,400	1,600	76,500	63,000	72,000
Ariz.	4,110	3,640	4,200	154,000	137,000	158,000
Total Valencias	91,510	87,640	96,800	3,894,500	3,784,000	4,175,000
ALL ORANGES:						
Calif.	44,300	39,000	35,500	1,662,000	1,463,000	1,331,000
Fla.	129,700	137,700	160,000	5,836,000	6,197,000	7,200,000
Texas	4,500	4,200	5,100	202,500	189,000	230,000
Ariz.	5,380	4,760	5,200	201,600	179,000	195,500
U. S. All Oranges	183,880	185,660	205,800	7,902,100	8,028,000	8,956,500
GRAPEFRUIT:						
Fla., All	39,900	37,400	47,000	1,695,000	1,590,000	1,998,000
Seedless	27,700	27,900	33,000	1,177,000	1,186,000	1,403,000
Pink	10,700	10,200	12,000	455,000	434,000	510,000
White	17,000	17,700	21,000	722,000	752,000	893,000
Other	12,200	9,500	14,000	518,000	404,000	595,000
Texas	6,700	8,100	8,500	268,000	324,000	340,000
Ariz.	2,510	3,160	3,200	80,300	101,000	102,000
Calif., All	5,060	5,250	5,400	165,300	171,500	176,400
Desert Valleys	3,260	2,950	3,300	105,000	94,400	106,000
Other Areas	1,800	2,300	2,100	60,300	77,100	70,400
U. S., All Grapefruit	54,170	53,910	64,100	2,208,600	2,186,500	2,616,400
LEMONS:						
Calif.	12,300	12,700	14,500	468,000	483,000	551,000
Ariz.	3,510	2,820	3,500	134,000	107,000	133,000
U. S. Lemons	15,810	15,520	18,000	602,000	590,000	684,000
TANGELOS: Fla.	1,800	2,500	3,300	81,000	113,000	149,000
TANGERINES:						
Fla.	3,400	3,000	4,900	162,000	143,000	233,000
Ariz.	170	220	220	6,380	8,250	8,250
Calif.	640	760	800	24,000	28,500	30,000
Total Tangerines	4,210	3,980	5,920	192,380	179,750	271,250
TEMPLES: Fla.	4,500	5,200	6,500	202,000	234,000	293,000

1/ The crop year begins with the bloom of the first year shown and ends with completion of harvest the following year. 2/ Net content of box varies. Approximate averages are as follows: Oranges - California and Arizona, 75 lbs.; Florida and other States, 90 lbs.; Grapefruit - California, Desert Valleys, and Arizona, 64 lbs.; other California areas, 67 lbs.; Florida 85 lbs. and Texas 80 lbs.; Lemons - 76 lbs.; Tangelos - 90 lbs.; Tangerines - California and Arizona, 75 lbs.; Florida, 95 lbs.; and Temples - 90 lbs. 3/ Navel and Miscellaneous varieties in California and Arizona. Early and Midseason varieties in Florida and Texas, including small quantities of tangerines in Texas.

IRISH POTATOES 1971 CROP

Seasonal group and State	Acreage			Yield per harv. acre			Production		
	Harvested	For	Indi-	1969	1970	cated:	1969	1970	Indi-
	1969	1970	harvest:	1969	1970	1971	1969	1970	1971
	1,000 acres			Cwt.			1,000 cwt.		
<u>WINTER:</u>									
Fla.	11.0	10.3	10.6	180	158	180	1,980	1,627	1,908
Calif.	8.8	8.5	7.1	210	230	230	1,848	1,955	1,633
Total	19.8	18.8	17.7	193	191	200	3,828	3,582	3,541

IRISH POTATOES 1971 CROP--Continued

Seasonal group and State	Planted acreage			Yield per planted acre			Production		
	1969	1970	Indi-	1969	1970	1971	1969	1970	1971
			1971						
	1,000 acres			Cwt.			1,000 cwt.		
<u>E. SPRING:</u>									
Fla.									
Hastings	26.5	24.7	23.5	184	164		4,866	4,043	Apr. 9
Other	3.2	2.0	2.4	131	133		418	266	"
Texas	3.3	3.3	3.8	122	136		403	448	"
Total	33.0	30.0	29.7	172	159		5,687	4,757	"
<u>L. SPRING:</u>									
N. Carolina									
8 N.E. Counties	10.0	10.0	10.0	135	150		1,350	1,500	May 10
Other Counties	2.4	2.4	2.4	120	100		288	240	"
Ala.	10.5	7.9	8.7	107	130		1,120	1,027	"
Miss.	2.5	2.5	2.5	80	85		200	213	"
Ark.	1.8	1.4	1.4	70	65		126	91	"
La.	3.5	2.7	2.6	64	72		225	195	"
Texas	5.2	5.1	5.4	96	113		500	576	"
Ariz.	12.8	11.3	10.3	230	240		2,944	2,712	"
Calif.	43.6	38.2	39.7	334	380		14,555	14,516	"
Total	92.3	81.5	83.0	231	259		21,308	21,070	"

FERTILIZER USED ON SELECTED CROPS IN SELECTED STATES 1970
(Corn for Grain, Cotton, Soybeans for Beans, Wheat)

Data on fertilizer used on acreages of corn and wheat for grain, soybeans for beans, and cotton in 1970 are presented in the following tables. The information was obtained when interviewing farm operators for Objective Yield Surveys conducted by the Statistical Reporting Service and are not official estimates of total fertilizer use. The sample fields for Objective Yield Surveys were selected on the basis of acreage of the various crops.

The samples are relatively small in some States and the data are subject to sampling fluctuation. Sampling errors were computed for the rates per acre of nitrogen, phosphorus and potash applied to each crop in the major producing States. For all States combined, the coefficients of variation in 1970 were 2 percent or less for cotton and corn, less than 3 percent for winter wheat and 3 to 8 percent for soybeans.

The data on percentage of harvested acres fertilized, application rate of fertilizer nutrients and time of application were collected by interview in the specified States in the summer and fall of 1970. No attempt has been made to convert the data into total nutrients used or total acreage affected. However, total harvested acreage for each crop is shown by States. They are the official USDA acreage estimates published in the 1970 SRS Annual Crop Summary.

Number of sample fields for each State is shown in the second column of the table for each crop. Data for wheat include reports on Winter, Durum and Other Spring Wheat where produced. The nutrients applied were reported in terms of N, P₂O₅ and K₂O, but are shown in the tables in terms of actual elements of N, P, and K. Factors used in converting to actual elements of P and K are given in the table footnotes.

The data in the last three columns of each table show the time of application of fertilizer. These percentages represent the percent of acres fertilized (1) at or before seeding, (2) after seeding only, or (3) both at or before seeding and after seeding.

Additional copies of the section on Fertilizer Use are available upon request.

FERTILIZER USE ON CORN ACREAGE HARVESTED FOR GRAIN, SELECTED STATES, 1970

State	Acres harvested 1/	Fields in survey	Acres receiving			Rate per acre receiving 2/			Acres fertilized 3/			
			Any fert.	N	P	K	N	P	K	At or before seeding only	After seeding only	At or before & after seeding
	Thou.	No.	Percent			Pounds			Percent			
N. Y.	279	106	100	99	98	98	84.0	29.1	56.5	87	1	12
Pa.	943	133	98	96	98	97	81.2	28.7	42.6	91	1	8
Ohio	3,014	136	100	100	100	100	109.5	36.2	69.3	55	0	45
Ind.	5,027	158	99	99	99	96	126.2	40.2	84.2	50	0	50
Ill.	10,066	193	96	95	94	94	118.2	40.2	76.0	70	2	28
Mich.	1,444	121	99	99	98	96	97.6	33.6	60.2	49	1	50
Wis.	1,794	145	98	98	97	97	69.4	30.2	68.0	70	1	29
Minn.	4,594	164	94	93	92	91	98.0	26.8	57.7	73	2	25
Iowa	9,990	206	95	94	90	87	106.9	29.1	52.4	82	1	17
Mo.	2,837	162	98	98	90	90	117.2	24.7	45.6	77	3	20
S.Dak.	2,496	126	61	60	52	28	58.6	15.6	10.4	73	10	17
Nebr.	4,897	191	93	93	71	47	146.1	18.3	18.1	66	8	26
Kans.	1,285	137	97	97	78	53	142.3	20.5	23.3	83	0	17
Mi.	484	98	97	97	97	96	84.2	29.2	61.1	64	0	36
Va.	458	95	100	100	100	100	100.8	30.6	74.4	60	1	39
N. C.	1,345	150	100	100	98	99	133.7	23.9	56.4	10	2	88
S. C.	402	101	100	100	100	100	127.8	28.0	69.6	6	2	92
Ga.	1,426	106	100	100	100	100	117.9	22.3	61.6	7	1	92
Fla.	322	84	98	98	96	96	96.7	21.2	53.6	9	1	90
Ky.	988	119	97	97	92	93	103.3	29.6	58.2	56	3	41
Tenn.	569	100	100	100	98	98	90.8	25.9	51.7	53	3	44
Ala.	545	69	100	100	100	100	96.3	22.4	43.0	16	0	84
Miss.	248	82	99	98	93	93	100.2	21.4	40.6	26	2	72
Texas	531	125	84	84	58	46	104.9	17.6	18.9	71	9	20

1/ From 1970 Annual Crop Summary, SRS, USDA. 2/ Nutrients were reported in terms of N, P₂O₅, and K₂O but are shown in this table in terms of the elements N, P, K. P₂O₅ is converted to P by dividing by 2.29137; K₂O is converted to K by dividing by 1.20459. 3/ Percentages apply to acres receiving fertilizer, not to total acres harvested for grain.

FERTILIZER USE ON WHEAT ACREAGE HARVESTED FOR GRAIN, SELECTED STATES, 1970

State	Acres	Fields	Acres receiving			Rate per acre			Acres fertilized 3/			
	harv. 1/	in survey	Any fert.	N	P	K	N	P	K	At or before seeding only	After seeding only	At or before & after seeding
	Thou.	No.	Percent	Percent			Pounds			Percent		
Ohio	971	80	99	99	99	99	36.5	25.3	45.7	53	9	38
Ind.	774	74	95	91	95	95	47.5	24.4	45.7	49	4	47
Ill.	993	78	92	92	86	85	46.1	22.6	33.8	68	3	29
Mich.	565	75	99	99	99	99	36.8	24.5	42.9	68	2	30
Minn.	830	43	86	86	86	56	36.3	16.8	18.2	84	3	13
Mo.	932	72	92	90	67	67	61.0	17.8	33.3	46	24	30
N. Dak.	6,486	236	73	69	73	6	14.5	11.7	7.0	99	0	1
S. Dak.	1,811	136	34	32	29	4/0	20.2	9.7	1.0	78	22	0
Nebr.	2,558	120	43	43	17	3	40.1	14.0	10.8	75	17	8
Kans.	9,061	260	51	51	37	5	46.2	15.6	11.9	59	10	31
Okla.	3,777	155	70	70	41	16	47.3	14.0	9.8	50	14	36
Texas	2,267	137	52	51	22	5	79.6	14.3	10.4	81	10	9
Mont.	3,383	190	39	30	39	26	10.2	8.8	3.5	98	0	2
Idaho	929	98	57	56	19	2	66.2	15.1	9.0	46	14	40
Colo.	2,420	113	6	6	0	0	42.6	0.0	0.0	86	14	0
Wash.	2,258	132	92	92	3	0	64.2	11.5	0.0	79	6	15
Oreg.	728	69	81	81	7	1	40.6	10.5	11.6	73	22	5

FERTILIZER USE ON SOYBEAN ACREAGE HARVESTED FOR BEANS, SELECTED STATES, 1970

Ohio	2,438	130	46	42	45	46	10.7	15.6	31.0	100	0	0
Ind.	3,311	125	61	52	57	61	8.0	13.6	35.6	99	1	0
Ill.	6,865	145	17	9	12	16	16.4	15.3	63.9	100	0	0
Minn.	3,129	116	22	17	22	22	13.0	11.9	30.9	100	0	0
Iowa	5,832	147	13	8	13	13	11.4	19.1	40.8	100	0	0
Mo.	3,496	137	17	15	16	17	9.8	12.6	30.4	96	0	4
Nebr.	812	54	24	19	20	13	31.8	18.6	9.4	100	0	0
Kans.	1,005	45	20	18	18	11	18.0	15.6	44.6	100	0	0
N. C.	876	73	58	49	56	58	13.3	15.2	45.8	95	5	0
S. C.	997	85	84	65	84	84	17.3	18.1	58.4	97	2	1
Tenn.	1,229	85	52	38	52	52	12.6	15.9	33.6	95	5	0
Miss.	2,336	138	25	13	25	25	16.5	20.0	36.7	97	3	0
Ark.	4,313	166	36	14	35	36	14.7	16.9	40.5	98	2	0
Ia.	1,688	106	25	12	25	25	13.0	24.2	43.8	100	0	0

1/ From 1970 Annual Crop Summary, SRS, USDA. 2/ Nutrients were reported in terms of N, P₂O₅, and K₂O but are shown in this table in terms of the elements N, P, K. P₂O₅ is converted to P by dividing by 2.29137; K₂O is converted to K by dividing by 1.20459. 3/ Percentages apply to acres receiving fertilizer, not to total acres harvested for beans. 4/ Less than .5 percent.

FERTILIZER USE ON COTTON ACREAGE, SELECTED STATES, 1970

State	: Acres : harv. : 1/	: Fields : in : survey	: Acres receiving				: Rate per acre			: Acres fertilized 3/		
			: Any : fert. : :	: N : :	: P : :	: K : :	: N : :	: P : :	: K : :	: At or : before : seeding : only	: After : seeding : only	: At or : before : & after : seeding
	: Thou. : :	: No. : :	Percent			Pounds			Percent			
Mo.	: 275	: 57	90	90	84	84	56.9	18.4	36.1	49	24	27
N. C.	: 165	: 63	100	100	100	100	67.1	24.1	62.4	48	0	52
S. C.	: 290	: 89	100	100	100	100	80.0	31.0	74.5	12	4	84
Ge.	: 380	: 108	100	100	100	100	92.1	25.9	70.9	20	1	79
Tenn.	: 390	: 77	99	96	96	96	60.5	27.2	53.1	75	3	22
Ala.	: 540	: 129	100	100	100	100	77.6	32.4	63.5	44	1	55
Miss.	: 1,190	: 351	100	99	42	42	96.1	26.3	51.0	66	9	25
Ark.	: 1,080	: 295	97	95	60	63	67.3	18.7	43.6	86	7	7
La.	: 455	: 100	95	95	57	56	80.6	22.0	41.7	81	11	8
Okl.	: 450	: 113	50	50	43	33	25.4	11.9	11.1	98	0	2
Texas	: 4,851	: 656	49	49	30	13	56.9	19.8	17.8	88	8	4
N. Mex.	: 142	: 54	67	61	50	6	72.0	36.9	14.1	61	22	17
Ariz.	: 275	: 115	90	90	36	4	134.5	25.7	13.3	12	57	31
Calif.	: 662	: 240	93	92	41	1	129.4	26.3	20.0	32	39	29

1/ From 1970 Annual Crop Summary, SRS, USDA. 2/ Nutrients were reported in terms of N, P₂O₅, and K₂O but are shown in this table in terms of the elements N, P, K. P₂O₅ is converted to P by dividing by 2.29137; K₂O is converted to K by dividing by 1.20459. 3/ Percentages apply to acres receiving fertilizer, not to total acres harvested.

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FERTILIZER USED ON SELECTED CROPS IN SELECTED STATES 1970
(Corn for Grain, Cotton, Soybeans for Beans, Wheat)

Data on fertilizer used on acreages of corn and wheat for grain, soybeans for beans, and cotton in 1970 are presented in the following tables. The information was obtained when interviewing farm operators for Objective Yield Surveys conducted by the Statistical Reporting Service and are not official estimates of total fertilizer use. The sample fields for Objective Yield Surveys were selected on the basis of acreage of the various crops.

The samples are relatively small in some States and the data are subject to sampling fluctuation. Sampling errors were computed for the rates per acre of nitrogen, phosphorus and potash applied to each crop in the major producing States. For all States combined, the coefficients of variation in 1970 were 2 percent or less for cotton and corn, less than 3 percent for winter wheat and 3 to 8 percent for soybeans.

The data on percentage of harvested acres fertilized, application rate of fertilizer nutrients and time of application were collected by interview in the specified States in the summer and fall of 1970. No attempt has been made to convert the data into total nutrients used or total acreage affected. However, total harvested acreage for each crop is shown by States. They are the official USDA acreage estimates published in the 1970 SRS Annual Crop Summary.

Number of sample fields for each State is shown in the second column of the table for each crop. Data for wheat include reports on Winter, Durum and Other Spring Wheat where produced. The nutrients applied were reported in terms of N, P₂O₅ and K₂O, but are shown in the tables in terms of actual elements of N, P, and K. Factors used in converting to actual elements of P and K are given in the table footnotes.

The data in the last three columns of each table show the time of application of fertilizer. These percentages represent the percent of acres fertilized (1) at or before seeding, (2) after seeding only, or (3) both at or before seeding and after seeding.

FERTILIZER USE ON CORN ACREAGE HARVESTED FOR GRAIN, SELECTED STATES, 1970

State	Acres	Fields	Acres receiving			Rate per acre			Acres fertilized 3/			
	harv. 1/	in survey	Any fert.	N	P	K	N	P	K	At or before seeding only	After seeding only	At or before & after seeding
	Thou.	No.	Percent			Pounds			Percent			
N. Y.	279	106	100	99	98	98	84.0	29.1	56.5	87	1	12
Pa.	943	133	98	96	98	97	81.2	28.7	42.6	91	1	8
Ohio	3,014	136	100	100	100	100	109.5	36.2	69.3	55	0	45
Ind.	5,027	158	99	99	99	96	126.2	40.2	84.2	50	0	50
ILL.	10,066	193	96	95	94	94	118.2	40.2	76.0	70	2	28
Mich.	1,444	121	99	99	98	96	97.6	33.6	60.2	49	1	50
Wis.	1,794	145	98	98	97	97	69.4	30.2	68.0	70	1	29
Minn.	4,594	164	94	93	92	91	98.0	26.8	57.7	73	2	25
Iowa	9,990	206	95	94	90	87	106.9	29.1	52.4	82	1	17
Mo.	2,837	162	98	98	90	90	117.2	24.7	45.6	77	3	20
S.Dak.	2,496	126	61	60	52	28	58.6	15.6	10.4	73	10	17
Nebr.	4,897	191	93	93	71	47	146.1	18.3	18.1	66	8	26
Kans.	1,285	137	97	97	78	53	142.3	20.5	23.3	83	0	17
Md.	484	98	97	97	97	96	84.2	29.2	61.1	64	0	36
Va.	458	95	100	100	100	100	100.8	30.6	74.4	60	1	39
N. C.	1,345	150	100	100	98	99	133.7	23.9	56.4	10	2	88
S. C.	402	101	100	100	100	100	127.8	28.0	69.6	6	2	92
Ga.	1,426	106	100	100	100	100	117.9	22.3	61.6	7	1	92
Fla.	322	84	98	98	96	96	96.7	21.2	53.6	9	1	90
Ky.	988	119	97	97	92	93	103.3	29.6	58.2	56	3	41
Tenn.	569	100	100	100	98	98	90.8	25.9	51.7	53	3	44
Ala.	545	69	100	100	100	100	96.3	22.4	43.0	16	0	84
Miss.	248	82	99	98	93	93	100.2	21.4	40.6	26	2	72
Texas	531	125	84	84	58	46	104.9	17.6	18.9	71	9	20

1/ From 1970 Annual Crop Summary, SRS, USDA. 2/ Nutrients were reported in terms of N, P₂O₅, and K₂O but are shown in this table in terms of the elements N, P, K. P₂O₅ is converted to P by dividing by 2.29137; K₂O is converted to K by dividing by 1.20459. 3/ Percentages apply to acres receiving fertilizer, not to total acres harvested for grain.

FERTILIZER USE ON WHEAT ACREAGE HARVESTED FOR GRAIN, SELECTED STATES, 1970

State	Acres harv. 1/	Fields in survey	Acres receiving Any fert.	Acres receiving			Rate per acre receiving 2/			Acres fertilized 3/		
				N	P	K	N	P	K	At or before seeding only	After seeding only	At or before & after seeding
	Thou.	No.	Percent	Percent			Pounds			Percent		
Ohio	971	80	99	99	99	99	36.5	25.3	45.7	53	9	38
Ind.	774	74	95	91	95	95	47.5	24.4	45.7	49	4	47
Ill.	993	78	92	92	86	85	46.1	22.6	33.8	68	3	29
Mich.	565	75	99	99	99	99	36.8	24.5	42.9	68	2	30
Minn.	830	43	86	86	86	56	36.3	16.8	18.2	84	3	13
Mo.	932	72	92	90	67	67	61.0	17.8	33.3	46	24	30
N. Dak.	6,486	236	73	69	73	6	14.5	11.7	7.0	99	0	1
S. Dak.	1,811	136	34	32	29	4/0	20.2	9.7	1.0	78	22	0
Nebr.	2,558	120	43	43	17	3	40.1	14.0	10.8	75	17	8
Kans.	9,061	260	51	51	37	5	46.2	15.6	11.9	59	10	31
Okla.	3,777	155	70	70	41	16	47.3	14.0	9.8	50	14	36
Texas	2,267	137	52	51	22	5	79.6	14.3	10.4	81	10	9
Mont.	3,383	190	39	30	39	26	10.2	8.8	3.5	98	0	2
Idaho	929	98	57	56	19	2	66.2	15.1	9.0	46	14	40
Colo.	2,420	113	6	6	0	0	42.6	0.0	0.0	86	14	0
Wash.	2,258	132	92	92	3	0	64.2	11.5	0.0	79	6	15
Oreg.	728	69	81	81	7	1	40.6	10.5	11.6	73	22	5

FERTILIZER USE ON SOYBEAN ACREAGE HARVESTED FOR BEANS, SELECTED STATES, 1970

Ohio	2,438	130	46	42	45	46	10.7	15.6	31.0	100	0	0
Ind.	3,311	125	61	52	57	61	8.0	13.6	35.6	99	1	0
Ill.	6,865	145	17	9	12	16	16.4	15.3	63.9	100	0	0
Minn.	3,129	116	22	17	22	22	13.0	11.9	30.9	100	0	0
Iowa	5,832	147	13	8	13	13	11.4	19.1	40.8	100	0	0
Mo.	3,496	137	17	15	16	17	9.8	12.6	30.4	96	0	4
Nebr.	812	54	24	19	20	13	31.8	18.6	9.4	100	0	0
Kans.	1,005	45	20	18	18	11	18.0	15.6	44.6	100	0	0
N. C.	876	73	58	49	56	58	13.3	15.2	45.8	95	5	0
S. C.	997	85	84	65	84	84	17.3	18.1	58.4	97	2	1
Tenn.	1,229	85	52	38	52	52	12.6	15.9	33.6	95	5	0
Miss.	2,336	138	25	13	25	25	16.5	20.0	36.7	97	3	0
Ark.	4,313	166	36	14	35	36	14.7	16.9	40.5	98	2	0
La.	1,688	106	25	12	25	25	13.0	24.2	43.8	100	0	0

1/ From 1970 Annual Crop Summary, SRS, USDA. 2/ Nutrients were reported in terms of N, P₂O₅, and K₂O but are shown in this table in terms of the elements N, P, K. P₂O₅ is converted to P by dividing by 2.29137; K₂O is converted to K by dividing by 1.20459. 3/ Percentages apply to acres receiving fertilizer, not to total acres harvested for beans. 4/ Less than .5 percent.

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FERTILIZER USE ON COTTON ACREAGE, SELECTED STATES, 1970

State	: Acres : harv. : 1/	: Fields : in : survey	: Acres receiving				: Rate per acre : receiving 2/			: Acres fertilized 3/		
			: Any : fert.	: N	: P	: K	: N	: P	: K	: At or : before : seeding : only	: After : seeding : only	: At or : before : & after : seeding
	: Thou.	: No.	: Percent			: Pounds			: Percent			
Mo.	: 275	: 57	: 90	: 90	: 84	: 84	: 56.9	: 18.4	: 36.1	: 49	: 24	: 27
N. C.	: 165	: 63	: 100	: 100	: 100	: 100	: 67.1	: 24.1	: 62.4	: 48	: 0	: 52
S. C.	: 290	: 89	: 100	: 100	: 100	: 100	: 80.0	: 31.0	: 74.5	: 12	: 4	: 84
Gea.	: 380	: 108	: 100	: 100	: 100	: 100	: 92.1	: 25.9	: 70.9	: 20	: 1	: 79
Tenn.	: 390	: 77	: 99	: 96	: 96	: 96	: 60.5	: 27.2	: 53.1	: 75	: 3	: 22
Ala.	: 540	: 129	: 100	: 100	: 100	: 100	: 77.6	: 32.4	: 63.5	: 44	: 1	: 55
Miss.	: 1,190	: 351	: 100	: 99	: 42	: 42	: 96.1	: 26.3	: 51.0	: 66	: 9	: 25
Ark.	: 1,080	: 295	: 97	: 95	: 60	: 63	: 67.3	: 18.7	: 43.6	: 86	: 7	: 7
La.	: 455	: 100	: 95	: 95	: 57	: 56	: 80.6	: 22.0	: 41.7	: 81	: 11	: 8
Okl.	: 450	: 113	: 50	: 50	: 43	: 33	: 25.4	: 11.9	: 11.1	: 98	: 0	: 2
Texas	: 4,851	: 656	: 49	: 49	: 30	: 13	: 56.9	: 19.8	: 17.8	: 88	: 8	: 4
N. Mex.	: 142	: 54	: 67	: 61	: 50	: 6	: 72.0	: 36.9	: 14.1	: 61	: 22	: 17
Ariz.	: 275	: 115	: 90	: 90	: 36	: 4	: 134.5	: 25.7	: 13.3	: 12	: 57	: 31
Calif.	: 662	: 240	: 93	: 92	: 41	: 1	: 129.4	: 26.3	: 20.0	: 32	: 39	: 29

1/ From 1970 Annual Crop Summary, SRS, USDA. 2/ Nutrients were reported in terms of N, P₂O₅, and K₂O but are shown in this table in terms of the elements N, P, K. P₂O₅ is converted to P by dividing by 2.29137; K₂O is converted to K by dividing by 1.20459. 3/ Percentages apply to acres receiving fertilizer, not to total acres harvested.