



Crop Production

ISSN: 1936-3737

Released February 9, 2022, by the National Agricultural Statistics Service (NASS), Agricultural Statistics Board, United States Department of Agriculture (USDA).

Special Note

Temperatures fell below freezing in Florida January 28-January 30. The full impact on the citrus crops in Florida may not be fully reflected in this report. The March Crop Production report will include the next update on citrus crops.

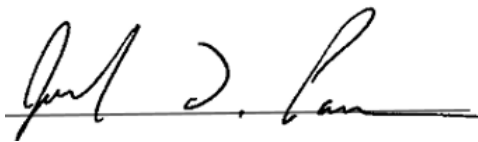
Orange Production Down 1 Percent from January Forecast

The United States all orange forecast for the 2021-2022 season is 3.88 million tons, down 1 percent from the previous forecast and down 12 percent from the 2020-2021 final utilization. The Florida all orange forecast, at 43.5 million boxes (1.96 million tons), is down 2 percent from the previous forecast and down 18 percent from last season's final utilization. In Florida, early, midseason, and Navel varieties are forecast at 17.5 million boxes (788,000 tons), unchanged from the previous forecast but down 23 percent from last season's final utilization. The Florida Valencia orange forecast, at 26.0 million boxes (1.17 million tons), is down 4 percent from the previous forecast and down 14 percent from last season's final utilization. The California and Texas orange production forecasts were carried forward from the previous forecast.

This report was approved on February 9, 2022.



Secretary of Agriculture
Designate
Seth Meyer



Agricultural Statistics Board
Chairperson
Joseph L. Parsons

Contents

Utilized Production of Citrus Fruits by Crop – States and United States: 2020-2021 and Forecasted February 1, 2022	4
Sugarcane Area Harvested, Yield, and Production by Use – States and United States: 2020 and 2021	5
Crop Area Planted and Harvested, Yield, and Production in Domestic Units – United States: 2021 and 2022.....	6
Crop Area Planted and Harvested, Yield, and Production in Metric Units – United States: 2021 and 2022	8
Fruits and Nuts Production in Domestic Units – United States: 2021 and 2022	10
Fruits and Nuts Production in Metric Units – United States: 2021 and 2022.....	11
January Percent of Normal Precipitation Map	12
January Departure from Normal Temperature Map.....	12
January Weather Summary	13
January Agricultural Summary	13
Crop Comments	14
Statistical Methodology	15
Reliability of February 1 Crop Production Forecasts	15
Information Contacts	16

Utilized Production of Citrus Fruits by Crop – States and United States: 2020-2021 and Forecasted February 1, 2022

[The crop year begins with the bloom of the first year shown and ends with the completion of harvest the following year]

Crop and State	Utilized production boxes ¹		Utilized production ton equivalent	
	2020-2021 (1,000 boxes)	2021-2022 (1,000 boxes)	2020-2021 (1,000 tons)	2021-2022 (1,000 tons)
Oranges				
California, all ²	50,100	47,600	2,004	1,904
Early, mid, and Navel ³	40,600	39,000	1,624	1,560
Valencia	9,500	8,600	380	344
Florida, all	52,800	43,500	2,377	1,958
Early, mid, and Navel ³	22,700	17,500	1,022	788
Valencia	30,100	26,000	1,355	1,170
Texas, all ²	1,050	400	45	17
Early, mid, and Navel ³	1,000	300	43	13
Valencia	50	100	2	4
United States, all	103,950	91,500	4,426	3,879
Early, mid, and Navel ³	64,300	56,800	2,689	2,361
Valencia	39,650	34,700	1,737	1,518
Grapefruit				
California ²	3,900	3,500	156	140
Florida, all	4,100	4,100	174	174
Texas ²	2,400	1,600	96	64
United States	10,400	9,200	426	378
Tangerines and mandarins ⁴				
California ²	28,100	21,000	1,124	840
Florida	890	800	42	38
United States	28,990	21,800	1,166	878
Lemons ²				
Arizona	800	1,400	32	56
California	21,300	23,000	852	920
United States	22,100	24,400	884	976

¹ Net pounds per box: oranges in California-80, Florida-90, Texas-85; grapefruit in California-80, Florida-85, Texas-80; tangerines and mandarins in California-80, Florida-95; lemons-80.

² Estimates for current year carried forward from an earlier forecast.

³ Navel and miscellaneous varieties in California. Early (including Navel) and midseason varieties in Florida and Texas.

⁴ Includes tangelos and tangors.

Sugarcane Area Harvested, Yield, and Production by Use – States and United States: 2020 and 2021

Use and State	Area harvested		Yield per acre ¹		Production ¹	
	2020 (1,000 acres)	2021 (1,000 acres)	2020 (tons)	2021 (tons)	2020 (1,000 tons)	2021 (1,000 tons)
For sugar						
Florida	409.0	388.0	44.3	43.4	18,119	16,839
Louisiana ²	461.0	464.0	32.9	29.5	15,167	13,688
Texas ²	33.4	34.2	31.5	31.6	1,052	1,081
United States	903.4	886.2	38.0	35.7	34,338	31,608
For seed						
Florida	14.3	15.5	47.3	47.2	676	732
Louisiana ²	27.4	30.6	36.5	34.2	1,000	1,047
Texas ²	2.5	2.2	34.3	33.7	86	74
United States	44.2	48.3	39.9	38.4	1,762	1,853
For sugar and seed						
Florida	423.3	403.5	44.4	43.5	18,795	17,571
Louisiana ²	488.4	494.6	33.1	29.8	16,167	14,735
Texas ²	35.9	36.4	31.7	31.7	1,138	1,155
United States	947.6	934.5	38.1	35.8	36,100	33,461

¹ Net tons.

² Estimates are carried forward from an earlier estimate.

**Crop Area Planted and Harvested, Yield, and Production in Domestic Units – United States:
2021 and 2022**

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2022 crop year. Blank data cells indicate estimation period has not yet begun]

Crop	Area planted		Area harvested	
	2021	2022	2021	2022
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)
Grains and hay				
Barley	2,660		1,948	
Corn for grain ¹	93,357		85,388	
Corn for silage	(NA)		6,481	
Hay, all	(NA)		50,736	
Alfalfa	(NA)		15,246	
All other	(NA)		35,490	
Oats	2,550		650	
Proso millet	725		662	
Rice	2,532		2,488	
Rye	2,133		294	
Sorghum for grain ¹	7,305		6,490	
Sorghum for silage	(NA)		331	
Wheat, all	46,703		37,163	
Winter	33,648	34,397	25,464	
Durum	1,635		1,534	
Other spring	11,420		10,165	
Oilseeds				
Canola	2,152.0		2,089.0	
Cottonseed	(X)		(X)	
Flaxseed	325		268	
Mustard seed	103.0		89.3	
Peanuts	1,585.2		1,545.0	
Rapeseed	14.3		12.5	
Safflower	152.0		135.0	
Soybeans for beans	87,195		86,332	
Sunflower	1,288.5		1,243.8	
Cotton, tobacco, and sugar crops				
Cotton, all	11,219.5		9,968.3	
Upland	11,093.0		9,844.5	
American Pima	126.5		123.8	
Sugarbeets	1,160.0		1,107.6	
Sugarcane	(NA)		934.5	
Tobacco	(NA)		218.9	
Dry beans, peas, and lentils				
Chickpeas	368.5		351.0	
Dry edible beans	1,394.0		1,335.6	
Dry edible peas	977.0		834.0	
Lentils	708.0		549.0	
Potatoes and miscellaneous				
Hops	(NA)		60.9	
Maple syrup	(NA)		(NA)	
Mushrooms	(NA)		(NA)	
Peppermint oil	(NA)		44.0	
Potatoes	943.0		935.7	
Spearmint oil	(NA)		14.9	

See footnote(s) at end of table.

--continued

**Crop Area Planted and Harvested, Yield, and Production in Domestic Units – United States:
2021 and 2022 (continued)**

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2022 crop year. Blank data cells indicate estimation period has not yet begun]

Crop	Yield per acre		Production	
	2021	2022	2021 (1,000)	2022 (1,000)
Grains and hay				
Barley	bushels	60.4	117,673	
Corn for grain	bushels	177.0	15,115,170	
Corn for silage	tons	20.1	130,317	
Hay, all	tons	2.37	120,196	
Alfalfa	tons	3.23	49,245	
All other	tons	2.00	70,951	
Oats	bushels	61.3	39,836	
Proso millet	bushels	23.2	15,376	
Rice ²	cwt	7,709	191,796	
Rye	bushels	33.4	9,808	
Sorghum for grain	bushels	69.0	447,810	
Sorghum for silage	tons	15.4	5,083	
Wheat, all	bushels	44.3	1,645,764	
Winter	bushels	50.2	1,277,365	
Durum	bushels	24.3	37,259	
Other spring	bushels	32.6	331,140	
Oilseeds				
Canola	pounds	1,302	2,720,550	
Cottonseed	tons	(X)	5,377.0	
Flaxseed	bushels	10.1	2,708	
Mustard seed	pounds	491	43,834	
Peanuts	pounds	4,135	6,389,300	
Rapeseed	pounds	1,809	22,616	
Safflower	pounds	1,001	135,175	
Soybeans for beans	bushels	51.4	4,435,232	
Sunflower	pounds	1,530	1,902,985	
Cotton, tobacco, and sugar crops				
Cotton, all ²	bales	849	17,624.0	
Upland ²	bales	841	17,257.0	
American Pima ²	bales	1,423	367.0	
Sugarbeets	tons	33.2	36,751	
Sugarcane	tons	35.8	33,461	
Tobacco	pounds	2,183	477,973	
Dry beans, peas, and lentils				
Chickpeas ²	cwt	815	2,861	
Dry edible beans ²	cwt	1,701	22,721	
Dry edible peas ²	cwt	1,025	8,549	
Lentils ²	cwt	606	3,327	
Potatoes and miscellaneous				
Hops	pounds	1,900	115,630.9	
Maple syrup	gallons	(NA)	3,424	
Mushrooms	pounds	(NA)	757,987	
Peppermint oil	pounds	104	4,566	
Potatoes	cwt	438	409,671	
Spearmint oil	pounds	119	1,775	

(NA) Not available.

(X) Not applicable.

¹ Area planted for all purposes.

² Yield in pounds.

Crop Area Planted and Harvested, Yield, and Production in Metric Units – United States: 2021 and 2022

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2022 crop year. Blank data cells indicate estimation period has not yet begun]

Crop	Area planted		Area harvested	
	2021	2022	2021	2022
	(hectares)	(hectares)	(hectares)	(hectares)
Grains and hay				
Barley	1,076,480		788,340	
Corn for grain ¹	37,780,640		34,555,670	
Corn for silage	(NA)		2,622,800	
Hay, all ²	(NA)		20,532,350	
Alfalfa	(NA)		6,169,900	
All other	(NA)		14,362,450	
Oats	1,031,960		263,050	
Proso millet	293,400		267,900	
Rice	1,024,680		1,006,870	
Rye	863,200		118,980	
Sorghum for grain ¹	2,956,260		2,626,440	
Sorghum for silage	(NA)		133,950	
Wheat, all ²	18,900,240		15,039,490	
Winter	13,617,010	13,920,120	10,305,030	
Durum	661,670		620,790	
Other spring	4,621,560		4,113,670	
Oilseeds				
Canola	870,890		845,400	
Cottonseed	(X)		(X)	
Flaxseed	131,520		108,460	
Mustard seed	41,680		36,140	
Peanuts	641,510		625,250	
Rapeseed	5,790		5,060	
Safflower	61,510		54,630	
Soybeans for beans	35,286,940		34,937,700	
Sunflower	521,440		503,350	
Cotton, tobacco, and sugar crops				
Cotton, all ²	4,540,420		4,034,070	
Upland	4,489,230		3,983,970	
American Pima	51,190		50,100	
Sugarbeets	469,440		448,230	
Sugarcane	(NA)		378,180	
Tobacco	(NA)		88,600	
Dry beans, peas, and lentils				
Chickpeas	149,130		142,050	
Dry edible beans	564,140		540,500	
Dry edible peas	395,380		337,510	
Lentils	286,520		222,170	
Potatoes and miscellaneous				
Hops	(NA)		24,630	
Maple syrup	(NA)		(NA)	
Mushrooms	(NA)		(NA)	
Peppermint oil	(NA)		17,810	
Potatoes	381,620		378,670	
Spearmint oil	(NA)		6,030	

See footnote(s) at end of table.

--continued

**Crop Area Planted and Harvested, Yield, and Production in Metric Units – United States:
2021 and 2022 (continued)**

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2022 crop year. Blank data cells indicate estimation period has not yet begun]

Crop	Yield per hectare		Production	
	2021	2022	2021	2022
	(metric tons)	(metric tons)	(metric tons)	(metric tons)
Grains and hay				
Barley	3.25		2,562,030	
Corn for grain	11.11		383,943,000	
Corn for silage	45.07		118,221,590	
Hay, all ²	5.31		109,039,980	
Alfalfa	7.24		44,674,310	
All other	4.48		64,365,660	
Oats	2.20		578,220	
Proso millet	1.30		348,720	
Rice	8.64		8,699,720	
Rye	2.09		249,130	
Sorghum for grain	4.33		11,374,900	
Sorghum for silage	34.42		4,611,220	
Wheat, all ²	2.98		44,790,360	
Winter	3.37		34,764,180	
Durum	1.63		1,014,020	
Other spring	2.19		9,012,150	
Oilseeds				
Canola	1.46		1,234,020	
Cottonseed	(X)		4,877,930	
Flaxseed	0.63		68,790	
Mustard seed	0.55		19,880	
Peanuts	4.64		2,898,140	
Rapeseed	2.03		10,260	
Safflower	1.12		61,310	
Soybeans for beans	3.45		120,707,230	
Sunflower	1.71		863,180	
Cotton, tobacco, and sugar crops				
Cotton, all ²	0.95		3,837,170	
Upland	0.94		3,757,270	
American Pima	1.59		79,900	
Sugarbeets	74.38		33,339,950	
Sugarcane	80.27		30,355,310	
Tobacco	2.45		216,800	
Dry beans, peas, and lentils				
Chickpeas	0.91		129,770	
Dry edible beans	1.91		1,030,610	
Dry edible peas	1.15		387,780	
Lentils	0.68		150,910	
Potatoes and miscellaneous				
Hops	2.13		52,450	
Maple syrup	(NA)		17,120	
Mushrooms	(NA)		343,820	
Peppermint oil	0.12		2,070	
Potatoes	49.07		18,582,370	
Spearmint oil	0.13		810	

(NA) Not available.

(X) Not applicable.

¹ Area planted for all purposes.

² Total may not add due to rounding.

Fruits and Nuts Production in Domestic Units – United States: 2021 and 2022

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2022 crop year, except citrus which is for the 2021-2022 season. Blank data cells indicate estimation period has not yet begun]

Crop	Production		
	2021	2022	
Citrus ¹			
Grapefruit	1,000 tons	426	378
Lemons	1,000 tons	884	976
Oranges	1,000 tons	4,426	3,879
Tangerines and mandarins	1,000 tons	1,166	878
Noncitrus			
Apples, commercial	million pounds	10,525.0	
Apricots	tons	55,500	
Avocados	tons		
Blueberries, Cultivated	1,000 pounds		
Blueberries, Wild (Maine)	1,000 pounds		
Cherries, Sweet	tons	369,000	
Cherries, Tart	million pounds	142.0	
Coffee (Hawaii)	1,000 pounds	27,120	
Cranberries	barrel	7,900,000	
Dates	tons		
Grapes	tons	6,470,000	
Kiwifruit (California)	tons		
Nectarines (California)	tons		
Olives (California)	tons		
Papayas (Hawaii)	1,000 pounds		
Peaches	tons	696,500	
Pears	tons	670,000	
Plums (California)	tons		
Prunes (California)	tons		
Raspberries, all	1,000 pounds		
Strawberries	1,000 cwt		
Nuts and miscellaneous			
Almonds, shelled (California)	1,000 pounds	2,800,000	
Hazelnuts, in-shell (Oregon)	tons		
Macadamias (Hawaii)	1,000 pounds		
Pecans, in-shell	1,000 pounds	258,000	
Pistachios (California)	1,000 pounds		
Walnuts, in-shell (California)	tons	670,000	

¹ Production years are 2020-2021 and 2021-2022.

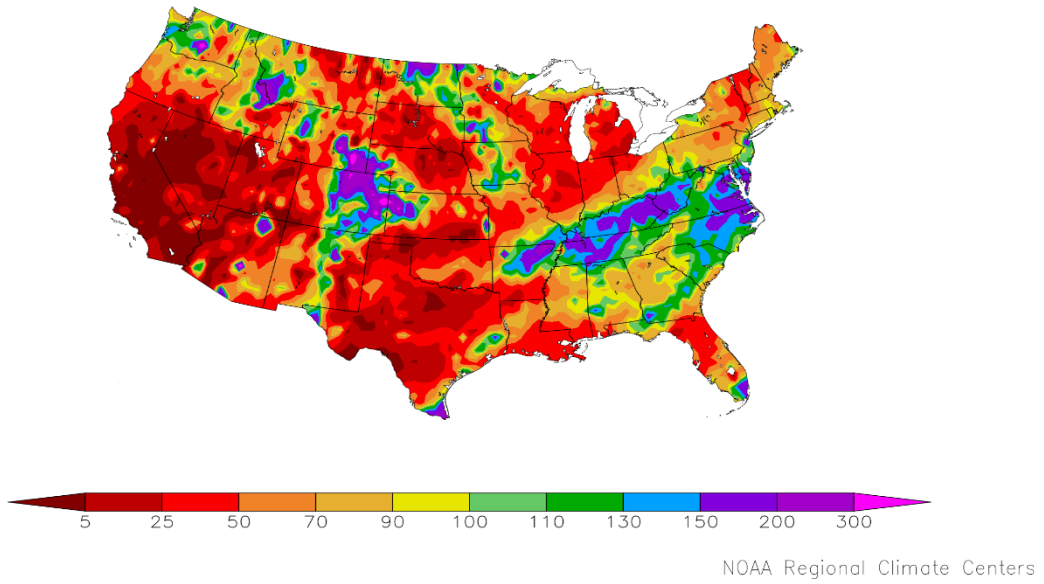
Fruits and Nuts Production in Metric Units – United States: 2021 and 2022

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2022 crop year, except citrus which is for the 2021-2022 season. Blank data cells indicate estimation period has not yet begun]

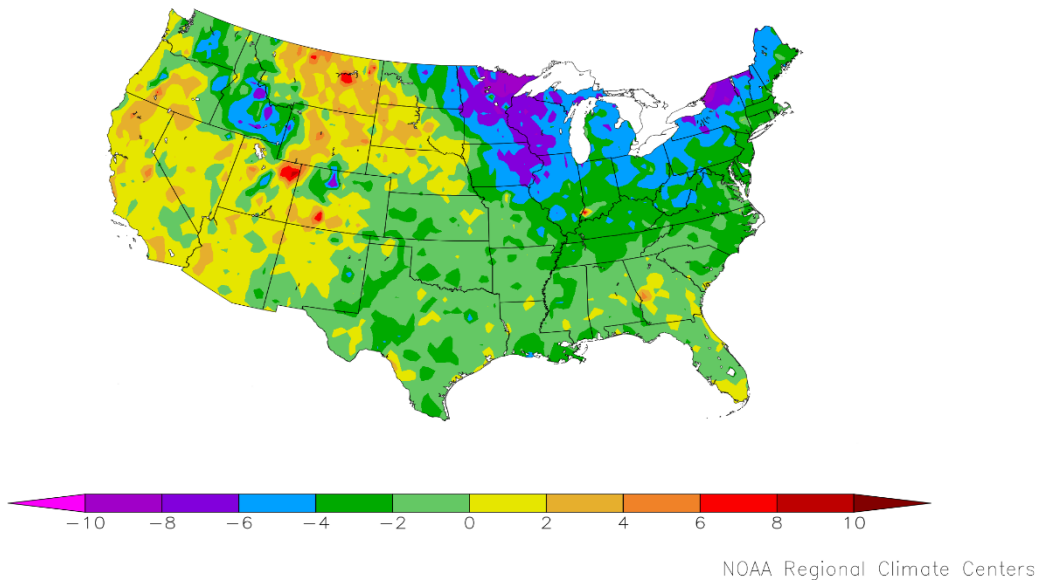
Crop	Production	
	2021 (metric tons)	2022 (metric tons)
Citrus ¹		
Grapefruit	386,460	342,920
Lemons	801,950	885,410
Oranges	4,015,200	3,518,970
Tangerines and mandarins	1,057,780	796,510
Noncitrus		
Apples, commercial	4,774,060	
Apricots	50,350	
Avocados		
Blueberries, Cultivated		
Blueberries, Wild (Maine)		
Cherries, Sweet	334,750	
Cherries, Tart	64,410	
Coffee (Hawaii)	12,300	
Cranberries	358,340	
Dates		
Grapes	5,869,490	
Kiwifruit (California)		
Nectarines (California)		
Olives (California)		
Papayas (Hawaii)		
Peaches	631,850	
Pears	607,810	
Plums (California)		
Prunes (California)		
Raspberries, all		
Strawberries		
Nuts and miscellaneous		
Almonds, shelled (California)	1,270,060	
Hazelnuts, in-shell (Oregon)		
Macadamias (Hawaii)		
Pecans, in-shell	117,030	
Pistachios (California)		
Walnuts, in-shell (California)	607,810	

¹ Production years are 2020-2021 and 2021-2022.

Percent of Normal Precipitation (%)
1/1/2022 – 1/31/2022



Departure from Normal Temperature (F)
1/1/2022 – 1/31/2022



January Weather Summary

As 2021 ended, the water equivalency of the Sierra Nevada snowpack stood close to 15 inches, nearly 160 percent of the late-December average, according to the California Department of Water Resources. Incredibly, less than an inch was added during January to that snowpack, leaving the early-February water equivalency at 16 inches, about 90 percent of the average for the date. Disappointingly low January precipitation totals were also reported across the remainder of California and the Great Basin, as well as the Southwest. In contrast, wet weather persisted early in the month across the Pacific Northwest, while periods of precipitation provided varying degrees of drought relief from the northern and central Rockies to the northern Plains.

Meanwhile, Southwestern dryness extended across the southern half of the Plains, where intensifying drought adversely affected rangeland, pastures, and winter grains. By January 23, more than one-quarter of the winter wheat was rated in very poor to poor condition in several key production states, including Kansas (31 percent), Colorado (40 percent), Oklahoma (43 percent), and Texas (71 percent). Drought impacts extended to the northern High Plains, where 65 percent of Montana's winter wheat was rated very poor to poor. On the same date, USDA/NASS rated topsoil moisture at least 40 percent very short to short in each of the ten states encompassing the Plains and the eastern slopes of the Rockies, ranging from 41 percent in North Dakota to 87 percent in New Mexico.

Farther east, an overall cold but quiet Midwestern weather pattern was interrupted by a mid-January storm, which delivered wind-driven snow, mainly west of the Mississippi River. In fact, parts of the upper Midwest were subjected to sustained cold weather, interspersed with periods of gusty winds and light snow, leading to rural travel difficulties and increased livestock stress. Monthly temperatures broadly averaged at least 5°F below normal from the Midwest to the interior Northeast. Cold weather occasionally reached the Deep South, culminating in freezes across parts of Florida on January 24 and 30. During the latter cold snap, Daytona Beach, Florida (31°F on January 30), experienced its first freeze since January 19, 2018.

In contrast, generally mild weather prevailed from the Pacific Coast to the High Plains, although cooler air began to settle across the Northwest late in the month. Parts of the Northwest also dealt with extended periods of air stagnation and foggy conditions. On the other side of the Rockies, windy weather frequently raked the High Plains, keeping winter wheat's protective snow cover at a minimum. On the southern Plains, windy, dry weather led to several, mid-winter grassfires, including the 1,700-acre Mill Creek Fire in Shackelford County, Texas, which was sparked on January 15. A rare winter wildfire—the Colorado Fire—also burned along the central California coastline near Big Sur, torching nearly 700 acres of vegetation, starting on January 21.

During the 5-week period ending February 1, drought coverage in the contiguous United States was nearly unchanged at 55 percent. According to the *United States Drought Monitor*, drought has covered more than 40 percent of the Lower 48 States for 71 consecutive weeks (September 29, 2020, to present), breaking the modern-day record of 68 weeks set from June 19, 2012 – October 1, 2013. Drought remained especially pervasive across the western half of the Nation, with 88 percent of the 11-state Western region experiencing drought in early February.

Elsewhere, several rounds of wintry weather affected parts of the South and East, contributing to above-normal January precipitation in some areas. The same storm system that delivered mid-month wind and snow across the upper Midwest later produced significant snow and ice accumulations from the southern Appalachians into the Northeast. Late in the month, a rapidly intensifying coastal storm resulted in blizzard conditions for the first time in more than 4 years along the middle and northern Atlantic Coast.

January Agricultural Summary

January was cooler than normal for most of the eastern half of the Nation. Cooler than normal temperatures were also recorded for most of the Southern Plains and large parts of the Pacific Northwest. Much of the Great Lakes, Idaho, Mid-Atlantic, Midwest, and Northeast recorded temperatures 4°F or more below normal. In contrast, most of California and large parts of the Northern Plains, Central Rockies, and Southwest were warmer than normal. Locations in Colorado, Montana, and Utah recorded temperatures 6°F or more above normal. While most of the Nation remained drier than normal during January, higher than normal amounts of precipitation were recorded in large parts of the Mid-Atlantic,

Mississippi Valley, and Central Rockies. Parts of the Northern Plains and Upper Midwest, as well as select locations in Arizona, South Florida, South Texas, and Washington also recorded higher than normal amounts of precipitation.

Crop Comments

Grapefruit: The United States 2021-2022 grapefruit crop is forecast at 378,000 tons, unchanged from the previous forecast but down 11 percent from last season's final utilization. The Florida forecast, at 4.10 million boxes (174,000 tons), is unchanged from previous forecast and unchanged from the last season. The California and Texas grapefruit production forecasts were carried forward from the previous forecast.

Tangerines and mandarins: The United States tangerine and mandarin crop is forecast at 878,000 tons, unchanged from the previous forecast but down 25 percent from the last season's final utilization. The Florida tangerine and mandarin forecast, at 800,000 boxes (38,000 tons), is unchanged from the previous forecast but down 10 percent from last year. The California tangerine and mandarin forecast was carried forward from the previous forecast.

Sugarcane: Production of sugarcane for sugar and seed is forecast at 33.5 million tons, up 1 percent from last month but down 7 percent from 2020. Producers intend to harvest 934,500 acres for sugar and seed during the 2021 crop year, down slightly from last month and down 1 percent from 2020. Yields for sugar and seed are expected to average 35.8 tons per acre, up 0.6 ton from last month but down 2.9 tons from 2020. The Louisiana and Texas sugarcane forecast were carried forward from the previous forecast.

Statistical Methodology

Survey procedures: The orange objective yield survey for the February 1 forecast was conducted in Florida. In August and September last year, the number of bearing trees and the number of fruit per tree was determined. In August and subsequent months, fruit size measurement and fruit droppage surveys are conducted, which combined with the previous components are used to develop the current forecast of production. California and Texas conduct grower survey on a quarterly basis in October, January, April, and July. California conducts an objective measurement survey in September for Navel oranges and in March for Valencia oranges.

Estimating procedures: State level objective yield estimates for Florida oranges were reviewed for errors, reasonableness, and consistency with historical estimates. Reports from growers in California and Texas were also used for setting estimates. These three States submit their analyses of the current situation to the Agricultural Statistics Board (ASB). The ASB uses the survey data and the State analyses to prepare the published February 1 forecast.

Revision policy: The February 1 production forecasts will not be revised. A new forecast will be made each month throughout the growing season. End-of-season estimates will be published in the *Citrus Fruits Summary* released in September. The production estimates are based on all data available at the end of the marketing season, including information from marketing orders, shipments, and processor records. Allowances are made for recorded local utilization and home use.

Reliability: To assist users in evaluating the reliability of the February 1 production forecasts, the "Root Mean Square Error," a statistical measure based on past performance, is computed. The deviation between the February 1 production forecast and the final estimate is expressed as a percentage of the final estimate. The average of squared percentage deviations for the latest 20-year period is computed. The square root of the average becomes statistically the "Root Mean Square Error." Probability statements can be made concerning expected differences in the current forecast relative to the final end-of-season estimate, assuming that factors affecting this year's forecast are not different from those influencing recent years. For example, the "Root Mean Square Error" for the February 1 orange production forecast is 5.1 percent. This means that chances are 2 out of 3 that the current orange production forecast will not be above or below the final estimates by more than 5.1 percent. Chances are 9 out of 10 (90 percent confidence level) that the difference will not exceed 8.8 percent.

Also, shown in the following table is a 20-year record for selected crops of the differences between the February 1 forecast and the final estimate. Using oranges again as an example, changes between the February 1 forecast and the final estimates during the past 20 years have averaged 287,000 tons, ranging from 18,000 tons to 843,000 tons. The February 1 forecast for oranges has been below the final estimate 7 times and above 13 times. This does not imply that the February 1 orange forecast this year is likely to understate or overstate final production.

Reliability of February 1 Crop Production Forecasts

[Based on data for the past twenty years]

Crop	Root mean square error	90 percent confidence interval	Difference between forecast and final estimate				
			Production			Years	
			Average	Smallest	Largest	Below final	Above final
	(percent)	(percent)	(millions)	(millions)	(millions)	(number)	(number)
Oranges ¹	5.1	8.8	287	18	843	7	13
Sugarcane	3.0	5.1	1	(Z)	3	4	16

(Z) Less than half of the unit shown.

¹ Quantity is in thousands of units.

USDA, National Agricultural Statistics Service Information Contacts

Listed below are the commodity statisticians in the Crops Branch of the National Agricultural Statistics Service to contact for additional information. E-mail inquiries may be sent to nass@usda.gov

Lance Honig, Chief, Crops Branch	(202) 720-2127
Chris Hawthorn, Head, Field Crops Section	(202) 720-2127
Irwin Anolik – Crop Weather	(202) 720-7621
Joshua Bates – Oats, Soybeans	(202) 690-3234
David Colwell – Current Agricultural Industrial Reports	(202) 720-8800
Michelle Harder – Barley, County Estimates, Hay	(202) 690-8533
James Johanson – Rye, Wheat	(202) 720-8068
Greg Lemmons – Corn, Flaxseed, Proso Millet	(202) 720-9526
Becky Sommer – Cotton, Cotton Ginnings, Sorghum	(202) 720-5944
Travis Thorson – Sunflower, Other Oilseeds	(202) 720-7369
Lihan Wei – Peanuts, Rice	(202) 720-7688
Fleming Gibson, Head, Fruits, Vegetables and Special Crops Section.....	(202) 720-2127
Fleming Gibson – Blueberries, Cranberries, Cucumbers, Pistachios, Potatoes, Pumpkins, Raspberries, Squash, Strawberries, Sugarbeets, Sugarcane, Sweet Potatoes.....	(202) 720-2127
Deonne Holiday – Almonds, Apples, Asparagus, Carrots, Coffee, Onions, Plums, Prunes, Sweet Corn, Tobacco	(202) 720-4288
Robert Little – Apricots, Dry Beans, Lettuce, Macadamia, Maple Syrup, Nectarines, Pears, Snap Beans, Spinach, Tomatoes	(202) 720-3250
Krishna Rizal – Artichokes, Cauliflower, Celery, Garlic, Grapefruit, Hazelnuts, Kiwifruit, Lemons, Mandarins and tangerines, Mint, Mushrooms, Olives, Oranges	(202) 720-5412
Antonio Torres – Cantaloupes, Dry Edible Peas, Green Peas, Honeydews, Lentils, Papayas, Peaches, Sweet Cherries, Tart Cherries, Walnuts, Watermelons.....	(202) 720-2157
Chris Wallace – Avocados, Bell Peppers, Broccoli, Cabbage, Chickpeas, Chile Peppers, Dates, Floriculture, Grapes, Hops, Pecans	(202) 720-4215

Access to NASS Reports

For your convenience, you may access NASS reports and products the following ways:

- All reports are available electronically, at no cost, on the NASS web site: www.nass.usda.gov
- Both national and state specific reports are available via a free e-mail subscription. To set-up this free subscription, visit www.nass.usda.gov and click on “National” or “State” in upper right corner above “search” box to create an account and select the reports you would like to receive.
- Cornell’s Mann Library has launched a new website housing NASS’s and other agency’s archived reports. The new website, <https://usda.library.cornell.edu>. All email subscriptions containing reports will be sent from the new website, <https://usda.library.cornell.edu>. To continue receiving the reports via e-mail, you will have to go to the new website, create a new account and re-subscribe to the reports. If you need instructions to set up an account or subscribe, they are located at: <https://usda.library.cornell.edu/help>. You should whitelist notifications@usda-esmis.library.cornell.edu in your email client to avoid the emails going into spam/junk folders.

For more information on NASS surveys and reports, call the NASS Agricultural Statistics Hotline at (800) 727-9540, 7:30 a.m. to 4:00 p.m. ET, or e-mail: nass@usda.gov.

The U.S. Department of Agriculture (USDA) prohibits discrimination against its customers, employees, and applicants for employment on the basis of race, color, national origin, age, disability, sex, gender identity, religion, reprisal, and where applicable, political beliefs, marital status, familial or parental status, sexual orientation, or all or part of an individual's income is derived from any public assistance program, or protected genetic information in employment or in any program or activity conducted or funded by the Department. (Not all prohibited bases will apply to all programs and/or employment activities.)

If you wish to file a Civil Rights program complaint of discrimination, complete the [USDA Program Discrimination Complaint Form](#) (PDF), found online at www.ascr.usda.gov/filing-program-discrimination-complaint-usda-customer, or at any USDA office, or call (866) 632-9992 to request the form. You may also write a letter containing all of the information requested in the form. Send your completed complaint form or letter to us by mail at U.S. Department of Agriculture, Director, Office of Adjudication, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410, by fax (202) 690-7442 or email at program.intake@usda.gov.



United States Department of Agriculture

Registration is Now Open

USDA's 98th Annual
**Agricultural
Outlook Forum**
February 24-25, 2022



Register Today

<https://www.usda.gov/oce/ag-outlook-forum>