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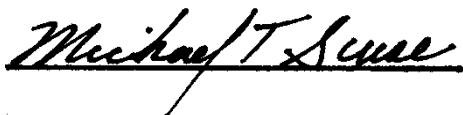
Orange Production Up 1 Percent from December

The United States all orange forecast for the 2016-2017 season is 5.39 million tons, up 1 percent from last month but down 9 percent from the 2015-2016 final utilization. The Florida all orange forecast, at 71.0 million boxes (3.20 million tons), is down 1 percent from last month and down 13 percent from last season's final utilization. Early, midseason, and Navel varieties in Florida are forecast at 36.0 million boxes (1.62 million tons), unchanged from last month but down slightly from last season's final utilization. The Florida Valencia orange forecast, at 35.0 million boxes (1.62 million tons), is down 3 percent from last month and down 23 percent from last season's final utilization.

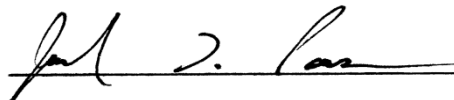
The California Valencia orange forecast is 10.5 million boxes (420,000 tons), unchanged from the previous forecast but up 11 percent from last season's final utilization. The California Navel orange forecast is 44.0 million boxes (1.76 million tons), up 5 percent from the previous forecast and up 13 percent from last season's final utilization. The Texas all orange forecast, at 1.70 million boxes (72,000 tons), is up 8 percent from the previous forecast and up 17 percent from last season's final utilization.

Florida frozen concentrated orange juice (FCOJ) yield forecast for the 2016-2017 season is 1.44 gallons per box at 42.0 degrees Brix, unchanged from last month but up 2 percent from last season's final yield of 1.41 gallons per box. The early and midseason portion is projected at 1.36 gallons per box, up 1 percent from last season's final yield of 1.35 gallons per box. The Valencia portion is projected at 1.54 gallons per box up 5 percent from last year's final yield of 1.47 gallons per box. All projections of yield assume the processing relationships this season will be similar to those of the past several seasons.

This report was approved on January 12, 2017.



Secretary of Agriculture
Designate
Michael T. Scuse



Agricultural Statistics Board
Chairperson
Joseph L. Parsons

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Utilized Production of Citrus Fruits by Crop – States and United States: 2015-2016 and Forecasted January 1, 2017

[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 ²	
	2015-2016 (1,000 boxes)	2016-2017 (1,000 boxes)	2015-2016 (1,000 tons)	2016-2017 (1,000 tons)
Oranges				
California, all	54,200	53,000	2,168	2,120
Early, mid, and Navel ³	45,500	44,000	1,820	1,760
Valencia	8,700	9,000	348	360
Florida, all	81,600	71,000	3,672	3,195
Early, mid, and Navel ³	36,100	36,000	1,625	1,620
Valencia	45,500	35,000	2,047	1,575
Texas, all	1,691	1,800	72	77
Early, mid, and Navel ³	1,351	1,450	57	62
Valencia	340	350	14	15
United States, all	137,491	125,800	5,911	5,392
Early, mid, and Navel ³	82,951	81,450	3,502	3,442
Valencia	54,540	44,350	2,409	1,950
Grapefruit				
California	3,800	4,100	152	164
Florida, all	10,800	9,000	459	382
Red	8,310	7,300	353	310
White	2,490	1,700	106	72
Texas	4,800	5,300	192	212
United States	19,400	18,400	803	758
Tangerines and mandarins ⁴				
California	21,700	23,000	868	920
Florida ⁵	1,415	1,520	67	71
United States	23,115	24,520	935	991
Lemons				
Arizona	1,750	1,550	70	62
California	20,500	20,000	820	800
United States	22,250	21,550	890	862
Tangelos ⁶				
Florida	390	(NA)	18	(NA)

(NA) Not available.

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; tangelos-90.

² Totals may not add due to rounding.

³ Navel and miscellaneous varieties in California. Early (including Navel) and midseason varieties in Florida and Texas. For 2015-2016 included small quantities of Temples in Florida. Beginning in 2016-2017 Temples in Florida are included in tangerines and mandarins.

⁴ Includes tangelos and tangors.

⁵ Small quantities of Temples in Florida

⁶ Beginning in 2016-2017, tangelos are included in tangerines and mandarins for Florida.

Hay Stocks on Farms – States and United States: May 1 and December 1, 2015 and 2016

State	May 1		December 1	
	2015 (1,000 tons)	2016 (1,000 tons)	2015 (1,000 tons)	2016 (1,000 tons)
Alabama	210	265	1,600	1,050
Arizona	40	55	310	300
Arkansas	540	530	1,750	1,950
California	320	340	1,900	1,800
Colorado	600	800	1,900	1,650
Connecticut	7	4	45	47
Delaware	2	2	20	25
Florida	42	55	560	550
Georgia	195	195	1,100	950
Idaho	900	950	2,500	2,600
Illinois	300	300	1,120	1,100
Indiana	320	185	760	960
Iowa	700	620	3,280	2,650
Kansas	1,120	1,350	5,100	5,300
Kentucky	610	800	4,150	3,950
Louisiana	185	150	620	780
Maine	26	26	139	142
Maryland	70	78	370	360
Massachusetts	7	14	56	55
Michigan	490	440	1,800	1,320
Minnesota	720	770	3,150	3,200
Mississippi	165	145	950	900
Missouri	1,650	1,585	5,600	5,350
Montana	1,300	1,025	3,700	4,100
Nebraska	1,250	1,450	5,100	4,600
Nevada	230	215	550	600
New Hampshire	7	6	42	31
New Jersey	7	20	80	123
New Mexico	110	115	400	400
New York	243	189	1,265	1,390
North Carolina	265	260	1,120	1,200
North Dakota	1,520	1,450	5,100	4,700
Ohio	430	355	1,490	1,340
Oklahoma	1,440	1,450	5,450	5,700
Oregon	375	440	2,000	2,300
Pennsylvania	265	390	2,100	2,200
Rhode Island	1	1	6	4
South Carolina	80	75	360	380
South Dakota	2,300	2,200	6,600	6,000
Tennessee	630	550	3,100	3,050
Texas	2,300	2,500	8,000	10,000
Utah	430	410	1,150	1,200
Vermont	35	35	150	260
Virginia	370	420	2,000	2,300
Washington	270	400	1,400	1,500
West Virginia	220	190	850	870
Wisconsin	730	810	2,900	3,200
Wyoming	490	525	1,300	1,400
United States	24,517	25,140	94,993	95,837

Crop Area Planted and Harvested, Yield, and Production in Domestic Units – United States: 2016 and 2017

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2017 crop year. Blank data cells indicate estimation period has not yet begun]

Crop	Area planted		Area harvested	
	2016	2017	2016	2017
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)
Grains and hay				
Barley	3,052		2,558	
Corn for grain ¹	94,004		86,748	
Corn for silage	(NA)		6,186	
Hay, all	(NA)		53,461	
Alfalfa	(NA)		16,885	
All other	(NA)		36,576	
Oats	2,828		981	
Proso millet	443		413	
Rice	3,150		3,097	
Rye	1,891		414	
Sorghum for grain ¹	6,690		6,163	
Sorghum for silage	(NA)		298	
Wheat, all	50,154		43,890	
Winter	36,137	32,383	30,222	
Durum	2,412		2,365	
Other spring	11,605		11,303	
Oilseeds				
Canola	1,714.0		1,685.7	
Cottonseed	(X)		(X)	
Flaxseed	374		367	
Mustard seed	103.1		98.2	
Peanuts	1,671.0		1,547.0	
Rapeseed	11.0		10.5	
Safflower	161.1		154.4	
Soybeans for beans	83,433		82,736	
Sunflower	1,596.6		1,534.0	
Cotton, tobacco, and sugar crops				
Cotton, all	10,074.5		9,521.7	
Upland	9,880.0		9,332.0	
American Pima	194.5		189.7	
Sugarbeets	1,163.4		1,126.2	
Sugarcane	(NA)		915.6	
Tobacco	(NA)		319.7	
Dry beans, peas, and lentils				
Austrian winter peas	38.0		28.0	
Dry edible beans	1,662.0		1,558.6	
Chickpeas, all	325.3		320.0	
Large	211.5		209.2	
Small	113.8		110.8	
Dry edible peas	1,382.0		1,329.8	
Lentils	933.0		908.0	
Wrinkled seed peas	(NA)		(NA)	
Potatoes and miscellaneous				
Hops	(NA)		50.9	
Maple syrup	(NA)		(NA)	
Mushrooms	(NA)		(NA)	
Peppermint oil	(NA)		65.3	
Potatoes, all	1,034.0		1,007.7	
Spring	51.0		48.0	
Summer	62.2		60.7	
Fall	920.8		899.0	
Spearmint oil	(NA)		24.5	
Sweet potatoes	168.1		163.3	
Taro (Hawaii)	(NA)		(D)	

See footnote(s) at end of table.

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**Crop Area Planted and Harvested, Yield, and Production in Domestic Units – United States:
2016 and 2017 (continued)**

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2017 crop year. Blank data cells indicate estimation period has not yet begun]

Crop	Yield per acre		Production	
	2016	2017	2016	2017
			(1,000)	(1,000)
Grains and hay				
Barley	bushels	77.9	199,282	
Corn for grain	bushels	174.6	15,148,038	
Corn for silage	tons	20.3	125,670	
Hay, all	tons	2.52	134,781	
Alfalfa	tons	3.45	58,263	
All other	tons	2.09	76,518	
Oats	bushels	66.0	64,770	
Proso millet	bushels	30.4	12,558	
Rice ²	cwt	7,237	224,145	
Rye	bushels	32.5	13,451	
Sorghum for grain	bushels	77.9	480,261	
Sorghum for silage	tons	14.0	4,171	
Wheat, all	bushels	52.6	2,309,675	
Winter	bushels	55.3	1,671,532	
Durum	bushels	44.0	104,116	
Other spring	bushels	47.2	534,027	
Oilseeds				
Canola	pounds	1,824	3,075,200	
Cottonseed	tons	(X)	5,418.0	
Flaxseed	bushels	23.7	8,680	
Mustard seed	pounds	980	96,270	
Peanuts	pounds	3,675	5,684,610	
Rapeseed	pounds	1,840	19,320	
Safflower	pounds	1,425	220,090	
Soybeans for beans	bushels	52.1	4,306,671	
Sunflower	pounds	1,731	2,654,735	
Cotton, tobacco, and sugar crops				
Cotton, all ²	bales	855	16,958.5	
Upland ²	bales	844	16,401.0	
American Pima ²	bales	1,411	557.5	
Sugarbeets	tons	32.7	36,881	
Sugarcane	tons	36.0	32,988	
Tobacco	pounds	1,967	628,720	
Dry beans, peas, and lentils				
Austrian winter peas ²	cwt	1,704	477	
Dry edible beans ²	cwt	1,842	28,712	
Chickpeas, all ²	cwt	1,702	5,447	
Large ²	cwt	1,677	3,509	
Small ²	cwt	1,749	1,938	
Dry edible peas ²	cwt	2,086	27,737	
Lentils ²	cwt	1,397	12,685	
Wrinkled seed peas	cwt	(NA)	439	
Potatoes and miscellaneous				
Hops	pounds	1,713	87,139.6	
Maple syrup	gallons	(NA)	4,207	
Mushrooms	pounds	(NA)	945,639	
Peppermint oil	pounds	89	5,800	
Potatoes, all	cwt	437	440,725	
Spring	cwt	316	15,171	
Summer	cwt	323	19,602	
Fall	cwt	452	405,952	
Spearmint oil	pounds	131	3,208	
Sweet potatoes	cwt	193	31,546	
Taro (Hawaii)	pounds	(D)	(D)	

(D) Withheld to avoid disclosing data for individual operations.

(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: 2016 and 2017

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2017 crop year. Blank data cells indicate estimation period has not yet begun]

Crop	Area planted		Area harvested	
	2016	2017	2016	2017
	(hectares)	(hectares)	(hectares)	(hectares)
Grains and hay				
Barley	1,235,110		1,035,200	
Corn for grain ¹	38,042,480		35,106,050	
Corn for silage	(NA)		2,503,410	
Hay, all ²	(NA)		21,635,130	
Alfalfa	(NA)		6,833,190	
All other	(NA)		14,801,940	
Oats	1,144,460		397,000	
Proso millet	179,280		167,140	
Rice	1,274,770		1,253,320	
Rye	765,270		167,540	
Sorghum for grain ¹	2,707,380		2,494,100	
Sorghum for silage	(NA)		120,600	
Wheat, all ²	20,296,820		17,761,840	
Winter	14,624,280	13,105,080	12,230,540	
Durum	976,110		957,090	
Other spring	4,696,430		4,574,210	
Oilseeds				
Canola	693,640		682,190	
Cottonseed	(X)		(X)	
Flaxseed	151,350		148,520	
Mustard seed	41,720		39,740	
Peanuts	676,240		626,060	
Rapeseed	4,450		4,250	
Safflower	65,200		62,480	
Soybeans for beans	33,764,500		33,482,430	
Sunflower	646,130		620,790	
Cotton, tobacco, and sugar crops				
Cotton, all ²	4,077,050		3,853,340	
Upland	3,998,340		3,776,570	
American Pima	78,710		76,770	
Sugarbeets	470,820		455,760	
Sugarcane	(NA)		370,530	
Tobacco	(NA)		129,360	
Dry beans, peas, and lentils				
Austrian winter peas	15,380		11,330	
Dry edible beans	672,590		630,750	
Chickpeas ²	131,650		129,500	
Large	85,590		84,660	
Small	46,050		44,840	
Dry edible peas	559,280		538,160	
Lentils	377,580		367,460	
Wrinkled seed peas	(NA)		(NA)	
Potatoes and miscellaneous				
Hops	(NA)		20,580	
Maple syrup	(NA)		(NA)	
Mushrooms	(NA)		(NA)	
Peppermint oil	(NA)		26,430	
Potatoes, all ²	418,450		407,810	
Spring	20,640		19,430	
Summer	25,170		24,560	
Fall	372,640		363,820	
Spearmint oil	(NA)		9,910	
Sweet potatoes	68,030		66,090	
Taro (Hawaii)	(NA)		(D)	

See footnote(s) at end of table.

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**Crop Area Planted and Harvested, Yield, and Production in Metric Units – United States:
2016 and 2017 (continued)**

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2017 crop year. Blank data cells indicate estimation period has not yet begun]

Crop	Yield per hectare		Production	
	2016	2017	2016	2017
	(metric tons)	(metric tons)	(metric tons)	(metric tons)
Grains and hay				
Barley	4.19		4,338,850	
Corn for grain	10.96		384,777,890	
Corn for silage	45.54		114,005,910	
Hay, all ²	5.65		122,271,270	
Alfalfa	7.74		52,855,300	
All other	4.69		69,415,960	
Oats	2.37		940,130	
Proso millet	1.70		284,810	
Rice	8.11		10,167,050	
Rye	2.04		341,670	
Sorghum for grain	4.89		12,199,190	
Sorghum for silage	31.38		3,783,870	
Wheat, all ²	3.54		62,859,050	
Winter	3.72		45,491,650	
Durum	2.96		2,833,570	
Other spring	3.18		14,533,830	
Oilseeds				
Canola	2.04		1,394,890	
Cottonseed	(X)		4,915,130	
Flaxseed	1.48		220,480	
Mustard seed	1.10		43,670	
Peanuts	4.12		2,578,500	
Rapeseed	2.06		8,760	
Safflower	1.60		99,830	
Soybeans for beans	3.50		117,208,380	
Sunflower	1.94		1,204,170	
Cotton, tobacco, and sugar crops				
Cotton, all ²	0.96		3,692,280	
Upland	0.95		3,570,900	
American Pima	1.58		121,380	
Sugarbeets	73.41		33,457,880	
Sugarcane	80.77		29,926,210	
Tobacco	2.20		285,180	
Dry beans, peas, and lentils				
Austrian winter peas	1.91		21,640	
Dry edible beans	2.06		1,302,350	
Chickpeas, all ²	1.91		247,070	
Large	1.88		159,170	
Small	1.96		87,910	
Dry edible peas	2.34		1,258,130	
Lentils	1.57		575,380	
Wrinkled seed peas	(NA)		19,910	
Potatoes and miscellaneous				
Hops	1.92		39,530	
Maple syrup	(NA)		21,040	
Mushrooms	(NA)		428,930	
Peppermint oil	0.10		2,630	
Potatoes, all ²	49.02		19,990,950	
Spring	35.43		688,150	
Summer	36.20		889,130	
Fall	50.61		18,413,670	
Spearmint oil	0.15		1,460	
Sweet potatoes	21.65		1,430,900	
Taro (Hawaii)	(D)		(D)	

(D) Withheld to avoid disclosing data for individual operations.

(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: 2016 and 2017

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Crop	Production	
	2016	2017
Citrus ¹		
Grapefruit 1,000 tons	803	758
Lemons 1,000 tons	890	862
Oranges 1,000 tons	5,911	5,392
Tangelos (Florida) ² 1,000 tons	18	(NA)
Tangerines and mandarins 1,000 tons	935	991
Noncitrus		
Apples million pounds	10,417.0	
Apricots tons	61,400	
Avocados tons		
Bananas (Hawaii) 1,000 pounds		
Blackberries (Oregon) 1,000 pounds		
Blueberries		
Cultivated 1,000 pounds		
Wild (Maine) 1,000 pounds		
Boysenberries (Oregon) 1,000 pounds		
Raspberries, All 1,000 pounds		
Cherries, Sweet tons	318,000	
Cherries, Tart million pounds	309.1	
Coffee 1,000 pounds		
Cranberries barrel	8,591,700	
Dates (California) tons		
Figs (California) tons		
Grapes tons	7,823,900	
Kiwifruit (California) tons		
Nectarines tons		
Olives (California) tons		
Papayas (Hawaii) 1,000 pounds		
Peaches tons	806,600	
Pears tons	782,000	
Plums (California) tons		
Prunes (California) tons	45,000	
Strawberries 1,000 cwt	28,853	
Nuts and miscellaneous		
Almonds, shelled (California) 1,000 pounds	2,050,000	
Hazelnuts, in-shell (Oregon) tons	38,000	
Macadamias (Hawaii) 1,000 pounds		
Pecans, in-shell 1,000 pounds	262,700	
Pistachios (California) 1,000 pounds		
Walnuts, in-shell (California) tons	670,000	

(NA) Not available.

¹ Production years are 2015-2016 and 2016-2017.

² Beginning in 2016-2017, tangelos are included in tangerines and mandarins for Florida.

Fruits and Nuts Production in Metric Units – United States: 2016 and 2017

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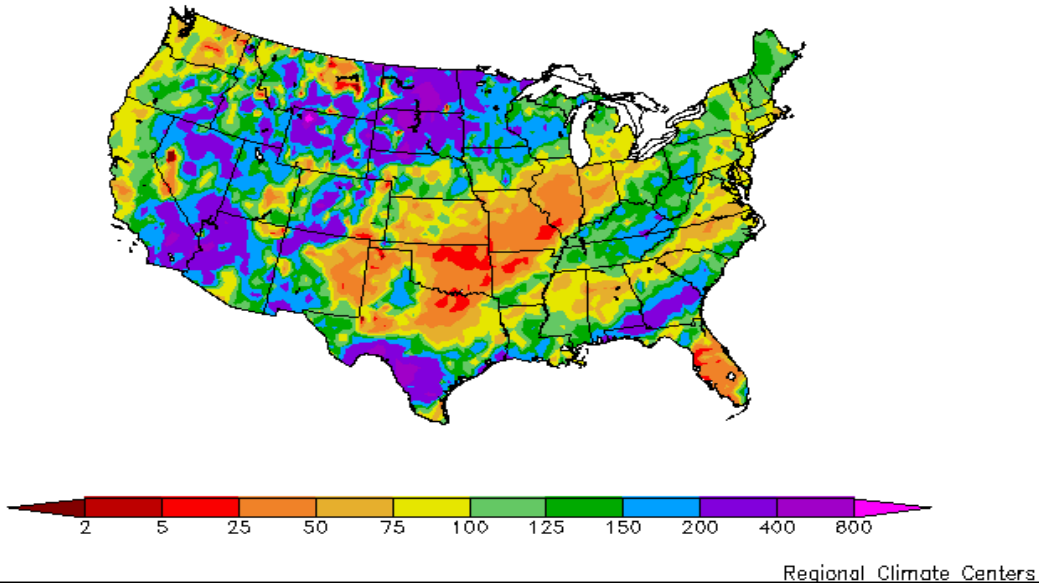
Crop	Production	
	2016 (metric tons)	2017 (metric tons)
Citrus¹		
Grapefruit	728,470	687,650
Lemons	807,390	781,990
Oranges	5,362,370	4,891,540
Tangelos (Florida) ²	16,330	(NA)
Tangerines and mandarins	848,220	899,020
Noncitrus		
Apples	4,725,070	
Apricots	55,700	
Avocados		
Bananas (Hawaii)		
Blackberries (Oregon)		
Blueberries		
Cultivated		
Wild (Maine)		
Boysenberries (Oregon)		
Raspberries, All		
Cherries, Sweet	288,480	
Cherries, Tart	140,210	
Coffee		
Cranberries	389,710	
Dates (California)		
Figs (California)		
Grapes	7,097,720	
Kiwifruit (California)		
Nectarines		
Olives (California)		
Papayas (Hawaii)		
Peaches	731,740	
Pears	709,420	
Plums (California)		
Prunes (California)	40,820	
Strawberries	1,308,740	
Nuts and miscellaneous		
Almonds, shelled (California)	929,860	
Hazelnuts, in-shell (Oregon)	34,470	
Macadamias (Hawaii)		
Pecans, in-shell	119,160	
Pistachios (California)		
Walnuts, in-shell (California)	607,810	

(NA) Not available.

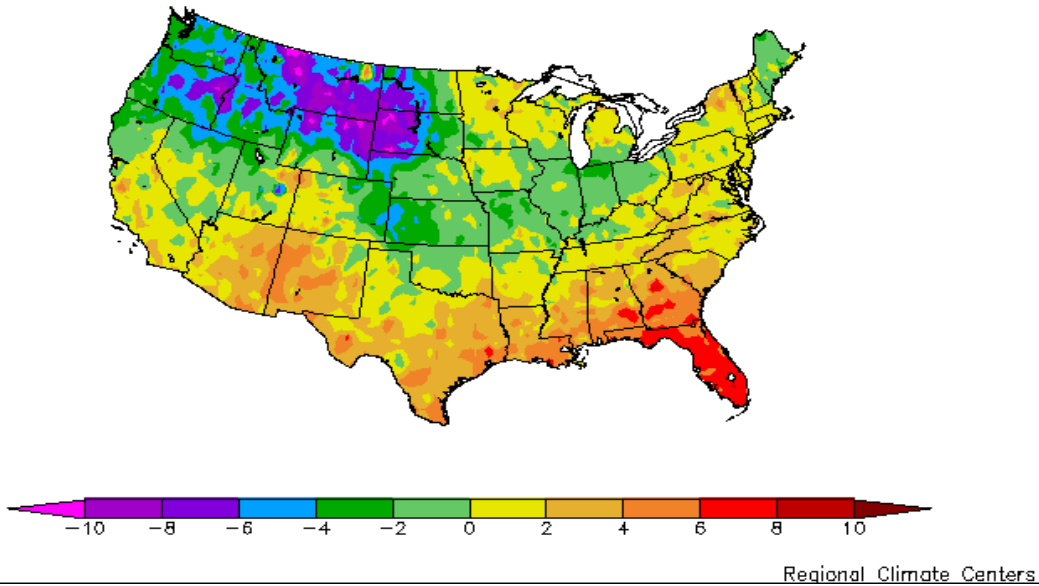
¹ Production years are 2015-2016 and 2016-2017.

² Beginning in 2016-2017, Tangelos are included in tangerines and mandarins for Florida.

Percent of Normal Precipitation (%)
12/1/2016 - 12/31/2016



Departure from Normal Temperature (F)
12/1/2016 - 12/31/2016



December Weather Summary

Stormy weather dominated the Nation, easing or eradicating drought in the East and West. In particular, multiple storms in California chiseled away at long-term drought, while soaking rains in the Southeast dented summer and autumn precipitation deficits. The Northeast also experienced drought relief in the form of rain and snow.

However, pockets of dryness persisted across the central and southern Plains, leading to agricultural impacts such as low pond levels and poor pasture, rangeland, and winter wheat conditions. A coating of snow preceded a sharp, mid-month cold snap across portions of the central and southern Plains, providing wheat with some beneficial moisture and insulation. Nevertheless, wheat conditions declined, with one-quarter of the crop in Colorado and Oklahoma rated in very poor to poor condition by January 1, 2017, compared to 15 percent and 12 percent, respectively, in late November.

Farther north, cold, stormy weather dominated the northern Plains and the Northwest, leading to periodic travel disruptions and increased livestock stress. One of the most significant storms struck the Dakotas on Christmas Day, resulting in blizzard conditions. The same system produced a wintry mix, including rain, freezing rain, sleet, and snow across the Upper Midwest.

Elsewhere, much-above-normal temperatures covered the Deep South, including the Southwest and the Gulf Coast States. Florida was especially warm, with the peninsula missing out on most of the rain that fell in other parts of the Southeast. As a result of the warm, dry weather, irrigation demands increased for Florida's citrus, vegetables, and strawberries.

December Agricultural Summary

Temperatures from the Southwest to the southern Atlantic Coast were above normal during December. Conversely, temperatures in the northern High Plains and parts of the Northwest averaged more than 6°F below normal. In the Corn Belt, a month of mild weather allowed producers to complete fieldwork. Precipitation levels were generally within 2 inches of normal across most of the Nation. In early December, a rain event in the Southeast caused as much as 7.5 inches of precipitation. Significant rainfall was also received in the western Gulf Coast States and the southern Colorado River Basin later in the month. According to the United States Drought Monitor, areas suffering drought conditions on January 3 were scattered throughout the Nation with extreme drought in parts of Alabama, California, Georgia, New England, and Oklahoma.

In a majority of reporting States, the winter wheat crop was in mostly good to excellent condition by the end of December. Although in Kansas, winter wheat conditions were rated at 44 percent in the good to excellent categories at the end of month, down from 52 percent on November 27. Generally, the eastern Corn Belt reported higher winter wheat ratings including Ohio at 84 percent good to excellent, Indiana at 73 percent good to excellent, and Illinois at 69 percent good to excellent.

Pasture and range conditions declined in several parts of the Nation in December. In Missouri, pasture conditions at the end of the month were rated 41 percent in the good to excellent categories, down 17 percentage points from November 27. In Colorado, pasture conditions were rated 30 percent in the good to excellent categories, down 14 percentage points from the end of November. Oklahoma producers reported 24 percent of pasture in the good to excellent categories, down 17 percentage points from November 27.

In Florida, the northern counties were under abnormally dry conditions at the beginning of December, which spread throughout the month to include several counties in the middle of the State. Cotton, soybean, and peanut harvesting all wrapped up at the beginning of the month. Sugarcane harvest continued in Glades, Hendry, and Palm Beach Counties. The dry conditions and warm temperatures had pasture quality and quantity declining steadily throughout the month. However, the cattle remained in mostly fair to good condition. Early orange harvest activities accelerated at the beginning of month. Grapefruit harvest was in full swing by the end of the month, with internal quality holding well. All processing plants were open and accepting field-run fruit by the end of the month. The navel oranges, white grapefruit, and red grapefruit harvest schedule was slightly ahead of last season.

Crop Comments

Grapefruit: The United States 2016-2017 grapefruit crop is forecast at 758,000 tons, up 2 percent from last month but down 6 percent from last season's final utilization. In Florida, expected production, at 9.00 million boxes (382,000 tons), is down 3 percent from last month and down 17 percent from last year. Texas grapefruit production up 13 percent from previous forecast and California grapefruit production up 3 percent from previous forecasts.

Lemons: The forecast for the 2016-2017 United States lemon crop is 862,000 tons, down 5 percent from the previous forecast and down 3 percent from last season's final utilization. Production is down from 2015-2016 in both Arizona and California.

Tangelos: Florida's tangelo forecast is 390,000 boxes (18,000 tons), unchanged from last month but down 41 percent from last season's final utilization. The production is the lowest since the 1958-1959 season.

Tangerines and mandarins: The United States tangerine and mandarin crop is forecast at 991,000 tons, up slightly from last month and up 4 percent from last season's final utilization if tangelos were included. If realized, this will be the largest production since records began in 1964-1965. The California tangerine and mandarin forecast is unchanged from previous forecast but up 6 percent from previous season. The Florida forecast is up 1 percent from last month and down 16 percent from 2015-2016, if tangelos were included. Beginning in 2016-2017, tangerine and mandarin estimates in Florida include tangelos.

Florida citrus: In the citrus growing region, reported daily high temperatures were above average on most days. Daytime highs ranged from the mid-70s to mid-80s, while nighttime lows were in the 50s and 60s. Monthly rainfall totals for December were well below average. Of the nineteen monitored stations, only four had an inch or more of rainfall. For the second consecutive month, rainfall has been below average. In conjunction with warmer than normal temperatures, drought data has been recorded across the citrus region. According to the January 3, 2017 U.S. Drought Monitor, abnormally dry conditions are now present in the complete citrus growing region.

Early tangerine harvest (Fallglo and Sunburst) was about over for the season. Royal and Honey tangerines still lack good color and were not yet ready for harvest. Early and mid-season oranges were still being harvested for the fresh market in limited quantities. Navel orange harvest decreased each week during the month. Red grapefruit harvest was in full swing, with internal quality holding well and with good color. All processing plants were now open and accepting field-run fruit.

Canals and ditches remained at low levels due to the lack of widespread rainfall over the past couple months. Growers were irrigating frequently to keep moisture in the ground and on the trees. Caretakers continued to spray in order to lower the psyllid population. Other reported grove practices occurring included fertilizing, applying herbicides, spraying supplemental miticides, and general grove care. Growers were performing general grove maintenance (irrigation and pump repair, ditch cleaning, weed removal, etc.) in well-kept groves.

California citrus: Wet weather slowed the citrus harvest. Navel orange, grapefruit, lime, lemon, and pomelo harvests continued. Satsuma mandarin harvest progressed well in Placer County. Clementine mandarin harvest continued in the San Joaquin Valley. Newly planted citrus trees were covered for frost protection.

California noncitrus fruits and nuts: By the beginning of December, the grape harvest was essentially completed for the year, and only a few table grapes remained to be harvested. Pruning continued in some vineyards. Kiwi, pomegranate, Asian and Bartlett pears, guava, quince, and persimmon harvest was ongoing. Stone fruit and olive orchard pruning and clean up continued. Removal of older orchards continued in preparation for replanting new varieties. Almond, walnut, and pistachio harvests were complete. Pruning and shredding continued throughout the month in harvested nut orchards. Zinc sulfate and boron were applied to some harvested almond and pistachio orchards. Planting of new almond and walnut orchards continued. Pecan harvest began during the middle of December. Chilling hours appeared to be adequate for this time of year.

Hay stocks on farms: All hay stored on United States farms as of December 1, 2016 totaled 95.8 million tons, up 1 percent from the previous December. Disappearance from May 1, 2016 - December 1, 2016 totaled 64.1 million tons,

compared with 64.0 million tons for the same period a year earlier.

December 1 hay stocks were up from 2015, coinciding with a slight increase in overall hay production. Producers in areas impacted by drought preserved stocks for winter feeding. Limited quantities are available to purchase in these impacted areas.

Statistical Methodology

Survey procedures: The orange objective yield survey for the January 1 forecast was conducted in Florida, which produces about 62 percent of the United States production last season. In August and September 2016, the number of bearing trees and the number of fruit per tree is 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 and packer surveys 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 and packers 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 January 1 forecast.

Revision policy: The January 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 January 1 production forecasts, the "Root Mean Square Error," a statistical measure based on past performance, is computed. The deviation between the January 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.

The "Root Mean Square Error" for the January 1 orange production forecast is 4.8 percent. However, if you exclude the three abnormal production years (one freeze season and two hurricane seasons), the "Root Mean Square Error" is 5.0 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 4.8 percent, or 5.0 percent excluding abnormal seasons. Chances are 9 out of 10 (90 percent confidence level) that the difference will not exceed 8.2 percent, or 8.6 percent excluding abnormal seasons.

Changes between the January 1 orange forecast and the final estimates during the past 20 years have averaged 336,000 tons (345,000 tons excluding abnormal seasons), ranging from 2,000 tons to 666,000 tons regardless of exclusions. The January 1 forecast for oranges has been below the final estimate 8 times and above 12 times (below 8 times and above 9 times, excluding abnormal seasons). The difference does not imply that the January 1 forecast this year is likely to understate or overstate final production.

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@nass.usda.gov

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James Johanson – County Estimates, Hay.....	(202) 690-8533
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Fleming Gibson – Citrus, Coffee, Tropical Fruits.....	(202) 720-5412
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Daphne Schauber – Floriculture, Grapes, Hops, Maple Syrup, Nursery, Tree Nuts.....	(202) 720-4215
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