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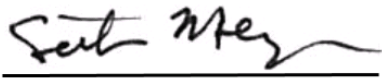
## Orange Production Down 4 Percent from March Forecast

**The United States all orange** forecast for the 2020-2021 season is 4.45 million tons, down 4 percent from the previous forecast and down 15 percent from the revised 2019-2020 final utilization. The Florida all orange forecast, at 51.7 million boxes (2.33 million tons), is down 7 percent from the previous forecast and down 23 percent from last season's revised final utilization. In Florida, early, midseason, and Navel varieties are forecast at 22.7 million boxes (1.02 million tons), up 1 percent from the previous forecast but down 23 percent from last season's final utilization. The Florida Valencia orange forecast, at 29.0 million boxes (1.31 million tons), is down 12 percent from the previous forecast and down 23 percent from last season's revised final utilization.

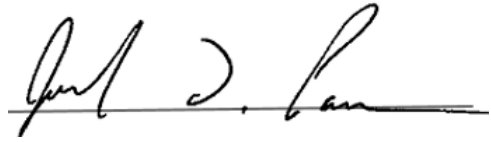
The California all orange forecast is 52.0 million boxes (2.08 million tons), unchanged from previous forecast but down 4 percent from last season's revised final utilization. The California Navel orange forecast is 42.0 million boxes (1.68 million tons), is unchanged from the previous forecast but down 3 percent from last season's revised final utilization. The California Valencia orange forecast is 10.0 million boxes (400,000 tons), is unchanged from the previous forecast but down 7 percent from last season's revised final utilization. The Texas all orange forecast, at 1.05 million boxes (45,000 tons), is down 30 percent from the previous forecast and down 22 percent from last season's final utilization.

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This report was approved on April 9, 2021.



Secretary of Agriculture  
Designate  
Seth Meyer



Agricultural Statistics Board  
Chairperson  
Joseph L. Parsons

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## Utilized Production of Citrus Fruits by Crop – States and United States: 2019-2020 and Forecasted April 1, 2021

[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 <sup>1</sup>		Utilized production ton equivalent	
	2019-2020 (1,000 boxes)	2020-2021 (1,000 boxes)	2019-2020 (1,000 tons)	2020-2021 (1,000 tons)
<b>Oranges</b>				
California, all .....	54,100	52,000	2,164	2,080
Early, mid, and Navel <sup>2</sup> .....	43,300	42,000	1,732	1,680
Valencia .....	10,800	10,000	432	400
Florida, all .....	67,400	51,700	3,033	2,327
Early, mid, and Navel <sup>2</sup> .....	29,650	22,700	1,334	1,022
Valencia .....	37,750	29,000	1,699	1,305
Texas, all .....	1,340	1,050	57	45
Early, mid, and Navel <sup>2</sup> .....	1,150	1,000	49	43
Valencia .....	190	50	8	2
United States, all .....	122,840	104,750	5,254	4,452
Early, mid, and Navel <sup>2</sup> .....	74,100	65,700	3,115	2,745
Valencia .....	48,740	39,050	2,139	1,707
<b>Grapefruit</b>				
California .....	4,700	4,200	188	168
Florida, all .....	4,850	4,300	207	183
Red <sup>3</sup> .....	4,060	(NA)	173	(NA)
White <sup>3</sup> .....	790	(NA)	34	(NA)
Texas .....	4,400	2,400	176	96
United States .....	13,950	10,900	571	447
<b>Tangerines and mandarins <sup>4</sup></b>				
California .....	22,400	23,000	896	920
Florida .....	1,020	950	48	45
United States .....	23,420	23,950	944	965
<b>Lemons</b>				
Arizona .....	1,800	1,800	72	72
California .....	25,300	22,000	1,012	880
United States .....	27,100	23,800	1,084	952

(NA) Not available.

<sup>1</sup> 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.

<sup>2</sup> Navel and miscellaneous varieties in California. Early (including Navel) and midseason varieties in Florida and Texas.

<sup>3</sup> Estimates discontinued in 2020-2021.

<sup>4</sup> Includes tangelos and tangors.

**Crop Area Planted and Harvested, Yield, and Production in Domestic Units – United States:  
2020 and 2021**

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

Crop	Area planted		Area harvested	
	2020	2021	2020	2021
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)
<b>Grains and hay</b>				
Barley .....	2,621	2,590	2,133	
Corn for grain <sup>1</sup> .....	90,819	91,144	82,467	
Corn for silage .....	(NA)		6,719	
Hay, all .....	(NA)	(NA)	52,238	51,714
Alfalfa .....	(NA)		16,230	
All other .....	(NA)		36,008	
Oats .....	2,984	2,488	1,004	
Proso millet .....	609		484	
Rice .....	3,036	2,710	2,987	
Rye .....	1,955		330	
Sorghum for grain <sup>1</sup> .....	5,880	6,940	5,095	
Sorghum for silage .....	(NA)		239	
Wheat, all .....	44,349	46,358	36,746	
Winter .....	30,415	33,078	23,024	
Durum .....	1,684	1,540	1,662	
Other spring .....	12,250	11,740	12,060	
<b>Oilseeds</b>				
Canola .....	1,825.0	2,115.0	1,789.0	
Cottonseed .....	(X)		(X)	
Flaxseed .....	305	400	296	
Mustard seed .....	97.0		91.4	
Peanuts .....	1,664.2	1,625.5	1,615.8	
Rapeseed .....	11.2		10.1	
Safflower .....	136.0		126.7	
Soybeans for beans .....	83,084	87,600	82,318	
Sunflower .....	1,718.7	1,216.0	1,665.7	
<b>Cotton, tobacco, and sugar crops</b>				
Cotton, all .....	12,092.5	12,036.0	8,701.5	
Upland .....	11,890.0	11,894.0	8,507.0	
American Pima .....	202.5	142.0	194.5	
Sugarbeets .....	1,162.2	1,169.0	1,142.3	
Sugarcane .....	(NA)		947.6	
Tobacco .....	(NA)	(NA)	198.1	195.8
<b>Dry beans, peas, and lentils</b>				
Chickpeas .....	269.8	290.0	262.9	
Dry edible beans .....	1,740.0	1,540.0	1,676.5	
Dry edible peas .....	999.0	893.0	973.0	
Lentils .....	528.0	611.0	514.0	
<b>Potatoes and miscellaneous</b>				
Hops .....	(NA)		58.6	
Maple syrup .....	(NA)		(NA)	
Mushrooms .....	(NA)		(NA)	
Peppermint oil .....	(NA)		50.1	
Potatoes .....	921.0		914.1	
Spearmint oil .....	(NA)		17.7	

See footnote(s) at end of table.

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**Crop Area Planted and Harvested, Yield, and Production in Domestic Units – United States:  
2020 and 2021 (continued)**

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

Crop	Yield per acre		Production	
	2020	2021	2020 (1,000)	2021 (1,000)
<b>Grains and hay</b>				
Barley ..... bushels	77.5		165,324	
Corn for grain ..... bushels	172.0		14,182,479	
Corn for silage ..... tons	20.5		137,729	
Hay, all ..... tons	2.43		126,812	
Alfalfa ..... tons	3.27		53,067	
All other ..... tons	2.05		73,745	
Oats ..... bushels	65.1		65,355	
Proso millet ..... bushels	19.0		9,210	
Rice <sup>2</sup> .....cwt	7,619		227,583	
Rye ..... bushels	34.9		11,532	
Sorghum for grain ..... bushels	73.2		372,960	
Sorghum for silage ..... tons	13.1		3,125	
Wheat, all ..... bushels	49.7		1,825,820	
Winter ..... bushels	50.9		1,171,022	
Durum ..... bushels	41.4		68,808	
Other spring ..... bushels	48.6		585,990	
<b>Oilseeds</b>				
Canola ..... pounds	1,931		3,454,950	
Cottonseed ..... tons	(X)		4,587.0	
Flaxseed ..... bushels	19.3		5,706	
Mustard seed ..... pounds	895		81,770	
Peanuts ..... pounds	3,796		6,133,900	
Rapeseed ..... pounds	1,971		19,910	
Safflower ..... pounds	1,167		147,800	
Soybeans for beans ..... bushels	50.2		4,135,477	
Sunflower ..... pounds	1,790		2,982,410	
<b>Cotton, tobacco, and sugar crops</b>				
Cotton, all <sup>2</sup> ..... bales	825		14,953.0	
Upland <sup>2</sup> ..... bales	813		14,401.0	
American Pima <sup>2</sup> ..... bales	1,362		552.0	
Sugarbeets ..... tons	29.4		33,618	
Sugarcane ..... tons	38.1		36,100	
Tobacco ..... pounds	1,966		389,413	
<b>Dry beans, peas, and lentils</b>				
Chickpeas <sup>2</sup> .....cwt	1,625		4,273	
Dry edible beans <sup>2</sup> .....cwt	1,966		32,963	
Dry edible peas <sup>2</sup> .....cwt	2,234		21,733	
Lentils <sup>2</sup> .....cwt	1,442		7,411	
<b>Potatoes and miscellaneous</b>				
Hops ..... pounds	1,770		103,810.3	
Maple syrup ..... gallons	(NA)		4,372	
Mushrooms ..... pounds	(NA)		816,367	
Peppermint oil ..... pounds	99		4,984	
Potatoes .....cwt	453		414,248	
Spearmint oil ..... pounds	121		2,134	

(NA) Not available.

(X) Not applicable.

<sup>1</sup> Area planted for all purposes.

<sup>2</sup> Yield in pounds.

## Crop Area Planted and Harvested, Yield, and Production in Metric Units – United States: 2020 and 2021

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

Crop	Area planted		Area harvested	
	2020 (hectares)	2021 (hectares)	2020 (hectares)	2021 (hectares)
<b>Grains and hay</b>				
Barley .....	1,060,690	1,048,150	863,200	
Corn for grain <sup>1</sup> .....	36,753,540	36,885,070	33,373,570	
Corn for silage .....	(NA)		2,719,110	
Hay, all <sup>2</sup> .....	(NA)	(NA)	21,140,200	20,928,140
Alfalfa .....	(NA)		6,568,120	
All other .....	(NA)		14,572,080	
Oats .....	1,207,590	1,006,870	406,310	
Proso millet .....	246,460		195,870	
Rice .....	1,228,640	1,096,710	1,208,810	
Rye .....	791,170		133,550	
Sorghum for grain <sup>1</sup> .....	2,379,580	2,808,550	2,061,900	
Sorghum for silage .....	(NA)		96,720	
Wheat, all <sup>2</sup> .....	17,947,600	18,760,620	14,870,740	
Winter .....	12,308,650	13,386,340	9,317,580	
Durum .....	681,500	623,220	672,590	
Other spring .....	4,957,450	4,751,060	4,880,560	
<b>Oilseeds</b>				
Canola .....	738,560	855,920	723,990	
Cottonseed .....	(X)		(X)	
Flaxseed .....	123,430	161,880	119,790	
Mustard seed .....	39,250		36,990	
Peanuts .....	673,490	657,820	653,900	
Rapeseed .....	4,530		4,090	
Safflower .....	55,040		51,270	
Soybeans for beans .....	33,623,260	35,450,840	33,313,270	
Sunflower .....	695,540	492,100	674,090	
<b>Cotton, tobacco, and sugar crops</b>				
Cotton, all <sup>2</sup> .....	4,893,710	4,870,850	3,521,410	
Upland .....	4,811,760	4,813,380	3,442,700	
American Pima .....	81,950	57,470	78,710	
Sugarbeets .....	470,330	473,080	462,280	
Sugarcane .....	(NA)		383,480	
Tobacco .....	(NA)	(NA)	80,150	79,240
<b>Dry beans, peas, and lentils</b>				
Chickpeas .....	109,190	117,360	106,390	
Dry edible beans .....	704,160	623,220	678,460	
Dry edible peas .....	404,290	361,390	393,760	
Lentils .....	213,680	247,270	208,010	
<b>Potatoes and miscellaneous</b>				
Hops .....	(NA)		23,730	
Maple syrup .....	(NA)		(NA)	
Mushrooms .....	(NA)		(NA)	
Peppermint oil .....	(NA)		20,270	
Potatoes .....	372,720		369,930	
Spearmint oil .....	(NA)		7,160	

See footnote(s) at end of table.

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**Crop Area Planted and Harvested, Yield, and Production in Metric Units – United States:  
2020 and 2021 (continued)**

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

Crop	Yield per hectare		Production	
	2020	2021	2020	2021
	(metric tons)	(metric tons)	(metric tons)	(metric tons)
<b>Grains and hay</b>				
Barley .....	4.17		3,599,510	
Corn for grain .....	10.79		360,251,560	
Corn for silage .....	45.95		124,945,650	
Hay, all <sup>2</sup> .....	5.44		115,041,910	
Alfalfa .....	7.33		48,141,570	
All other .....	4.59		66,900,340	
Oats .....	2.33		948,630	
Proso millet .....	1.07		208,880	
Rice .....	8.54		10,322,990	
Rye .....	2.19		292,930	
Sorghum for grain .....	4.59		9,473,620	
Sorghum for silage .....	29.31		2,834,950	
Wheat, all <sup>2</sup> .....	3.34		49,690,680	
Winter .....	3.42		31,870,000	
Durum .....	2.78		1,872,650	
Other spring .....	3.27		15,948,030	
<b>Oilseeds</b>				
Canola .....	2.16		1,567,140	
Cottonseed .....	(X)		4,161,260	
Flaxseed .....	1.21		144,940	
Mustard seed .....	1.00		37,090	
Peanuts .....	4.25		2,782,290	
Rapeseed .....	2.21		9,030	
Safflower .....	1.31		67,040	
Soybeans for beans .....	3.38		112,549,240	
Sunflower .....	2.01		1,352,800	
<b>Cotton, tobacco, and sugar crops</b>				
Cotton, all <sup>2</sup> .....	0.92		3,255,630	
Upland .....	0.91		3,135,450	
American Pima .....	1.53		120,180	
Sugarbeets .....	65.97		30,497,740	
Sugarcane .....	85.40		32,749,370	
Tobacco .....	2.20		176,630	
<b>Dry beans, peas, and lentils</b>				
Chickpeas .....	1.82		193,820	
Dry edible beans .....	2.20		1,495,180	
Dry edible peas .....	2.50		985,790	
Lentils .....	1.62		336,160	
<b>Potatoes and miscellaneous</b>				
Hops .....	1.98		47,090	
Maple syrup .....	(NA)		21,860	
Mushrooms .....	(NA)		370,300	
Peppermint oil .....	0.11		2,260	
Potatoes .....	50.79		18,789,970	
Spearmint oil .....	0.14		970	

(NA) Not available.

(X) Not applicable.

<sup>1</sup> Area planted for all purposes.

<sup>2</sup> Total may not add due to rounding.

## Fruits and Nuts Production in Domestic Units – United States: 2020 and 2021

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2021 crop year, except citrus which is for the 2020-2021 season. Blank data cells indicate estimation period has not yet begun]

Crop	Production		
	2020	2021	
<b>Citrus</b> <sup>1</sup>			
Grapefruit .....	1,000 tons	571	447
Lemons .....	1,000 tons	1,084	952
Oranges .....	1,000 tons	5,254	4,452
Tangerines and mandarins .....	1,000 tons	944	965
<b>Noncitrus</b>			
Apples, commercial .....	million pounds	10,650.0	
Apricots .....	tons	34,800	
Avocados .....	tons		
Blueberries, Cultivated .....	1,000 pounds		
Blueberries, Wild (Maine) .....	1,000 pounds		
Cherries, Sweet .....	tons	334,000	
Cherries, Tart .....	million pounds	197.0	
Coffee (Hawaii) .....	1,000 pounds	27,590	
Cranberries .....	barrel	8,970,000	
Dates .....	tons		
Grapes .....	tons	7,180,000	
Kiwifruit (California) .....	tons		
Nectarines (California) .....	tons		
Olives (California) .....	tons		
Papayas (Hawaii) .....	1,000 pounds		
Peaches .....	tons	645,500	
Pears .....	tons	800,000	
Plums (California) .....	tons		
Prunes (California) .....	tons		
Raspberries, all .....	1,000 pounds		
Strawberries .....	1,000 cwt		
<b>Nuts and miscellaneous</b>			
Almonds, shelled (California) .....	1,000 pounds	3,000,000	
Hazelnuts, in-shell (Oregon) .....	tons	71,000	
Macadamias (Hawaii) .....	1,000 pounds		
Pecans, in-shell .....	1,000 pounds	302,350	
Pistachios (California) .....	1,000 pounds		
Walnuts, in-shell (California) .....	tons	780,000	

<sup>1</sup> Production years are 2019-2020 and 2020-2021.

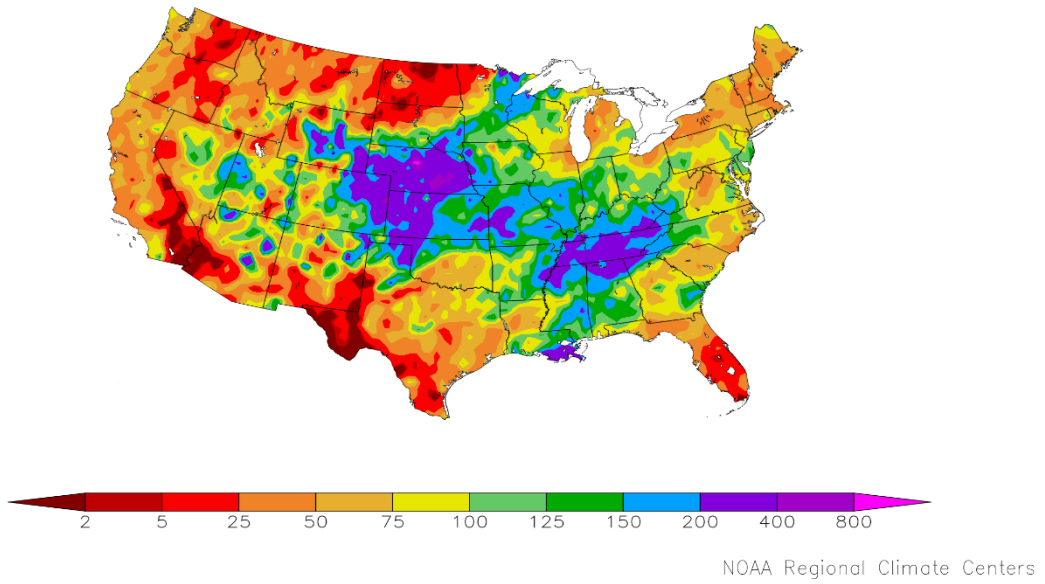
## Fruits and Nuts Production in Metric Units – United States: 2020 and 2021

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2021 crop year, except citrus which is for the 2020-2021 season. Blank data cells indicate estimation period has not yet begun]

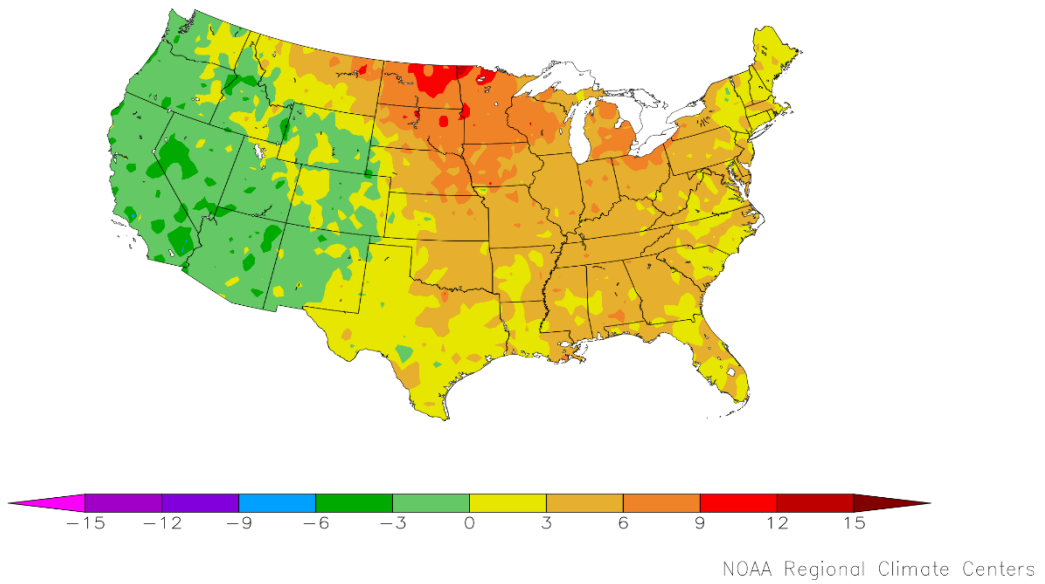
Crop	Production	
	2020 (metric tons)	2021 (metric tons)
<b>Citrus <sup>1</sup></b>		
Grapefruit .....	518,000	405,510
Lemons .....	983,390	863,640
Oranges .....	4,766,350	4,038,790
Tangerines and mandarins .....	856,380	875,430
<b>Noncitrus</b>		
Apples, commercial .....	4,830,760	
Apricots .....	31,570	
Avocados .....		
Blueberries, Cultivated .....		
Blueberries, Wild (Maine) .....		
Cherries, Sweet .....	303,000	
Cherries, Tart .....	89,360	
Coffee (Hawaii) .....	12,510	
Cranberries .....	406,870	
Dates .....		
Grapes .....	6,513,590	
Kiwifruit (California) .....		
Nectarines (California) .....		
Olives (California) .....		
Papayas (Hawaii) .....		
Peaches .....	585,590	
Pears .....	725,750	
Plums (California) .....		
Prunes (California) .....		
Raspberries, all .....		
Strawberries .....		
<b>Nuts and miscellaneous</b>		
Almonds, shelled (California) .....	1,360,780	
Hazelnuts, in-shell (Oregon) .....	64,410	
Macadamias (Hawaii) .....		
Pecans, in-shell .....	137,140	
Pistachios (California) .....		
Walnuts, in-shell (California) .....	707,600	

<sup>1</sup> Production years are 2019-2020 and 2020-2021.

Percent of Normal Precipitation (%)  
3/1/2021 – 3/31/2021



Departure from Normal Temperature (F)  
3/1/2021 – 3/31/2021



## March Weather Summary

The effects of February's severe cold wave faded amid March warmth. In fact, consistently cooler-than-normal March weather was limited to areas west of the Rockies, where monthly temperatures averaged as much as 5°F below normal. In contrast, early-spring warmth dominated the central and eastern United States, boosting monthly temperatures at least 5 to 10°F above normal across portions of the northern Plains and upper Midwest.

The weather pattern helping to drive that temperature regime—a Western trough and Eastern ridge—helped to suppress the Pacific storm track southward, leading to limited precipitation across the Pacific Coast States. Farther east, however, the same storms were able to tap into abundant moisture while traveling northeastward across the Nation's mid-section, leading to drought-easing rain and snow in central sections of the Rockies and Plains; multiple rounds of heavy rain and severe weather in the Southeast; and periodic Midwestern storminess. Precipitation mostly bypassed several areas, including the drought-affected northern Plains; southern and western Texas; and peninsular Florida. By late March, topsoil moisture was rated at least one-half very short to short in several states, including North Dakota (87 percent), New Mexico (84 percent), Montana (76 percent), South Dakota (66 percent), Florida (59 percent), Texas (55 percent), and Wyoming (55 percent).

Rangeland, pastures, and winter wheat across the central Plains and environs benefited from the boost in soil moisture; any flooding was limited by antecedent dryness and unfrozen soils, which allowed much of the rain and melting snow to soak in. By March 28, at least one-half of the winter wheat was rated in good to excellent condition in several Plains States, including Oklahoma (61 percent) and Kansas (50 percent). Wheat across the Midwest and mid-South was also generally faring well, with 70 percent of the Illinois crop rated good to excellent.

By late March, Southern planting was mostly progressing at a normal pace, or was ahead of schedule, except in a few areas where lowland flooding and wet soils inhibited fieldwork. By March 28, at least one-half of the intended corn acreage had been planted in Louisiana (74 percent) and Texas (50 percent). On the same date, Louisiana led the Nation in rice planting (43 percent complete), followed by Texas (39 percent). In Arizona, 26% of the cotton had been planted by March 28, compared to the 5-year average of 18 percent.

During the 4 weeks ending March 30, drought coverage across the contiguous United States fell from 46.6 to 43.9 percent, on the strength of improving conditions in the Central States. However, worsening drought was noted in several areas, including the northern Plains and parts of Texas. In the 11-state Western region, drought coverage dipped from 79.9 to 75.2 percent, mainly due to improvement in the northern and central Rockies. In contrast, Southeastern flood events were particularly impressive in early March across Kentucky and late in the month in central Tennessee. Severe weather outbreaks, mainly on March 12-13, 16-18, 24-25, 27-28, and 30-31, spawned more than 175 tornadoes, according to preliminary reports—the highest March total since 225 twisters occurred in 2012.

## March Agricultural Summary

March was warmer than average for the eastern third of the Nation as well as the Nation's midsection. Temperatures averaged 6°F or more above normal for much of the Great Lakes and the Great Plains. Parts of Minnesota, North Dakota, and South Dakota recorded temperatures 9°F or more above normal. Most of the western third of the Nation was moderately cooler than normal.

During March, large parts of the Mississippi Valley, Central Plains, and Eastern Rockies received at least double their normal amounts of precipitation. Most of California, Florida, and Texas, as well as the Northwest, Northern Plains, and Northern Rockies remained significantly drier than normal for the month.

## Crop Comments

**Grapefruit:** The United States 2020-2021 grapefruit crop is forecast at 447,000 tons, down 21 percent from the previous forecast and down 22 percent from last season's revised final utilization. In Florida, expected production, at 4.30 million boxes (183,000 tons), is down 7 percent from the previous forecast and down 11 percent from last year.

**Tangerines and mandarins:** The United States tangerine and mandarin crop is forecast at 965,000 tons, down 1 percent from the previous forecast but up 2 percent from last season's revised final utilization. The California tangerine and mandarin forecast, at 23.0 million boxes (920,000 tons) is unchanged from the previous forecast but up 3 percent from last season revised total.

**Lemons:** The 2020-2021 United States lemon crop is forecast at 952,000 tons, down 8 percent from previous forecast and down 12 percent from last season's revised final utilization. The California forecast, at 22.0 million boxes (880,000 tons), is down 8 percent from the previous forecast and down 13 percent from the revised 2019-2020 season total.

## Statistical Methodology

**Survey procedures:** The orange objective yield survey for the April 1 forecast was conducted in Florida. In August and September of last year, the number of bearing trees and number of fruit per tree is determined. In August and subsequent months, fruit size measurement and fruit droppage surveys are conducted, which are combined with the previous components to develop the current forecast of production. California and Texas conduct grower surveys on a quarterly basis in October, January, April, and July. California also conducts objective measurement surveys 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. The Florida Field Office submits its analysis of the current situation to the Agricultural Statistics Board (ASB). The ASB uses the Florida survey data and their analyses to prepare the published April 1 forecast. 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 April 1 forecast.

**Revision policy:** The April 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 April 1 production forecasts, the "Root Mean Square Error," a statistical measure based on past performance, is computed. The deviation between the April 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 April 1 orange production forecast is 3.0 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 3.0 percent. Chances are 9 out of 10 (90 percent confidence level) that the difference will not exceed 5.2 percent.

Also, shown in the following table is a 20-year record for selected crops of the differences between the April 1 forecast and the final estimate. Using oranges again as an example, changes between the April 1 orange forecast and the final estimates during the past 20-years have averaged 151,000 tons, ranging from 0 ton to 502,000 tons. The April 1 forecast for oranges has been below the final estimate 8 times, above 11 times and equal 1 time. The difference does not imply that the April 1 forecasts this year are likely to understate or overstate final production.

### Reliability of April 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
Oranges <sup>1</sup> .....tons	(percent) 3.0	(percent) 5.2	(millions) 151	(millions) 0	(millions) 502	(number) 8	(number) 11

<sup>1</sup> 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](mailto: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
Becky Sommer – Cotton, Cotton Ginnings, Sorghum .....	(202) 720-5944
James Johanson – Barley, County Estimates, Hay .....	(202) 690-8533
Greg Lemmons – Corn, Flaxseed, Proso Millet .....	(202) 720-9526
Jean Porter – Rye, Wheat .....	(202) 720-8068
John Stephens – Peanuts, Rice .....	(202) 720-7688
Travis Thorson – Sunflower, Other Oilseeds .....	(202) 720-7369
Fleming Gibson, Head, Fruits, Vegetables and Special Crops Section .....	(202) 720-2127
Heidi Lanouette – Blueberries, Cranberries, Cucumbers, Pistachios, Potatoes, Pumpkins, Raspberries, Squash, Strawberries, Sugarbeets, Sugarcane, Sweet Potatoes .....	(202) 720-4285
Robert Little – Apricots, Dry Beans, Lettuce, Macadamia, Maple Syrup, Nectarines, Pears, Snap Beans, Spinach, Tomatoes .....	(202) 720-3250
Anastasiya Osborne – Almonds, Apples, Asparagus, Carrots, Coffee, Onions Plums, Prunes, Sweet Corn, Tobacco .....	(202) 720-4288
Krishna Rizal – Artichokes, Cauliflower, Celery, Grapefruit, Garlic, Hazelnuts, Kiwifruit, Lemons, Mandarins and tangerines, Mint, Mushrooms, Olives, Oranges .....	(202) 720-5412
Fleming Gibson – Avocados, Bell Peppers, Broccoli, Cabbage, Chickpeas, Chile Peppers, Dates, Floriculture, Grapes, Hops, Pecans .....	(202) 720-2127
Antonio Torres – Cantaloupes, Dry Edible Peas, Green Peas, Honeydews, Lentils, Papayas, Peaches, Sweet Cherries, Tart Cherries, Walnuts, Watermelons .....	(202) 720-2157



## Access to NASS Reports

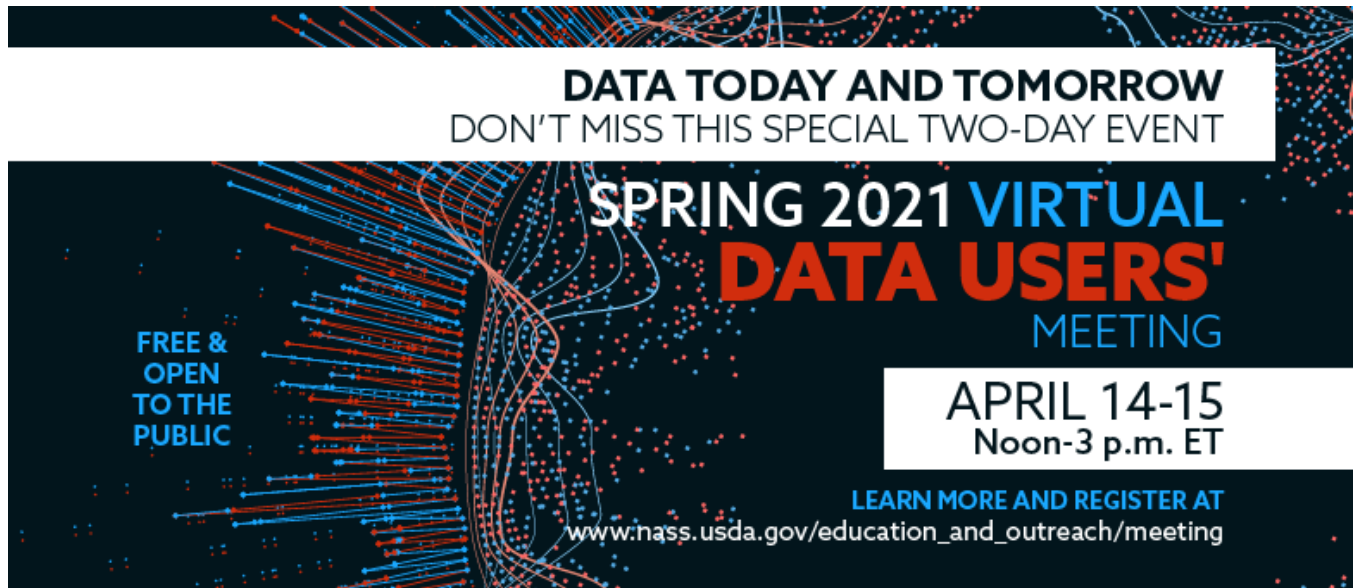
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- Cornell’s Mann Library has launched a new website housing NASS’s and other agency’s archived reports. The new website, <https://usda.library.cornell.edu>. All email subscriptions containing reports will be sent from the new website, <https://usda.library.cornell.edu>. 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](mailto: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](mailto:nass@usda.gov).

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## USDA NASS Data Users' Meeting

**Virtual Meeting**  
**April 14 and 15, 2021**  
**12:00 – 3:00 pm ET**

USDA's National Agricultural Statistics Service (NASS) will hold a virtual meeting for users of U.S. domestic and international agriculture data. Along with NASS, the 2021 Spring Data Users' Meeting will headline the Agricultural Marketing Service, Economic Research Service, Farm Service Agency, Foreign Agricultural Service, World Agricultural Outlook Board – and the Census Bureau's Foreign Trade Division. Representatives will provide agency updates, answer questions, and listen to concerns from data users.

### Abbreviated Agenda

#### Day 1 – April 14

Agency Updates– *All agencies*

AMS Market News - *Agricultural Marketing Service*

World Board Meteorology - *World Agricultural Outlook Board*

NASS Grain Stocks Program - *National Agricultural Statistics Service*

Foreign Production, Trade, and Import/Export Data - *World Agricultural Outlook Board, Foreign Agricultural Service, and U.S. Census Bureau*

#### Day 2 – April 15

Open Forum – *All agencies*

NASS Modernization - *National Agricultural Statistics Service*

ERS Research - *Economic Research Service*

For registration details or additional information about the Data Users' Meeting, see the meeting page on the NASS website ([https://www.nass.usda.gov/Education\\_and\\_Outreach/Meeting/index.php](https://www.nass.usda.gov/Education_and_Outreach/Meeting/index.php)).