

## **Crop Production**

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#### **Orange Production Down 1 Percent from December Forecast**

The United States all orange forecast for the 2015-2016 season is 5.25 million tons, down 1 percent from the previous forecast and down 18 percent from the 2014-2015 final utilization. The Florida all orange forecast, at 69.0 million boxes (3.11 million tons), is unchanged from last month's forecast but down 29 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 24 percent from last season's final utilization. The Florida Valencia orange forecast, at 33.0 million boxes (1.49 million tons), is unchanged from last month but down 33 percent from last season's final utilization.

The California Valencia orange forecast is 10.0 million boxes (400,000 tons), up 5 percent from previous forecast and from last season's final utilization. The California Navel orange forecast is 42.0 million boxes (1.68 million tons), down 2 percent from the previous forecast but up 6 percent from last season's final utilization. The Texas all orange forecast, at 1.41 million boxes (60,000 tons), is down 16 percent from previous forecast and down 3 percent last season's final utilization.

**Florida frozen concentrated orange juice (FCOJ)** yield forecast for the 2015-2016 season is 1.50 gallons per box at 42.0 degrees Brix, down 4 percent from the December forecast but unchanged from last season's final yield of 1.50 gallons per box. The early and midseason portion is projected at 1.38 gallons per box, down 3 percent from last season's final yield of 1.42 gallons per box. The Valencia portion is projected at 1.65 gallons up 4 percent from last year's final yield of 1.58 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, 2016.

Secretary of Agriculture Designate Robert Johansson Agricultural Statistics Board Chairperson James M. Harris

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#### Utilized Production of Citrus Fruits by Crop - States and United States: 2014-2015 and Forecasted January 1, 2016

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

Cuan and Ctata	Utilized production boxes 1		Utilized production ton equivalent			
Crop and State	2014-2015	2015-2016	2014-2015	2015-2016		
	(1,000 boxes)	(1,000 boxes)	(1,000 tons)	(1,000 tons)		
Oranges						
California, all	49,000	52,000	1,960	2,080		
Early, mid, and Navel <sup>2</sup>	39,500	42,000	1,580	1,680		
Valencia	9,500	10,000	380	400		
Florida, all	96,800	69,000	4,356	3,105		
Early, mid, and Navel 2	47,400	36,000	2,133	1,620		
Valencia	49,400	33,000	2,223	1,485		
Texas, all	1,452	1,410	62	60		
Early, mid, and Navel <sup>2</sup>	1,170	1,130	50	48		
Valencia	282	280	12	12		
United States, all	147,252	122,410	6,378	5,245		
Early, mid, and Navel <sup>2</sup>	88,070	79,130	3,763	3,348		
Valencia	59,182	43,280	2,615	1,897		
Grapefruit						
California	3,800	3,700	152	148		
Florida, all	12,900	10,800	548	459		
Red	9,650	8,500	410	361		
White	3,250	2,300	138	98		
Texas	4,250	5,100	170	204		
United States	20,950	19,600	870	811		
Tangerines and mandarins						
Arizona <sup>3 4</sup>	170	(NA)	7	(NA)		
California 3	18,200	21,000	728	840		
Florida	2,270	1,400	108	67		
United States	20,640	22,400	843	907		
Lemons						
Arizona	2,000	1,600	80	64		
California	20,500	20,000	820	800		
United States	22,500	21,600	900	864		
Tangelos						
Florida	680	400	31	18		

(NA) Not available.

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

<sup>&</sup>lt;sup>2</sup> Navel and miscellaneous varieties in California. Early (including Navel) and midseason varieties in Florida and Texas. Small quantities of Temples in Florida.

<sup>&</sup>lt;sup>3</sup> Includes tangelos and tangors. <sup>4</sup> Estimates discontinued in 2015-2016.

### Hay Stocks on Farms - States and United States: May 1 and December 1, 2014 and 2015

State	May 1		Decembe	er 1
State	2014	2015	2014	2015
	(1,000 tons)	(1,000 tons)	(1,000 tons)	(1,000 tons)
Alabama	300	210	1,495	1,600
Arizona	35	40	320	310
Arkansas	550	540	2,050	1,750
California	140	320	1,750	1,900
Colorado	320	600	1,800	1,900
Connecticut	8	7	48	45
Delaware	2	2	28	20
Florida	55	42	570	560
Georgia	170	195	1,030	1,100
Idaho	320	900	2,250	2,500
Illinois	310	300	1,300	1,120
Indiana	200	320	1,070	760
lowa	410	700	2,950	3,280
Kansas	1,340	1,120	3,700	5,100
Kentucky	700	610	3,300	4,150
Louisiana	105	185	820	620
Maine	18	26	130	139
Maryland	70	70	285	370
Massachusetts	19	7	50	56
Michigan	270	490	2,000	1,800
Minnesota	440	720	3,050	3,150
Mississippi	160	165	900	950
Missouri	1,800	1,650	5,500	5,600
Montana	875	1,300	4,600	3,700
Nebraska	1,150	1,250	4,600	5,100
Nevada	45	230	751	550
New Hampshire	6	7 7	43	42
New Jersey	22		118	80
New Mexico New York	90 330	110 243	435 1,330	400 1,265
North Carolina	220	265	1,300	1,120
North Dakota	1,200	1,520	5,400	5,100
Ohio	275	430	1,550	1,490
Oklahoma	1,100	1,440	5,100	5,450
Oregon	210	375	1,640	2,000
Pennsylvania	300	265	1,720	2,100
Rhode Island	1	1	7	_, 6
South Carolina	95	80	370	360
South Dakota	1,480	2,300	6,000	6,600
Tennessee	630	630	3,050	3,100
Texas	1,350	2,300	7,500	8,000
Utah	300	430	1,190	1,150
Vermont	45	35	182	150
Virginia	470	370	1,950	2,000
Washington	290	270	1,450	1,400
West Virginia	235	220	910	850
Wisconsin	435	730	2,960	2,900
Wyoming	280	490	1,500	1,300
United States	19,176	24,517	92,052	94,993

# Crop Area Planted and Harvested, Yield, and Production in Domestic Units – United States: 2015 and 2016

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2016 crop year. Blank data cells indicate estimation period has not yet begun]

Crop	Area planted		Area harvested	
Стор	2015 2016		2015	2016
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)
Grains and hay				
Barley	3,558		3,109	
Corn for grain <sup>1</sup>	87,999		80,749	
			·	
Corn for silage	(NA)		6,221	
Hay, all	(NA)		54,437	
Alfalfa	(NA)		17,778	
All other	(NA)		36,659	
Oats	3,088		1,276	
Proso millet	445		418	
Rice	2,614		2,575	
_	1,569		360	
Rye	•			
Sorghum for grain 1	8,459		7,851	
Sorghum for silage	(NA)		306	
Wheat, all	54,644		47,094	
Winter	39,461	36,609	32,257	
Durum	1,936	•	1,896	
Other spring	13,247		12,941	
Oilseeds				
Canola	1,777.0		1,714.5	
Cottonseed	(X)		(X)	
Flaxseed	463		456	
Mustard seed	44.0		40.1	
Peanuts	1,625.0		1,568.0	
Rapeseed	1.2		1.1	
Safflower	168.2		159.1	
Soybeans for beans	82,650		81,849	
Sunflower	1,859.1		1,799.4	
Cotton, tobacco, and sugar crops				
Cotton, all	8,580.5		8,076.9	
Upland	8,422.0		7,922.0	
.'				
American Pima	158.5		154.9	
Sugarbeets	1,158.8		1,144.3	
Sugarcane	(NA)		892.7	
Tobacco	(NA)		326.6	
Dry beans, peas, and lentils				
Austrian winter peas	34.0		21.0	
Dry edible beans	1,764.4		1,711.4	
Dry edible peas	1,143.0		1,083.5	
Lentils	493.0		476.0	
Wrinkled seed peas	(NA)		(NA)	
Potatoes and miscellaneous	. ,		. ,	
	/N1A\		40.0	
Hops	(NA)		43.6	
Peppermint oil	(NA)		65.2	
Potatoes, all	1,065.2		1,053.3	
Spring	70.1		68.5	
Summer	50.5		47.1	
Fall	944.6		937.7	
Spearmint oil	(NA)		27.2	
_'	, ,			
Sweet potatoes	156.9		153.1	
Taro (Hawaii)	(NA)		0.3	

See footnote(s) at end of table.

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#### Crop Area Planted and Harvested, Yield, and Production in Domestic Units - United States: 2015 and 2016 (continued)

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2016 crop year. Blank data cells indicate estimation period has not yet begun]

Crop	Yield per	acre	Production	
Сгор	2015 2016		2015 2016	
			(1,000)	(1,000)
Grains and hay				
Barley bushels	68.9		214,297	
Corn for grain bushels	168.4		13,601,198	
Corn for silagetons	20.4		126,894	
Hay, alltons	2.47		134,388	
Alfalfatons	3.32		58,974	
All othertons	2.06		75,414	
Oats bushels	70.2		89,535	
Proso millet bushels	33.9		14,159	
Rice <sup>2</sup>	7,470		192,343	
_	,		· · · · · · · · · · · · · · · · · · ·	
Ryebushels	31.9		11,496	
Sorghum for grainbushels	76.0		596,751	
Sorghum for silagetons	14.6		4,475	
Wheat, allbushels	43.6		2,051,752	
Winter bushels	42.5		1,370,188	
Durumbushels	43.5		82,484	
Other spring bushels	46.3		599,080	
Oilseeds				
Canolapounds	1,677		2,875,010	
Cottonseedtons	(X)		4,153.0	
Flaxseed bushels	22.1		10,095	
Mustard seedpounds	671		26,927	
Peanutspounds	3,963		6,213,790	
Rapeseed pounds	1,382		1,520	
Safflowerpounds	1,347		214,251	
Soybeans for beans	48.0		3,929,885	
Sunflowerpounds	1,625		2,923,730	
Cotton, tobacco, and sugar crops				
Cotton, all <sup>2</sup> bales	769		12,943.0	
Upland <sup>2</sup> bales	758		12,508.0	
American Pima <sup>2</sup> bales	1,348		435.0	
	30.8			
Sugarbeetstons			35,278	
Sugarcanetons	36.5		32,549	
Tobaccopounds	2,178		711,236	
Dry beans, peas, and lentils	4 000			
Austrian winter peas <sup>2</sup> cwt	1,238		260	
Dry edible beans <sup>2</sup> cwt	1,760		30,121	
Dry edible peas <sup>2</sup> cwt	1,687		18,283	
Lentils <sup>2</sup> cwt	1,108		5,276	
Wrinkled seed peascwt	(NA)		384	
Potatoes and miscellaneous				
Hopspounds	1,807		78,846.0	
Peppermint oilpounds	90		5,882	
Potatoes, all	418		440,498	
Spring	296		20,251	
Summer	334		15,734	
Fall cwt	431		404,513	
Spearmint oilpounds	113		3,070	
_' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' ' '	203			
			-	
Sweet potatoes	10,300		31,016 3,502	

<sup>(</sup>NA) Not available.

(X) Not applicable.

Area planted for all purposes.

Yield in pounds.

# Crop Area Planted and Harvested, Yield, and Production in Metric Units – United States: 2015 and 2016

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2016 crop year. Blank data cells indicate estimation period has not yet begun]

Crop	Area pla	anted	Area harvested	
Оюр	2015	2016	2015	2016
	(hectares)	(hectares)	(hectares)	(hectares)
Grains and hay				
Barley	1,439,890		1,258,180	
Corn for grain <sup>1</sup>	35,612,320		32,678,310	
Corn for silage	(NA)		2,517,580	
Hay, all <sup>2</sup>	` '			
	(NA)		22,030,110	
Alfalfa	(NA)		7,194,580	
All other	(NA)		14,835,530	
Oats	1,249,680		516,380	
Proso millet	180,090		169,160	
Rice	1,057,860		1,042,080	
Rye	634,960		145,690	
Sorghum for grain <sup>1</sup>	3,423,270		3,177,220	
Sorghum for silage	(NA)		123,840	
Wheat, all <sup>2</sup>	22,113,880		19,058,470	
Winter	· · · ·	14,815,300		
Winter	15,969,470	14,010,300	13,054,090	
Durum	783,480		767,290	
Other spring	5,360,930		5,237,090	
Oilseeds				
Canola	719,130		693,840	
Cottonseed	(X)		(X)	
Flaxseed	187,370		184,540	
Mustard seed	17,810		16,230	
Peanuts	657,620		634,550	
Rapeseed	490		450	
Safflower	68.070		64,390	
	,		33,123,470	
Soybeans for beansSunflower	33,447,630 752,360		728,200	
Catter takens and arms area				
Cotton, tobacco, and sugar crops	0.470.440		0.000.040	
Cotton, all <sup>2</sup>	3,472,440		3,268,640	
Upland	3,408,300		3,205,950	
American Pima	64,140		62,690	
Sugarbeets	468,950		463,090	
Sugarcane	(NA)		361,270	
Tobacco	(NA)		132,150	
Dry beans, peas, and lentils				
Austrian winter peas	13,760		8,500	
Dry edible beans	714,040		692,590	
Dry edible peas	462,560		438,480	
Lentils	199,510		192,630	
Wrinkled seed peas	(NA)		192,630 (NA)	
·	, ,		` '	
Potatoes and miscellaneous Hops	(NA)		17,660	
Peppermint oil	(NA) (NA)		26,390	
	` '		· ·	
Potatoes, all <sup>2</sup>	431,080		426,260	
Spring	28,370		27,720	
Summer	20,440		19,060	
Fall	382,270		379,480	
Spearmint oil	(NA)		11,010	
Sweet potatoes	63,500		61,960	
Taro (Hawaii)	(NA)		140	

See footnote(s) at end of table.

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#### Crop Area Planted and Harvested, Yield, and Production in Metric Units - United States: 2015 and 2016 (continued)

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2016 crop year. Blank data cells indicate estimation period has not yet begun]

Yie		hectare	Production	
Сгор	2015 2016		2015 2016	
	(metric tons)	(metric tons)	(metric tons)	(metric tons)
Grains and hay				
Barley	3.71		4,665,770	
Corn for grain	10.57		345,486,340	
Corn for silage	45.73		115,116,300	
Hay, all <sup>2</sup>	5.53		121,914,740	
Alfalfa	7.44		53,500,310	
All other	4.61		68,414,430	
Oats	2.52		1,299,600	
Proso millet	1.90		321,120	
			8,724,530	
Rice	8.37			
Rye	2.00		292,010	
Sorghum for grain	4.77		15,158,170	
Sorghum for silage	32.78		4,059,650	
Wheat, all <sup>2</sup>	2.93		55,839,540	
Winter	2.86		37,290,410	
Durum	2.93		2,244,850	
Other spring	3.11		16,304,290	
Oilseeds				
Canola	1.88		1,304,080	
Cottonseed	(X)		3,767,540	
Flaxseed	1.39		256,420	
Mustard seed	0.75		12,210	
Peanuts	4.44		2,818,530	
Rapeseed	1.55		690	
Safflower	1.51		97,180	
Soybeans for beans	3.23		106,953,940	
Sunflower	1.82		1,326,180	
Cotton, tobacco, and sugar crops				
Cotton, all <sup>2</sup>	0.86		2,818,010	
Upland	0.85		2,723,300	
	1.51		94,710	
American Pima			′	
Sugarbeets	69.11		32,003,660	
Sugarcane	81.73		29,527,960	
Tobacco	2.44		322,610	
Dry beans, peas, and lentils				
Austrian winter peas	1.39		11,790	
Dry edible beans	1.97		1,366,270	
Dry edible peas	1.89		829,300	
Lentils	1.24		239,320	
Wrinkled seed peas	(NA)		17,420	
Potatoes and miscellaneous				
Hops	2.03		35,760	
Peppermint oil	0.10		2,670	
Potatoes, all <sup>2</sup>	46.87		19,980,650	
Spring	33.14		918,570	
Summer	37.44		713,680	
Fall	48.35		18,348,400	
Spearmint oil				
_ t	0.13		1,390	
Sweet potatoes	22.71		1,406,860	
Taro (Hawaii)	11.55		1,590	

(NA) Not available.

<sup>(</sup>X) Not available.
(X) Not applicable.

Area planted for all purposes.

Total may not add due to rounding.

#### Fruits and Nuts Production in Domestic Units - United States: 2015 and 2016

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2016 crop year, except citrus which is for the 2015-2016 season. Blank cells indicate estimation period has not yet begun]

Cron	Production		
Сгор	2015	2016	
Citrus <sup>1</sup>			
Grapefruit	870	811	
Lemons	900	864	
Oranges1,000 tons	6,378	5,245	
Tangelos (Florida)1,000 tons		18	
Tangerines and mandarins	843	907	
Noncitrus			
Applesmillion pounds	10,171.8		
Apricotstons	53,008		
Bananas (Hawaii)pounds			
Grapestons	8,046,400		
Olives (California)tons			
Papayas (Hawaii)pounds			
Peachestons			
Pearstons	,		
Prunes, dried (California)tons			
Prunes and plums (excludes California)tons			
Nuts and miscellaneous			
Almonds, shelled (California)	1,800,000		
Hazelnuts, in-shell (Oregon)tons	39,000		
Pecans, in-shell	272,340		
Walnuts, in-shell (California)tons	575,000		
Maple syrup	3,414		

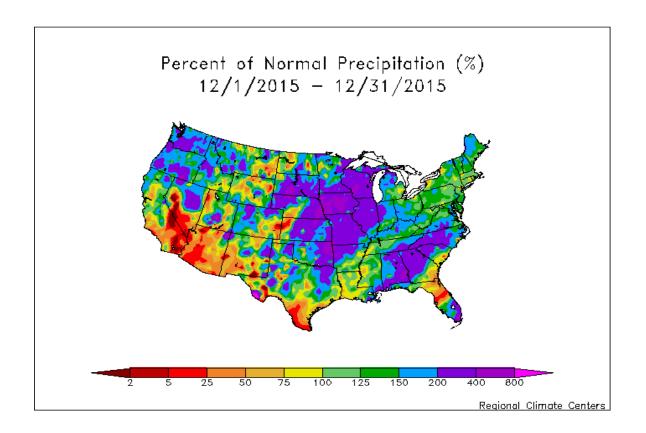
<sup>&</sup>lt;sup>1</sup> Production years are 2014-2015 and 2015-2016.

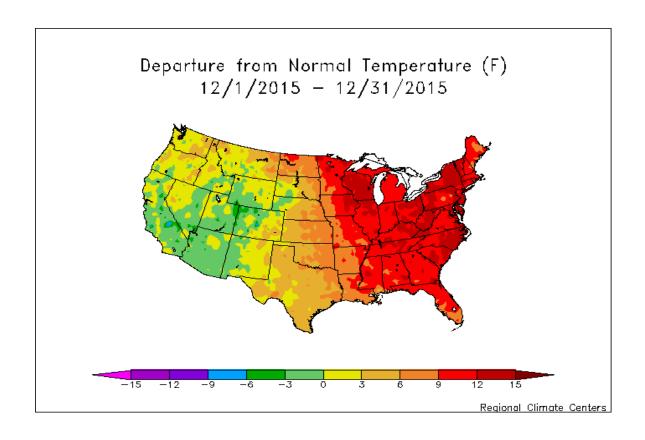
#### Fruits and Nuts Production in Metric Units - United States: 2015 and 2016

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2016 crop year, except citrus which is for the 2015-2016 season. Blank cells indicate estimation period has not yet begun]

Cron	Production		
Crop	2015	2016	
	(metric tons)	(metric tons)	
Citrus <sup>1</sup>	700.050	705 700	
Grapefruit	789,250 816,470	735,730 783,810	
Lemons	5,786,020	4,758,180	
Oranges		16.330	
Tangelos (Florida)  Tangerines and mandarins	•	822,820	
rangemes and mandams	704,700	022,020	
Noncitrus			
Apples	4,613,850		
Apricots	48,090		
Bananas (Hawaii)			
Grapes	7,299,570		
Olives (California)			
Papayas (Hawaii)			
Peaches	729,920		
Pears			
Prunes, dried (California)			
Prunes and plums (excludes California)			
Nuts and miscellaneous			
Almonds, shelled (California)	816,470		
Hazelnuts, in-shell (Oregon)			
Pecans, in-shell	123,530		
Walnuts, in-shell (California)			
Maple syrup			

<sup>&</sup>lt;sup>1</sup> Production years are 2014-2015 and 2015-2016.





#### **December Weather Summary**

Record-setting December warmth covered much of the Midwest and East, while heavy to record-setting precipitation fell across the Northwest, mid-South, and upper Midwest. Relentless precipitation further eased or eradicated Northwestern drought but southern California and the Desert Southwest received little December moisture.

Farther east, an already wet pattern across the Nation's mid-section culminated in a late-month deluge that drove the Mississippi River to record-high levels from Cape Girardeau, Missouri to Thebes, Illinois. Record-breaking crests were also noted along several Mississippi River tributaries, especially in Missouri.

The wetness across the mid-South and lower Midwest increased concerns about soft red winter wheat due to standing water and lowland flooding. During December, the portion of Illinois' winter wheat rated in good to excellent condition fell from 67 to 58 percent. Excessively wet conditions also continued to plague parts of the Southeast, hampering final harvest and winter wheat planting efforts. In North Carolina, only 42 percent of the winter wheat was rated in good to excellent condition at the end of December, down from 69 percent on November 29.

Unusual warmth accompanied the general wetness across the eastern half of the country. In the Southeast, warm conditions allowed winter grains and cool-season pastures to continue to develop. Farther north, periods of snow blanketed the upper Midwest, despite above-normal temperatures. Occasional snow also fell across the Plains, providing winter wheat with some moisture and insulation. On the southern High Plains, however, a late-month blizzard caused significant livestock losses due to bitter cold and wind-driven snow.

#### **December Agricultural Summary**

Temperatures from the Mississippi Valley eastward were well above normal during December, allowing producers additional time to complete fieldwork while aiding the establishment of winter wheat. Most notably, temperatures in the Great Lakes Region, Ohio Valley, and Mid-Atlantic Coast averaged more than 9 degrees above normal. In the West, monthly temperatures were slightly below normal. Precipitation levels were generally within 3 inches of normal across most of the Nation. In early December, rain events on the Northern Pacific Coast caused as much as 8 inches of precipitation. Another exception included significant rainfall from the Southern Plains to the Middle Mississippi Valley and the Southeast later in the month.

Most of the winter wheat crop was being reported in good or excellent condition by the end of December. In Kansas, winter wheat conditions were rated at 54 percent in the good to excellent categories at the end of month, up from 48 percent on November 29. Areas with some snow cover reported higher winter wheat ratings including Montana at 74 percent good to excellent, South Dakota at 71 percent good to excellent, and Nebraska at 59 percent good to excellent.

Pasture and range conditions varied throughout the Nation. In Colorado, pasture conditions at the end of the month were rated 62 percent in the good to excellent categories, up 12 percentage points from November 29. Oklahoma producers reported 36 percent of pasture in the good to excellent categories, down 8 percentage points from November 29. In North Carolina, pasture conditions were rated 28 percent in the good to excellent categories, down 9 percentage points from November 29.

During the month of December, Florida producers experienced above-average temperatures and above-average precipitation in the Florida Panhandle and southern region. There was an increase in early orange harvest activities at the beginning of the month. Producers reported overall good quality in fresh fruit but fruit size was small compared to a normal year. By the end of December, most processing plants were open for the season. Navel orange and grapefruit harvest schedule was slightly lagging behind last season.

Late-season row crop harvesting continued in some southern States throughout December but was mostly complete as the month ended. In Texas and Arizona, cotton harvest was virtually complete. Rain events in Georgia delayed harvest and decreased quality of soybeans, cotton, and peanuts in many areas. Most of the cotton and peanut crops not harvested prior to December in South Carolina were likely to be left in the fields and destroyed as a result of October's historic flood and still soggy field conditions.

#### **Crop Comments**

**Grapefruit:** The United States grapefruit for 2015-2016 crop is forecast at 811,000 tons, up 3 percent from last month's forecast but down 7 percent from last season's final utilization. In Florida, expected production is down 6 percent from last month and down 16 percent from last year. California and Texas grapefruit production estimates are both up from the previous forecast.

**Lemons:** The forecast for the United States lemon 2015-2016 crop is 864,000 tons, up 2 percent from the previous forecast but down 4 percent from last season's final utilization. Arizona's harvest was reported ahead of schedule this year. California's production is up 3 percent from the previous forecast.

**Tangelos:** Florida's tangelo forecast is 400,000 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. The Row Count Survey conducted December 30-31, showed 60 percent of the rows were harvested.

**Tangerines and mandarins:** The United States tangerine and mandarin crop is forecast at 907,000 tons, up 8 percent from last month and last season's final utilization. If realized this would be the largest production ever recorded. California tangerine and mandarin production estimates are up 11 percent from the previous forecast and up 15 percent above last year. This would also be a record for California. The Florida forecast is down 18 percent from the previous month and down 38 percent from last year. This will be the lowest production in Florida since the 1929-30 season. Estimates for Arizona have been discontinued.

**Florida citrus:** In the citrus growing region, reported daily high temperatures were warmer than average for almost the entire month; most days reached the mid to upper 80s in all areas. Rainfall was above average in the Indian River District, but very sporadic across the remainder of the citrus region. Vero Beach (Indian River County) and St Lucie West (St. Lucie County) had between two-and-a-half and three inches of rainfall, while most other areas had less than two inches. The least rainfall was in Lake Alfred (Polk County) at 0.34 inches. According to December 29, 2015 U.S. Drought Monitor, the eastern edges of Orange and Volusia county, nearly all of Osceola county, and all of Brevard County were abnormally dry. The remainder of the citrus region was drought free.

Harvest was in full swing in all citrus counties on early variety oranges, and white and red grapefruit. Fruit was going primarily to the processed markets. Navels and early tangerine fresh shipments were about over for the season. Honey tangerines still remained to be harvested. Orlando tangelos were about over, and Minneola tangelos were getting underway. Other grove activity was relatively slow this time of the year. Growers were irrigating as needed and spraying for psyllids. Mowing was being reduced to an as needed basis, mostly before harvest.

California citrus: Citrus harvest continued. Lemons, mandarins, Cara Cara oranges, Navel oranges, tangerines, grapefruit, Oro Blanco hybrid grapefruit, and pomelos were harvested, packed, and shipped worldwide. Prior to the holidays, citrus packing houses increased their volume of exports. New varieties of citrus groves were planted. Some immature orange trees remained covered to protect them from freezing temperatures. Frost protection measures continued overall, due to the cold weather. With the onset of wet weather and the holidays, citrus harvest slowed down and packing houses were packing their remaining stock on hand.

California noncitrus fruits and nuts: The harvest season of grapes for juice, raisins (traditional and DOV), and wine were completed. Table grape vineyards were covered with plastic to protect against rain. Some grape vineyards were irrigated, treated for weed control, and fumigated in preparation for replanting. Some growers applied soil amendments. Post-harvest cultural maintenance continued in deciduous tree fruit, vineyards, and nut orchards. Pushed-out orchards and vineyards continued to be cleaned up with burning, ripping, and fumigation in preparation for spring planting. Aged apricot, nectarine, peach, and plum trees were removed and replaced with new trees. Pomegranate harvest concluded midmonth. Olives continued to size up and were harvested the last of December, when pruning and orchard cleaning

commenced. Most of remaining kiwifruit have been picked and are awaiting shipping in cold storage. Harvest of almond and walnut orchards ended early December. Nut orchards were pruned, irrigated, and treated to prepare for their dormant season. Orchards with aged almond trees were removed and replaced with new almond trees. Almonds, pistachios, shelled and in-shell walnuts, and shelled pecans continued to be packed and shipped worldwide.

**Hay stocks on farms:** All hay stored on United States farms as of December 1, 2015 totaled 95.0 million tons, up 3 percent from the previous December. Disappearance from May 1, 2015 - December 1, 2015 totaled 63.9 million tons, compared with 67.0 million tons for the same period a year earlier.

December 1 hay stocks were up from 2014, despite a decrease in overall hay production. Producers in persistent drought affected areas 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 59 percent of the United States production. Bearing tree numbers are determined at the start of the season based on a fruit tree census conducted every other year, combined with ongoing review based on administrative data or special surveys. From mid-July to mid-September, 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 4.1 percent. However, if you exclude the three abnormal production years (one freeze season and two hurricane seasons), the "Root Mean Square Error" is 4.3 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 4.1 percent, or 4.3 percent excluding abnormal seasons. Chances are 9 out of 10 (90 percent confidence level) that the difference will not exceed 7.1 percent, or 7.4 percent excluding abnormal seasons.

Changes between the January 1 orange forecast and the final estimates during the past 20 years have averaged 326,000 tons (334,000 tons excluding abnormal seasons), ranging from 2,000 tons to 638,000 tons regardless of exclusions. The January 1 forecast for oranges has been below the final estimate 7 times and above 13 times (below 7 times and above 10 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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Tony Dahlman – Oats, Soybeans	(202) 690-3234
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James Johanson – County Estimates, Hay	(202) 690-8533
Scott Matthews - Crop Weather, Barley	(202) 720-7621
Jean Porter – Rye, Wheat	(202) 720-8068
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Travis Thorson – Sunflower, Other Oilseeds	(202) 720-7369
Jorge Garcia-Pratts, Head, Fruits, Vegetables and Special Crops Section	(202) 720-2127
Vincent Davis – Fresh and Processing Vegetables, Onions, Strawberries,	/
Sugarbeets, Sugarcane, Cherries	
Fleming Gibson – Citrus, Coffee, Tropical Fruits	
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Dave Losh – Hops	(360) 709-2400
Dan Norris – Austrian Winter Peas, Dry Edible Peas, Lentils, Mint,	
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Daphne Schauber – Floriculture, Grapes, Maple Syrup, Nursery, Tree Nuts	(202) 720-4215
Chris Singh – Apples, Apricots, Plums, Prunes, Tobacco	(202) 720-4288

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