Crop Production

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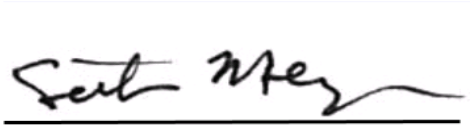
Winter Wheat Production Up 2 Percent from 2022
Orange Production Down 1 Percent from April Forecast

Winter wheat production is forecast at 1.13 billion bushels, up 2 percent from 2022. As of May 1, the United States yield is forecast at 44.7 bushels per acre, down 2.3 bushels from last year's average yield of 47.0 bushels per acre. Area expected to be harvested for grain or seed is forecast at 25.3 million acres, up 8 percent from last year.

Hard Red Winter production, at 514 million bushels, is down 3 percent from a year ago. Soft Red Winter, at 406 million bushels, is up 21 percent from 2022. White Winter, at 210 million bushels, is down 11 percent from last year. Of the White Winter production, 10.2 million bushels are Hard White and 200 million bushels are Soft White.

The United States all orange forecast for the 2022-2023 season is 2.55 million tons, down 1 percent from the previous forecast and down 25 percent from the 2021- 2022 final utilization. The Florida all orange forecast, at 15.7 million boxes (705,000 tons), is down 3 percent from the previous forecast and down 62 percent from last season's final utilization. In Florida, early, midseason, and Navel varieties are forecast at 6.15 million boxes (277,000 tons), up 1 percent from the previous forecast but down 66 percent from last season's final utilization. The Florida Valencia orange forecast, at 9.50 million boxes (428,000 tons), is down 5 percent from the previous forecast and down 59 percent from last season's final utilization.

This report was approved on May 12, 2023.



Secretary of Agriculture
Designate
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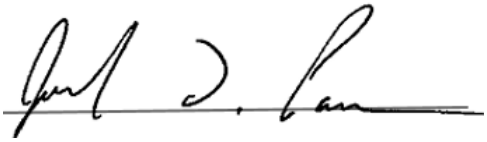

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Winter Wheat Area Harvested, Yield, and Production – States and United States: 2022 and Forecasted May 1, 2023

State	Area harvested		Yield per acre		Production	
	2022	2023	2022	2023	2022	2023
	(1,000 acres)	(1,000 acres)	(bushels)	(bushels)	(1,000 bushels)	(1,000 bushels)
Arkansas	150	160	53.0	51.0	7,950	8,160
California	70	95	73.0	80.0	5,110	7,600
Colorado	1,430	1,650	25.0	30.0	35,750	49,500
Idaho	710	700	90.0	87.0	63,900	60,900
Illinois	560	790	79.0	78.0	44,240	61,620
Indiana	240	380	81.0	77.0	19,440	29,260
Kansas	6,600	6,600	37.0	29.0	244,200	191,400
Kentucky	375	430	80.0	79.0	30,000	33,970
Maryland	170	175	78.0	79.0	13,260	13,825
Michigan	415	580	83.0	81.0	34,445	46,980
Mississippi	75	95	52.0	53.0	3,900	5,035
Missouri	410	600	60.0	60.0	24,600	36,000
Montana	1,800	1,750	33.0	44.0	59,400	77,000
Nebraska	820	970	32.0	34.0	26,240	32,980
North Carolina	375	420	64.0	63.0	24,000	26,460
North Dakota	95	110	60.0	54.0	5,700	5,940
Ohio	465	540	79.0	78.0	36,735	42,120
Oklahoma	2,450	2,150	28.0	23.0	68,600	49,450
Oregon	720	740	68.0	56.0	48,960	41,440
South Dakota	730	750	52.0	46.0	37,960	34,500
Tennessee	335	400	73.0	72.0	24,455	28,800
Texas	1,300	2,000	30.0	28.0	39,000	56,000
Virginia	150	145	68.0	61.0	10,200	8,845
Washington	1,800	1,750	68.0	57.0	122,400	99,750
Wisconsin	240	240	78.0	71.0	18,720	17,040
Other States [1]	974	1,066	56.0	61.8	54,542	65,840
United States	23,459	25,286	47.0	44.7	1,103,707	1,130,415

[1] Other States include Alabama, Delaware, Georgia, New Jersey, New Mexico, New York, Pennsylvania, South Carolina, Utah, and Wyoming. Individual State level estimates will be published in the *Small Grains 2023 Summary* report.

Durum Wheat Area Harvested, Yield, and Production – States and United States: 2022 and Forecasted May 1, 2023

[Area harvested for the United States and remaining States will be published in the *Acreage* report released June 2023. Yield and production will be published in the *Crop Production* report released July 2023. Blank data cells indicate estimation period has not yet begun]

State	Area harvested		Yield per acre		Production	
	2022	2023	2022	2023	2022	2023
	(1,000 acres)	(1,000 acres)	(bushels)	(bushels)	(1,000 bushels)	(1,000 bushels)
Arizona	84	39	114.0	106.0	9,576	4,134
California	35	20	110.0	110.0	3,850	2,200
Idaho	7		65.0		455	
Montana	675		28.0		18,900	
North Dakota	780		40.0		31,200	
United States	1,581		40.5		63,981	

Wheat Production by Class – United States: 2022 and Forecasted May 1, 2023

[Wheat class estimates are based on the latest available data including both surveys and administrative data. The previous end-of-year season class percentages are used throughout the forecast season for States that do not have survey or administrative data available. Blank data cells indicate estimation period has not yet begun]

Crop	2022	2023
	(1,000 bushels)	(1,000 bushels)
Winter		
Hard red	530,910	514,297
Soft red	336,525	405,754
Hard white	10,647	10,185
Soft white	225,625	200,179
Spring		
Hard red	446,015	
Hard white	6,707	
Soft white	29,468	
Durum	63,981	
Total	1,649,878	

Hay Stocks on Farms – States and United States: December 1 and May 1, 2021-2023

State	December 1		May 1	
	2021	2022	2022	2023
	(1,000 tons)	(1,000 tons)	(1,000 tons)	(1,000 tons)
Alabama	1,550	1,300	240	160
Arizona	180	250	10	10
Arkansas	1,700	1,440	260	200
California	1,200	1,125	280	325
Colorado	2,000	1,350	580	170
Connecticut	38	41	5	7
Delaware	10	11	2	2
Florida	460	450	75	30
Georgia	1,260	950	190	120
Idaho	2,350	2,500	530	460
Illinois	950	980	260	240
Indiana	900	770	240	220
Iowa	3,120	2,480	720	380
Kansas	5,000	4,100	670	740
Kentucky	3,750	3,100	980	670
Louisiana	640	620	180	90
Maine	105	142	30	29
Maryland	275	300	66	49
Massachusetts	34	39	8	11
Michigan	1,100	980	270	230
Minnesota	1,460	2,190	330	570
Mississippi	1,000	800	180	110
Missouri	5,700	4,650	1,100	820
Montana	2,900	3,250	450	450
Nebraska	4,650	3,000	1,250	530
Nevada	490	560	52	105
New Hampshire	42	41	5	6
New Jersey	85	77	14	15
New Mexico	240	190	30	30
New York	1,700	1,400	550	510
North Carolina	950	1,000	150	125
North Dakota	2,100	3,300	520	850
Ohio	1,400	1,350	360	350
Oklahoma	4,260	3,000	600	400
Oregon	920	1,410	220	230
Pennsylvania	1,440	1,630	340	390
Rhode Island	5	5	1	1
South Carolina	450	380	80	70
South Dakota	3,300	4,350	1,090	1,250
Tennessee	3,000	2,680	530	400
Texas	8,200	5,150	1,600	1,050
Utah	1,000	1,250	290	480
Vermont	157	175	34	33
Virginia	1,800	1,700	280	320
Washington	1,100	1,200	180	360
West Virginia	790	780	105	175
Wisconsin	2,105	2,165	630	560
Wyoming	1,150	1,300	200	190
United States	79,016	71,911	16,767	14,523

Utilized Production of Citrus Fruits by Crop – States and United States: 2021-2022 and Forecasted May 1, 2023

[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	
	2021-2022	2022-2023	2021-2022	2022-2023
	(1,000 boxes)	(1,000 boxes)	(1,000 tons)	(1,000 tons)
Oranges				
California, all [2]	39,100	45,100	1,564	1,804
Early, mid, and Navel [3]	31,500	37,000	1,260	1,480
Valencia	7,600	8,100	304	324
Florida, all	41,200	15,650	1,854	705
Early, mid, and Navel [3]	18,250	6,150	821	277
Valencia	22,950	9,500	1,033	428
Texas, all [2]	200	1,050	8	45
Early, mid, and Navel [3]	170	700	7	30
Valencia	30	350	1	15
United States, all	80,500	61,800	3,426	2,554
Early, mid, and Navel [3]	49,920	43,850	2,088	1,787
Valencia	30,580	17,950	1,338	767
Grapefruit				
California [2]	4,100	4,200	164	168
Florida, all	3,330	1,800	142	77
Texas [2]	1,700	2,400	68	96
United States	9,130	8,400	374	341
Tangerines and mandarins [4]				
California [2]	17,500	21,000	700	840
Florida	750	500	36	24
United States	18,250	21,500	736	864
Lemons [2]				
Arizona	1,250	1,700	50	68
California	25,200	23,000	1,008	920
United States	26,450	24,700	1,058	988

[1] Net pounds per box: oranges in California-80, Florida-90, Texas-85; grapefruit in California-80, Florida-85, Texas-80; tangerines and mandarins in California-80, Florida-95; lemons-80.
[2] Estimates for current year carried forward from an earlier forecast.
[3] Navel and miscellaneous varieties in California. Early (including Navel) and midseason varieties in Florida and Texas.
[4] Includes tangelos and tangors.

Peach Production by Type – California: 2022 and Forecasted May 1, 2023

Type	Total production	
	2022	2023
	(tons)	(tons)
Freestone	266,000	270,000
Clingstone	209,000	210,000
Total	475,000	480,000

Almonds Production – State and United States: 2022 and Forecasted May 1, 2023

State	Total production (shelled basis)	
	2022	2023
	(1,000 pounds)	(1,000 pounds)
California	2,565,000	2,500,000
United States	2,565,000	2,500,000

Cotton Area Planted, Harvested, and Yield by Type – States and United States: 2021 and 2022

Type and State	Area planted		Area harvested		Yield per acre	
	2021	2022	2021	2022	2021	2022
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(pounds)	(pounds)
Upland						
Alabama	405.0	435.0	401.0	430.0	826	930
Arizona	120.0	87.0	119.0	86.0	1,275	1,563
Arkansas	480.0	640.0	475.0	630.0	1,248	1,179
California	26.0	19.0	25.5	18.5	1,920	1,946
Florida	92.0	106.0	90.0	103.0	640	769
Georgia	1,170.0	1,290.0	1,160.0	1,270.0	914	1,002
Kansas	110.0	165.0	102.0	138.0	880	577
Louisiana	110.0	195.0	104.0	190.0	1,011	904
Mississippi	445.0	530.0	430.0	525.0	997	1,084
Missouri	315.0	360.0	310.0	340.0	1,260	1,240
New Mexico	36.0	66.0	26.0	30.0	1,108	960
North Carolina	375.0	470.0	365.0	460.0	1,017	1,049
Oklahoma	495.0	670.0	440.0	230.0	756	634
South Carolina	210.0	270.0	207.0	266.0	986	911
Tennessee	275.0	335.0	270.0	325.0	1,036	1,053
Texas	6,350.0	7,850.0	5,550.0	2,000.0	666	734
Virginia	75.0	91.0	74.0	90.0	1,109	1,131
United States	11,089.0	13,579.0	10,148.5	7,131.5	813	942
American Pima						
Arizona	9.0	15.0	8.8	14.4	982	933
California	88.0	115.0	87.0	114.0	1,501	1,558
New Mexico	12.5	19.0	11.9	18.8	645	715
Texas	17.0	33.0	16.0	29.0	780	728
United States	126.5	182.0	123.7	176.2	1,288	1,280
All						
Alabama	405.0	435.0	401.0	430.0	826	930
Arizona	129.0	102.0	127.8	100.4	1,254	1,473
Arkansas	480.0	640.0	475.0	630.0	1,248	1,179
California	114.0	134.0	112.5	132.5	1,596	1,612
Florida	92.0	106.0	90.0	103.0	640	769
Georgia	1,170.0	1,290.0	1,160.0	1,270.0	914	1,002
Kansas	110.0	165.0	102.0	138.0	880	577
Louisiana	110.0	195.0	104.0	190.0	1,011	904
Mississippi	445.0	530.0	430.0	525.0	997	1,084
Missouri	315.0	360.0	310.0	340.0	1,260	1,240
New Mexico	48.5	85.0	37.9	48.8	963	866
North Carolina	375.0	470.0	365.0	460.0	1,017	1,049
Oklahoma	495.0	670.0	440.0	230.0	756	634
South Carolina	210.0	270.0	207.0	266.0	986	911
Tennessee	275.0	335.0	270.0	325.0	1,036	1,053
Texas	6,367.0	7,883.0	5,566.0	2,029.0	666	734
Virginia	75.0	91.0	74.0	90.0	1,109	1,131
United States	11,215.5	13,761.0	10,272.2	7,307.7	819	950

Cotton Production and Bales Ginned by Type – States and United States: 2021 and 2022

Type and State	Production in 480-pound net weight bales [1]		Lint seed ratio		Bales ginned in 480-pound net weight bales [2]	
	2021	2022	2021	2022	2021	2022
	(1,000 bales)	(1,000 bales)	(ratio)	(ratio)	(bales)	(bales)
Upland						
Alabama	690.0	833.0	(NA)	(NA)	662,750	808,450
Arizona	316.0	280.0	(NA)	(NA)	302,400	265,800
Arkansas	1,235.0	1,548.0	(NA)	(NA)	1,322,950	1,678,000
California	102.0	75.0	(NA)	(NA)	114,200	93,300
Florida	120.0	165.0	(NA)	(NA)	100,300	134,250
Georgia	2,210.0	2,650.0	(NA)	(NA)	2,244,100	2,694,150
Kansas	187.0	166.0	(NA)	(NA)	130,800	121,850
Louisiana	219.0	358.0	(NA)	(NA)	219,450	365,000
Mississippi	893.0	1,186.0	(NA)	(NA)	876,300	1,160,200
Missouri	814.0	878.0	(NA)	(NA)	750,250	774,850
New Mexico	60.0	60.0	(NA)	(NA)	19,300	28,300
North Carolina	773.0	1,005.0	(NA)	(NA)	819,000	1,065,650
Oklahoma	693.0	304.0	(NA)	(NA)	545,450	171,900
South Carolina	425.0	505.0	(NA)	(NA)	370,500	441,650
Tennessee	583.0	713.0	(NA)	(NA)	585,400	706,500
Texas	7,700.0	3,060.0	(NA)	(NA)	7,925,250	3,253,850
Virginia	171.0	212.0	(NA)	(NA)	169,050	208,700
United States	17,191.0	13,998.0	(NA)	(NA)	17,157,450	13,972,400
American Pima						
Arizona	18.0	28.0	(NA)	(NA)	17,850	27,500
California	272.0	370.0	(NA)	(NA)	271,400	369,800
New Mexico	16.0	28.0	(NA)	(NA)	15,700	31,750
Texas	26.0	44.0	(NA)	(NA)	25,200	39,350
United States	332.0	470.0	(NA)	(NA)	330,150	468,400
All						
Alabama	690.0	833.0	(NA)	(NA)	662,750	808,450
Arizona	334.0	308.0	(NA)	(NA)	320,250	293,300
Arkansas	1,235.0	1,548.0	0.432	0.432	1,322,950	1,678,000
California	374.0	445.0	(NA)	(NA)	385,600	463,100
Florida	120.0	165.0	(NA)	(NA)	100,300	134,250
Georgia	2,210.0	2,650.0	0.464	0.456	2,244,100	2,694,150
Kansas	187.0	166.0	(NA)	(NA)	130,800	121,850
Louisiana	219.0	358.0	(NA)	(NA)	219,450	365,000
Mississippi	893.0	1,186.0	0.437	0.432	876,300	1,160,200
Missouri	814.0	878.0	(NA)	(NA)	750,250	774,850
New Mexico	76.0	88.0	(NA)	(NA)	35,000	60,050
North Carolina	773.0	1,005.0	(NA)	(NA)	819,000	1,065,650
Oklahoma	693.0	304.0	(NA)	(NA)	545,450	171,900
South Carolina	425.0	505.0	(NA)	(NA)	370,500	441,650
Tennessee	583.0	713.0	(NA)	(NA)	585,400	706,500
Texas	7,726.0	3,104.0	0.435	0.442	7,950,450	3,293,200
Virginia	171.0	212.0	(NA)	(NA)	169,050	208,700
United States	17,523.0	14,468.0	(NA)	(NA)	17,487,600	14,440,800

(NA) Not available.

[1] Production ginned and to be ginned.

[2] Equivalent 480-pound net weight bales ginned, not adjusted for cross-state movement.

Cottonseed Production and Farm Disposition – States and United States: 2021 and 2022

State	Production		Farm disposition				Seed for planting [2]	
			Sales to oil mills		Other [1]			
	2021	2022	2021	2022	2021	2022	2021	2022
	(1,000 tons)	(1,000 tons)	(1,000 tons)	(1,000 tons)	(1,000 tons)	(1,000 tons)	(1,000 tons)	(1,000 tons)
Alabama	200.0	236.0	23.0	19.0	177.0	217.0	2.5	2.3
Arizona	113.0	121.0	-	-	113.0	121.0	0.8	0.8
Arkansas	390.0	489.0	291.0	356.0	99.0	133.0	3.3	3.0
California	128.0	153.0	31.0	47.0	97.0	106.0	1.1	0.8
Florida	34.0	48.0	25.0	34.0	9.0	14.0	0.6	0.5
Georgia	612.0	757.0	238.0	349.0	374.0	408.0	5.7	5.5
Kansas	57.0	50.0	-	-	57.0	50.0	0.6	0.6
Louisiana	68.0	109.0	41.0	57.0	27.0	52.0	1.2	0.8
Mississippi	276.0	374.0	189.0	215.0	87.0	159.0	3.4	2.3
Missouri	245.0	317.0	133.0	136.0	112.0	181.0	2.1	2.0
New Mexico	24.0	23.0	1.0	-	23.0	23.0	0.4	0.5
North Carolina	218.0	295.0	12.0	10.0	206.0	285.0	2.8	2.3
Oklahoma	205.0	93.0	118.0	44.0	87.0	49.0	2.9	2.9
South Carolina	119.0	141.0	-	38.0	119.0	103.0	1.4	1.3
Tennessee	183.0	208.0	156.0	161.0	27.0	47.0	2.1	2.2
Texas	2,403.0	940.0	1,263.0	446.0	1,140.0	494.0	37.9	39.1
Virginia	48.0	61.0	-	11.0	48.0	50.0	0.6	0.5
United States	5,323.0	4,415.0	2,521.0	1,923.0	2,802.0	2,492.0	69.4	67.4

- Represents zero.
[1] Includes planting seed, feed, exports, inter-farm sales, shrinkage, losses, and other uses.
[2] Included in "other" farm disposition. Seed for planting is produced in crop year shown, but used in the following year.

Cotton Objective Yield Data

The National Agricultural Statistics Service conducted objective yield surveys in four cotton-producing States during 2022. Randomly selected plots in cotton fields are visited monthly from September through harvest to obtain specific counts and measurements. Data in these tables are actual field counts from this survey.

Cotton Harvest Loss per Acre – Selected States: 2018-2022

State	2018	2019	2020	2021	2022
	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)
Arkansas	100	73	53	43	80
Georgia	342	269	236	158	218
Louisiana [1]	165	(NA)	(NA)	(NA)	(NA)
Mississippi	87	104	97	85	91
North Carolina [1]	174	(NA)	(NA)	(NA)	(NA)
Texas	59	43	58	61	78
4-State [2]	123	90	100	76	120

(NA) Not available.
[1] Objective yield survey discontinued in 2019.
[2] 6-State total prior to 2019.

Cotton Cumulative Boll Counts – Selected States: 2018-2022

[Includes small bolls (less than one inch in diameter), large unopened bolls (at least one inch in diameter), open bolls, partially opened bolls, and burrs per 40 feet of row. November, December, and Final exclude small bolls]

State and month	2018	2019	2020	2021	2022
	(number)	(number)	(number)	(number)	(number)
Arkansas					
September	891	900	994	990	811
October	910	896	849	838	799
November	892	925	820	809	799
December	892	900	820	807	799
Final	892	900	820	807	799
Georgia					
September	605	598	606	597	605
October	737	783	747	658	648
November	712	790	761	669	705
December	719	799	784	694	721
Final	713	803	785	694	721
Louisiana [1]					
September	759	(NA)	(NA)	(NA)	(NA)
October	734	(NA)	(NA)	(NA)	(NA)
November	739	(NA)	(NA)	(NA)	(NA)
December	739	(NA)	(NA)	(NA)	(NA)
Final	739	(NA)	(NA)	(NA)	(NA)
Mississippi					
September	871	944	900	957	804
October	895	895	867	807	814
November	846	904	877	848	830
December	846	901	875	849	828
Final	846	901	875	851	828
North Carolina [1]					
September	601	(NA)	(NA)	(NA)	(NA)
October	641	(NA)	(NA)	(NA)	(NA)
November	714	(NA)	(NA)	(NA)	(NA)
December	719	(NA)	(NA)	(NA)	(NA)
Final	719	(NA)	(NA)	(NA)	(NA)
Texas					
September	570	458	576	491	583
October	576	438	581	512	615
November	553	456	595	538	629
December	583	459	608	539	640
Final	582	461	608	539	643
4-State [2]					
September	627	551	645	567	641
October	661	562	661	573	668
November	640	579	671	595	692
December	659	580	683	599	701
Final	657	593	693	597	708

(NA) Not available.

[1] Objective yield survey discontinued in 2019.

[2] 6-State total prior to 2019.

Crop Area Planted and Harvested, Yield, and Production in Domestic Units – United States: 2022 and 2023

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2023 crop year. Blank data cells indicate estimation period has not yet begun]

Crop	Area planted		Area harvested	
	2022	2023	2022	2023
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)
Grains and hay				
Barley	2,945	2,922	2,433	
Corn for grain [1]	88,579	91,996	79,207	
Corn for silage	(NA)		6,860	
Hay, all	(NA)	(NA)	49,546	50,645
Alfalfa	(NA)		14,913	
All other	(NA)		34,633	
Oats	2,581	2,667	890	
Proso millet	637		507	
Rice	2,222	2,583	2,172	
Rye	2,175		341	
Sorghum for grain [1]	6,325	5,975	4,570	
Sorghum for silage	(NA)		525	
Wheat, all	45,738	49,855	35,480	
Winter	33,271	37,505	23,459	25,286
Durum	1,632	1,780	1,581	
Other spring	10,835	10,570	10,440	
Oilseeds				
Canola	2,213.0	2,270.0	2,169.0	
Cottonseed	(X)		(X)	
Flaxseed	263	175	244	
Mustard seed	221.0		182.0	
Peanuts	1,450.3	1,547.0	1,385.4	
Rapeseed	10.9		10.4	
Safflower	150.2		135.3	
Soybeans for beans	87,450	87,505	86,336	
Sunflower	1,693.0	1,361.0	1,607.0	
Cotton, tobacco, and sugar crops				
Cotton, all	13,761.0	11,256.0	7,307.7	
Upland	13,579.0	11,102.0	7,131.5	
American Pima	182.0	154.0	176.2	
Sugarbeets	1,159.5	1,110.8	1,137.1	
Sugarcane	(NA)		930.2	
Tobacco	(NA)	(NA)	201.8	197.1
Dry beans, peas, and lentils				
Chickpeas	353.1	340.5	341.9	
Dry edible beans	1,250.0	1,226.0	1,223.0	
Dry edible peas	919.0	1,000.0	862.0	
Lentils	660.0	519.0	602.0	
Potatoes and miscellaneous				
Hops	(NA)		59.8	
Maple syrup	(NA)		(NA)	
Mushrooms	(NA)		(NA)	
Peppermint oil	(NA)		34.0	
Potatoes	901.0		895.6	
Spearmint oil	(NA)		13.7	

See footnote(s) at end of table.

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Crop Area Planted and Harvested, Yield, and Production in Domestic Units – United States: 2022 and 2023 (continued)

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2023 crop year. Blank data cells indicate estimation period has not yet begun]

Crop	Yield per acre		Production	
	2022	2023	2022	2023
			(1,000)	(1,000)
Grains and hay				
Barley ..... bushels	71.7		174,333	
Corn for grain ..... bushels	173.3		13,729,719	
Corn for silage ..... tons	18.7		128,567	
Hay, all ..... tons	2.28		112,801	
Alfalfa ..... tons	3.22		47,958	
All other ..... tons	1.87		64,843	
Oats ..... bushels	64.8		57,655	
Proso millet ..... bushels	18.5		9,403	
Rice [2] ..... cwt	7,383		160,368	
Rye ..... bushels	36.1		12,301	
Sorghum for grain ..... bushels	41.1		187,785	
Sorghum for silage ..... tons	10.8		5,662	
Wheat, all ..... bushels	46.5		1,649,878	
Winter ..... bushels	47.0	44.7	1,103,707	1,130,415
Durum ..... bushels	40.5		63,981	
Other spring ..... bushels	46.2		482,190	
Oilseeds				
Canola ..... pounds	1,762		3,821,810	
Cottonseed ..... tons	(X)		4,415.0	
Flaxseed ..... bushels	17.6		4,304	
Mustard seed ..... pounds	557		101,290	
Peanuts ..... pounds	4,019		5,568,150	
Rapeseed ..... pounds	1,863		19,380	
Safflower ..... pounds	1,213		164,054	
Soybeans for beans ..... bushels	49.5		4,276,123	
Sunflower ..... pounds	1,750		2,812,540	
Cotton, tobacco, and sugar crops				
Cotton, all [2] ..... bales	950		14,468.0	
Upland [2] ..... bales	942		13,998.0	
American Pima [2] ..... bales	1,280		470.0	
Sugarbeets ..... tons	28.6		32,574	
Sugarcane ..... tons	37.3		34,671	
Tobacco ..... pounds	2,217		447,367	
Dry beans, peas, and lentils				
Chickpeas [2] ..... cwt	1,070		3,658	
Dry edible beans [2] ..... cwt	2,113		25,847	
Dry edible peas [2] ..... cwt	1,751		15,092	
Lentils [2] ..... cwt	912		5,489	
Potatoes and miscellaneous				
Hops ..... pounds	1,694		101,286.3	
Maple syrup ..... gallons	(NA)		5,028	
Mushrooms ..... pounds	(NA)		702,391	
Peppermint oil ..... pounds	99		3,349	
Potatoes ..... cwt	438		392,243	
Spearmint oil ..... pounds	120		1,648	

(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: 2022 and 2023

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2023 crop year. Blank data cells indicate estimation period has not yet begun]

Crop	Area planted		Area harvested	
	2022	2023	2022	2023
	(hectares)	(hectares)	(hectares)	(hectares)
Grains and hay				
Barley	1,191,810	1,182,500	984,610	
Corn for grain [1]	35,847,040	37,229,860	32,054,280	
Corn for silage	(NA)		2,776,170	
Hay, all [2]	(NA)	(NA)	20,050,770	20,495,530
Alfalfa	(NA)		6,035,140	
All other	(NA)		14,015,630	
Oats	1,044,500	1,079,310	360,170	
Proso millet	257,790		205,180	
Rice	899,220	1,045,310	878,990	
Rye	880,200		138,000	
Sorghum for grain [1]	2,559,660	2,418,020	1,849,430	
Sorghum for silage	(NA)		212,460	
Wheat, all [2]	18,509,710	20,175,820	14,358,400	
Winter	13,464,440	15,177,900	9,493,620	10,232,990
Durum	660,450	720,350	639,810	
Other spring	4,384,820	4,277,570	4,224,960	
Oilseeds				
Canola	895,580	918,650	877,770	
Cottonseed	(X)		(X)	
Flaxseed	106,430	70,820	98,740	
Mustard seed	89,440		73,650	
Peanuts	586,920	626,060	560,660	
Rapeseed	4,410		4,210	
Safflower	60,780		54,750	
Soybeans for beans	35,390,140	35,412,400	34,939,320	
Sunflower	685,140	550,780	650,340	
Cotton, tobacco, and sugar crops				
Cotton, all [2]	5,568,940	4,555,190	2,957,350	
Upland	5,495,290	4,492,870	2,886,050	
American Pima	73,650	62,320	71,310	
Sugarbeets	469,240	449,530	460,170	
Sugarcane	(NA)		376,440	
Tobacco	(NA)	(NA)	81,650	79,750
Dry beans, peas, and lentils				
Chickpeas	142,900	137,800	138,360	
Dry edible beans	505,860	496,150	494,940	
Dry edible peas	371,910	404,690	348,840	
Lentils	267,100	210,030	243,620	
Potatoes and miscellaneous				
Hops	(NA)		24,190	
Maple syrup	(NA)		(NA)	
Mushrooms	(NA)		(NA)	
Peppermint oil	(NA)		13,760	
Potatoes	364,630		362,440	
Spearmint oil	(NA)		5,540	

See footnote(s) at end of table.

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Crop Area Planted and Harvested, Yield, and Production in Metric Units – United States: 2022 and 2023 (continued)

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2023 crop year. Blank data cells indicate estimation period has not yet begun]

Crop	Yield per hectare		Production	
	2022	2023	2022	2023
	(metric tons)	(metric tons)	(metric tons)	(metric tons)
Grains and hay				
Barley	3.85		3,795,650	
Corn for grain	10.88		348,750,930	
Corn for silage	42.01		116,634,020	
Hay, all [2]	5.10		102,331,350	
Alfalfa	7.21		43,506,770	
All other	4.20		58,824,580	
Oats	2.32		836,860	
Proso millet	1.04		213,260	
Rice	8.28		7,274,170	
Rye	2.26		312,460	
Sorghum for grain	2.58		4,769,960	
Sorghum for silage	24.18		5,136,480	
Wheat, all [2]	3.13		44,902,320	
Winter	3.16	3.01	30,037,980	30,764,850
Durum	2.72		1,741,280	
Other spring	3.11		13,123,060	
Oilseeds				
Canola	1.97		1,733,540	
Cottonseed	(X)		4,005,220	
Flaxseed	1.11		109,330	
Mustard seed	0.62		45,940	
Peanuts	4.50		2,525,670	
Rapeseed	2.09		8,790	
Safflower	1.36		74,410	
Soybeans for beans	3.33		116,377,000	
Sunflower	1.96		1,275,750	
Cotton, tobacco, and sugar crops				
Cotton, all [2]	1.07		3,150,040	
Upland	1.06		3,047,710	
American Pima	1.44		102,330	
Sugarbeets	64.22		29,550,640	
Sugarcane	83.55		31,453,000	
Tobacco	2.49		202,920	
Dry beans, peas, and lentils				
Chickpeas	1.20		165,920	
Dry edible beans	2.37		1,172,400	
Dry edible peas	1.96		684,560	
Lentils	1.02		248,980	
Potatoes and miscellaneous				
Hops	1.90		45,940	
Maple syrup	(NA)		25,140	
Mushrooms	(NA)		318,600	
Peppermint oil	0.11		1,520	
Potatoes	49.09		17,791,840	
Spearmint oil	0.13		750	

(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: 2022 and 2023

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2023 crop year, except citrus which is for the 2022-2023 season. Blank data cells indicate estimation period has not yet begun]

Crop		Production	
		2022	2023
Citrus [1]			
Grapefruit	1,000 tons	374	341
Lemons	1,000 tons	1,058	988
Oranges	1,000 tons	3,426	2,554
Tangerines and mandarins	1,000 tons	736	864
Noncitrus			
Apples, commercial	million pounds	9,765.0	
Apricots	tons	29,640	
Avocados	tons	156,900	
Blueberries, Cultivated	1,000 pounds	621,600	
Blueberries, Wild (Maine)	1,000 pounds	77,600	
Cherries, Sweet	tons	231,700	
Cherries, Tart	million pounds	244.2	
Coffee (Hawaii)	1,000 pounds	25,690	
Cranberries	barrel	8,058,000	
Dates	tons	66,150	
Grapes	tons	5,922,500	
Kiwifruit (California)	tons	36,500	
Nectarines (California)	tons	109,000	
Olives (California)	tons	69,700	
Papayas (Hawaii)	1,000 pounds	8,350	
Peaches	tons	625,680	
Pears	tons	644,000	
Plums (California)	tons	81,300	
Prunes (California)	tons	226,800	
Raspberries	1,000 pounds	168,600	
Strawberries	1,000 cwt	27,820.0	
Nuts and miscellaneous			
Almonds, shelled (California)	1,000 pounds	2,565,000	2,500,000
Hazelnuts, in-shell (Oregon)	tons	77,500	
Macadamias (Hawaii)	1,000 pounds	37,700	
Pecans, in-shell	1,000 pounds	277,700	
Pistachios (California)	1,000 pounds	882,000	
Walnuts, in-shell (California)	tons	752,000	

[1] Production years are 2021-2022 and 2022-2023.

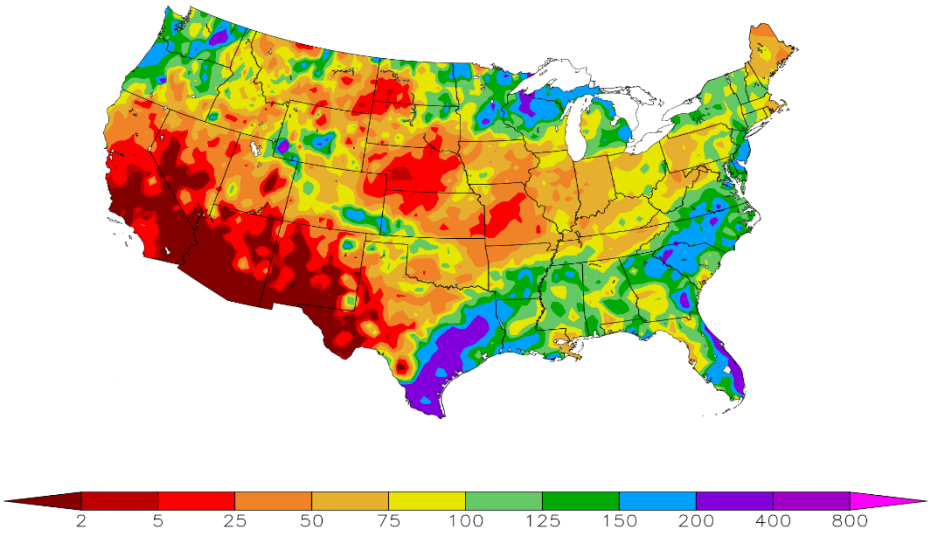
Fruits and Nuts Production in Metric Units – United States: 2022 and 2023

[Data are the latest estimates available, either from the current report or from previous reports. Current year estimates are for the full 2023 crop year, except citrus which is for the 2022-2023 season. Blank data cells indicate estimation period has not yet begun]

Crop	Production	
	2022	2023
	(metric tons)	(metric tons)
Citrus [1]		
Grapefruit	339,290	309,350
Lemons	959,800	896,300
Oranges	3,108,010	2,316,950
Tangerines and mandarins	667,690	783,810
Noncitrus		
Apples, commercial	4,429,330	
Apricots	26,890	
Avocados	142,340	
Blueberries, Cultivated	281,950	
Blueberries, Wild (Maine)	35,200	
Cherries, Sweet	210,190	
Cherries, Tart	110,770	
Coffee (Hawaii)	11,650	
Cranberries	365,500	
Dates	60,010	
Grapes	5,372,800	
Kiwifruit (California)	33,110	
Nectarines (California)	98,880	
Olives (California)	63,230	
Papayas (Hawaii)	3,790	
Peaches	567,610	
Pears	584,230	
Plums (California)	73,750	
Prunes (California)	205,750	
Raspberries	76,480	
Strawberries	1,261,890	
Nuts and miscellaneous		
Almonds, shelled (California)	1,163,460	1,133,980
Hazelnuts, in-shell (Oregon)	70,310	
Macadamias (Hawaii)	17,100	
Pecans, in-shell	125,960	
Pistachios (California)	400,070	
Walnuts, in-shell (California)	682,200	

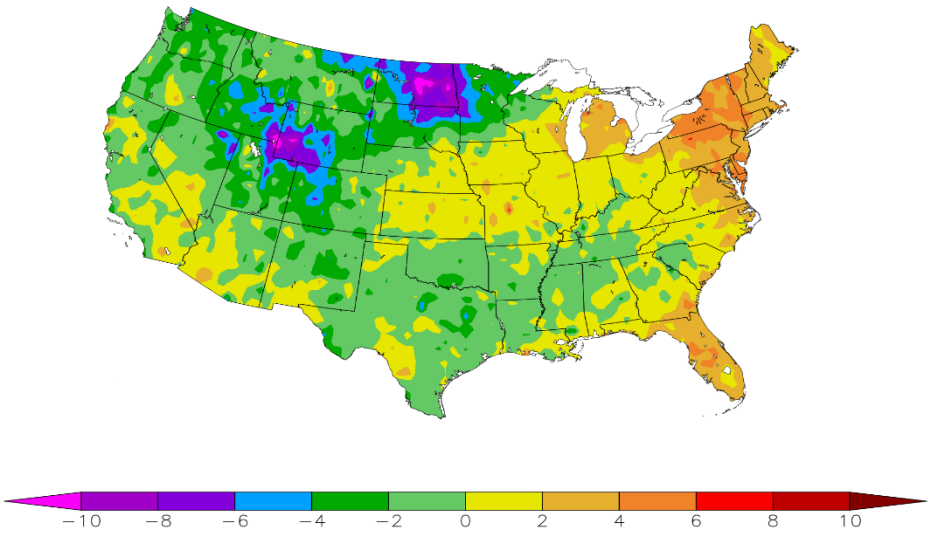
[1] Production years are 2021-2022 and 2022-2023.

Percent of Normal Precipitation (%)
4/1/2023 – 4/30/2023



NOAA Regional Climate Centers

Departure from Normal Temperature (F)
4/1/2023 – 4/30/2023



NOAA Regional Climate Centers

April Weather Summary

For much of the month, cool Western weather limited the rate of melting snow. By May 1, the average water equivalency of the Sierra Nevada snowpack stood near 50 inches, according to the California Department of Water Resources, down about a foot from the seasonal peak of 62 inches. In late April, however, sudden heat led to increases in Western streamflow and local flooding, as well as corresponding dam releases. Seasonably dry weather prevailed during April in much of California, the Great Basin, and the Southwest, while occasional showers stretched from the Pacific Northwest to the northern Rockies.

Farther east, snow was also slow to melt in parts of the north-central United States, helping to hold April temperatures 5 to 7°F below normal in North Dakota locations such as Bismarck, Dickinson, and Minot. The lingering snow cover, accompanied by chilly conditions and low soil temperatures, delayed the onset of spring fieldwork. By April 30, only 19 percent of the Nation's barley and 12 percent of the spring wheat had been planted, compared to respective 5-year averages of 35 and 22 percent. Sugarbeet planting had not begun by the end of April in Minnesota and North Dakota.

Snow-melt flooding was observed in parts of the upper Midwest, primarily along the Red, James, and Big Sioux Rivers. Significant flooding also occurred in the upper Mississippi Basin, where top-three crests were reported along the Mississippi River in locations such as La Crosse, Wisconsin (3.89 feet above flood stage on April 26), and Dubuque, Iowa (7.03 feet above flood stage on April 29). In those locations, higher crests were reported only in April 1965 and 2001.

In contrast, deeply entrenched drought persisted during April across the central and southern Plains, with adverse impacts on rangeland, pastures, winter grains, and emerging summer crops. By April 30, USDA/NASS rated nearly one-half (42 percent) of the Nation's winter wheat in very poor to poor condition, led by Kansas (64 percent very poor to poor), Oklahoma (61 percent), Texas (57 percent), and Nebraska (51 percent). Although late-April rainfall provided some limited drought relief across the central and southern Plains, the *Drought Monitor* indicated by May 2 that extreme to exceptional drought (D3 to D4) covered 63 percent of Kansas, along with 47 percent of Nebraska, 33 percent of Oklahoma, and 21 percent of Texas.

On May 2, moderate to exceptional drought (D1 to D4) covered 24.42 percent of the contiguous United States, down from 28.23 percent in early April and 62.95 percent on October 25, 2022. Prior to May 2, the last time less than one-quarter of the country was experiencing drought was June 16, 2020, nearly 3 years ago. Still, an area centered over the Nation's mid-section reported extremely dry April weather. For example, North Platte, Nebraska—with monthly precipitation totaling 0.04 inch—tied a 1928 standard for its driest April on record. Additionally, Wichita, Kansas, received a March-April total of 0.72 inch, the driest such period since 1936.

Elsewhere, generally wet April weather prevailed across the South, while late-month downpours eased precipitation deficits in the middle and northern Atlantic States. Despite the rain, Southern planting activities remained mostly at or ahead of the normal pace. At the end of April, 63 percent of the intended national rice acreage and 15 percent of the cotton had been planted, versus respective 5-year averages of 49 and 14 percent. In addition, there was sufficient warmth across the eastern one-third of the United States to promote rapid development, including summer crop emergence. In fact, it was the warmest April on record in few Eastern locations, including Burlington, Vermont; Newark, New Jersey; and Brunswick, Georgia.

April Agricultural Summary

April was cooler than normal for much of the western half of the Nation. Large parts of the Northern Plains and Rockies recorded temperatures 6°F or more below normal. In contrast, except for the Lower Mississippi Valley, much of the eastern half of the Nation was warmer than normal. Parts of Florida, southern Georgia, the Mid-Atlantic, and Northeast recorded temperatures 4°F or more above normal for the month. While most of the Southwest remained dry, higher than normal amounts of precipitation were recorded in much of the Great Lakes, Mid-Atlantic, Pacific Northwest, and the South. Parts of the Pacific Northwest and the South recorded 7 inches of rain or more during the month.

By April 2, producers had planted 2 percent of the Nation's corn crop, equal to both last year and the 5-year average. By April 16, producers had planted 8 percent of the Nation's corn crop, 4 percentage points ahead of last year and

3 percentage points ahead of the 5-year average. By April 30, producers had planted 26 percent of the Nation's corn crop, 13 percentage points ahead of last year but equal to the 5-year average. At that time, planting progress was furthest advanced in Missouri and Texas with 80 percent and 74 percent planted, respectively. Six percent of the Nation's corn acreage had emerged by April 30, three percentage points ahead of the previous year and 1 percentage point ahead of the 5-year average.

Four percent of the Nation's soybean acreage was planted by April 16, three percentage points ahead of both last year and the 5-year average. Nineteen percent of the Nation's soybean acreage was planted by April 30, twelve percentage points ahead of last year and 8 percentage points ahead of the 5-year average. By April 30, planting progress was furthest advanced in Louisiana with 59 percent, 3 percentage points ahead of last year and 20 percentage points ahead of the 5-year average.

By April 2, six percent of the Nation's winter wheat crop was headed, 2 percentage points ahead of last year and 4 percentage points ahead of the 5-year average. By April 16, ten percent of the Nation's winter wheat crop was headed, 3 percentage points ahead of last year and 2 percentage points ahead of the 5-year average. By April 30, twenty-five percent of the Nation's winter wheat crop was headed, 4 percentage points ahead of last year and 2 percentage points ahead of the 5-year average. On April 30, twenty-eight percent of the 2023 winter wheat crop was reported in good to excellent condition, 1 percentage point above the same time last year. In Kansas, the largest winter wheat-producing State, 64 percent of the winter wheat crop was rated in poor to very poor condition.

Nationwide, 4 percent of the cotton crop was planted by April 2, equal to the previous year but 1 percentage point behind the 5-year average. By April 16, eight percent of the cotton crop was planted, 2 percentage points behind the previous year and 1 percentage point behind the 5-year average. By April 30, fifteen percent of the cotton crop was planted, equal to the previous year but 1 percentage point ahead of the 5-year average. At that time, planting progress was furthest advanced in California with 85 percent planted, 9 percentage points behind last year but 20 percentage points ahead of the 5-year average.

Thirteen percent of the Nation's sorghum acreage was planted by April 2, equal to both last year and the 5-year average. Fifteen percent of the Nation's sorghum acreage was planted by April 16, two percentage points behind both the previous year and the 5-year average. Twenty-one percent of the Nation's sorghum acreage was planted by April 30, one percentage point ahead of the previous year but 1 percentage point behind the 5-year average. Texas had planted 69 percent of its sorghum acreage by April 30, three percentage points ahead of the previous year but equal to the 5-year average.

By April 2, producers had seeded 17 percent of the 2023 rice acreage, 6 percentage points ahead of the previous year and 3 percentage points ahead of the 5-year average. By April 2, ten percent of the Nation's rice acreage had emerged, 4 percentage points ahead of both last year and the 5-year average. By April 16, producers had seeded 38 percent of the 2023 rice acreage, 17 percentage points ahead of the previous year and 10 percentage points ahead of the 5-year average. By April 16, eighteen percent of the Nation's rice acreage had emerged, 5 percentage points ahead of last year and 3 percentage points ahead of the 5-year average. By April 30, producers had seeded 63 percent of the 2023 rice acreage, 21 percentage points ahead of the previous year and 14 percentage points ahead of the 5-year average. At that time, planting progress was furthest advanced in Louisiana and Texas with 89 percent and 83 percent planted, respectively. By April 30, thirty-nine percent of the Nation's rice acreage had emerged, 16 percentage points ahead of last year and 10 percentage points ahead of the 5-year average.

Nationally, oat producers had seeded 25 percent of this year's acreage by April 2, equal to both last year and the 5-year average. Twenty-four percent of the Nation's oat acreage was emerged by April 2, one percentage point ahead of both the previous year and the 5-year average. Nationally, oat producers had seeded 36 percent of this year's acreage by April 16, three percentage points ahead of the previous year and 1 percentage point ahead of the 5-year average. Twenty-six percent of the Nation's oat acreage was emerged by April 16, two percentage points ahead of the previous year but equal to the 5-year average. Nationally, oat producers had seeded 49 percent of this year's acreage by April 30, five percentage points ahead of the previous year but 3 percentage points behind the 5-year average. Thirty-three percent of the Nation's oat acreage was emerged by April 30, three percentage points ahead of the previous year but 2 percentage points behind the 5-year average.

Five percent of the Nation's barley crop was planted by April 16, eleven percentage points behind last year and 9 percentage points behind the 5-year average. Nineteen percent of the Nation's barley crop was planted by April 30, fifteen percentage points behind last year and 16 percentage points behind the 5-year average. At that time, planting progress was furthest advanced in Washington and Idaho with 55 percent and 47 percent planted, respectively. Three percent of the Nation's barley crop had emerged by April 30, six percentage points behind the previous year and 7 percentage points behind the 5-year average.

By April 16, three percent of the spring wheat crop was seeded, 5 percentage points behind last year and 4 percentage points behind the 5-year average. By April 30, twelve percent of the spring wheat crop was seeded, 6 percentage points behind last year and 10 percentage points behind the 5-year average. At that time, planting progress was furthest advanced in Washington with 74 percent planted, 1 percentage point behind last year and 3 percentage points behind the 5-year average. By April 30, two percent of the Nation's spring wheat crop had emerged, 3 percentage points behind the previous year and 4 percentage points behind the 5-year average.

Nationally, peanut producers had planted 1 percent of the 2023 peanut acreage by April 16, one percentage point behind both the previous year and the 5-year average. Nationally, peanut producers had planted 8 percent of the 2023 peanut acreage by April 30, one percentage point behind the previous year and 2 percentage points behind the 5-year average. At that time, producers in Florida had planted 24 percent of the 2023 intended acreage by week's end, 1 percentage point behind last year but equal to the 5-year average.

By April 16, thirteen percent of the sugarbeet crop was planted, 6 percentage points ahead of last year but equal to the 5-year average. By April 30, twenty-four percent of the sugarbeet crop was planted, 7 percentage points ahead of last year but 14 percentage points behind the 5-year average. At that time, planting progress was furthest advanced in Michigan and Idaho with 76 percent and 71 percent planted, respectively.

Crop Comments

Winter wheat: Production is forecast at 1.13 billion bushels, up 2 percent from 2022. As of May 1, the United States yield is forecast at 44.7 bushels per acre, down 2.3 bushels from last year's average yield of 47.0 bushels per acre. Area expected to be harvested for grain is forecast at 25.3 million acres, up 8 percent from last year. Producers expect to harvest 67 percent of the planted acres for grain. If realized, this harvest ratio would be the lowest since 1917. Dry conditions in Colorado, Kansas, Nebraska, Oklahoma, and Texas are factoring into the increased abandonment.

As of April 30, twenty-eight percent of the winter wheat acreage in the 18 major producing States was rated in good to excellent condition, one percentage point higher than at the same time last year. Nationally, 25 percent of the winter wheat crop was headed by April 30, two percentage points ahead of the 5-year average pace.

As of April 30, the winter wheat crop in Kansas and Oklahoma was rated in poor to very poor condition at 64 percent and 61 percent, respectively. Spring drought conditions have caused condition ratings to worsen compared with last year in these States.

As of April 30, the winter wheat crop in Indiana, Michigan, and Ohio was rated in good to excellent condition at 75 percent, 64 percent, and 66 percent, respectively. Warmer temperatures and adequate moisture throughout April aided winter wheat progress in the Great Lakes States.

Durum wheat: Production of Durum wheat in Arizona and California is forecast at a collective 6.33 million bushels, down 53 percent from last year. Acreage intended for harvest in these two states is down 50 percent from 2022.

Hay stocks on farms: All hay stored on United States farms as of May 1, 2023, totaled 14.5 million tons, down 13 percent from May 1, 2022. The May 1 hay stock level for the United States represents the second lowest amount stored since records began in 1950. Disappearance from December 1, 2022 – May 1, 2023, totaled 57.4 million tons, down 8 percent from the same period a year earlier.

Record low May 1 hay stock levels were estimated in Arizona, Colorado, and Rhode Island.

Grapefruit: The United States 2022-2023 grapefruit crop is forecast at 341,000 tons, up 1 percent from the previous forecast but down 9 percent from last season's final utilization. The Florida forecast, at 1.80 million boxes (77,000 tons), is up 6 percent from previous forecast but down 46 percent from the last season. California and Texas grapefruit production forecasts were carried forward from the previous forecast.

Tangerines and mandarins: The United States tangerine and mandarin crop is forecast at 864,000 tons, unchanged from the previous forecast but up 17 percent from the last season's final utilization. The Florida tangerine and mandarin forecast, at 500,000 boxes (24,000 tons), is unchanged from the previous forecast but down 33 percent from last season. The California tangerine and mandarin forecast was carried forward from the previous forecast.

Peaches: California peach total production for 2023 is forecast at 480,000 tons, up 1 percent from 2022. The California Freestone forecast, at 270,000 tons, is up 2 percent from last season. Harvest of early Freestone peach varieties is underway. The California Clingstone forecast, at 210,000 tons, is up less than 1 percent from 2022. Full bloom for the California Clingstone crop began on March 14, eight days earlier than last year. All areas of the State reported the highest number of chilling hours in the last ten years. Significant rainfall and cooler than normal temperatures during bloom delayed and extended the bloom period for both types of peaches.

Almonds: The 2023 California almond production (shelled basis) is forecast at 2.50 billion pounds, down 3 from the previous year.

California growers remain optimistic about the 2023 crop progress; however, weather conditions have presented some uncertainty for almond pollination. In late February, wet and colder-than-average weather conditions were not ideal for pollination. Heavy rains, high winds, hail, fluctuating temperatures, and snowpack following an extended drought have negatively impacted the almond bloom, which usually begins mid-February and lasts until mid-March. In Northern California, a winter storm swept across the State in the latter part of February, bringing some snow to the Sacramento Valley, and growers hadn't seen this in years. With warmer and drier weather in April, California almond growers continue to monitor progression and assess potential damage from the recent rainstorms in the State.

2022 Cotton Final: All cotton production is estimated at 14.5 million 480-pound bales, 17 percent lower than the 2021 crop. The United States yield for all cotton is estimated at 950 pounds per acre, up 131 pounds from the previous year.

Upland cotton production is estimated at 14.0 million 480-pound bales, down 19 percent from the 2021 crop. The United States yield for upland cotton is estimated at 942 pounds per acre, up 129 pounds from 2021.

American Pima production is estimated at 470,000 bales (480-pounds), up 42 percent from 2021. The United States yield is estimated at 1,280 pounds per acre, down 8 pounds from the previous season.

Cottonseed: Cottonseed production in 2022 totaled 4.42 million tons, down 17 percent from the previous year. Sales to oil mills accounted for 44 percent of the disposition. The remaining 56 percent will be used for seed, feed, exports, and various other uses.

Statistical Methodology

Wheat survey procedures: Objective yield and farm operator surveys were conducted between April 24 and May 9 to gather information on expected yield as of May 1. The objective yield survey was conducted in three States (Kansas, Oklahoma, and Texas) where wheat is normally mature enough to make meaningful counts. Farm operators were interviewed to update previously reported acreage data and seek permission to randomly locate two sample plots in selected winter wheat fields. The counts made within each sample plot depended upon the crop's maturity. Counts such as number of stalks, heads in late boot, and number of emerged heads were made to predict the number of heads that would be harvested. The counts are used with similar data from previous years to develop a projected biological yield. The average harvesting loss is subtracted to obtain a net yield. The plots are revisited each month until crop maturity when the heads are clipped, threshed, and weighed. After the farm operator has harvested the sample field, another plot is sampled to obtain current year harvesting loss.

The farm operator survey included a sample of approximately 9,300 producers representing all major production areas. The survey was conducted primarily by telephone with some use of mail, and internet. These producers were selected from an earlier acreage survey and were asked about the probable winter wheat acres for harvest and yield on their operation. These growers will continue to be surveyed throughout the growing season to provide indications of average yields.

Orange survey procedures: The orange objective yield survey for the May 1 forecast was conducted in Florida. In August and September of last year, the number of bearing trees and the number of fruit per tree was determined. In August and subsequent months, fruit size measurement and fruit droppage surveys are conducted, which 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.

Wheat estimating procedures: National and State level objective yield and grower reported data were reviewed for reasonableness and consistency with historical estimates. The survey data were also reviewed considering weather patterns and crop progress compared to previous months and previous years. Each Regional Field Office submits their analysis of the current situation to the Agricultural Statistics Board (ASB). The ASB uses the survey data and the State analyses to prepare the published May 1 forecasts.

Orange estimating procedures: State level objective yield indications 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 analysis to prepare the published May 1 forecast. The May 1 orange production forecasts for California and Texas are carried forward from April.

Revision Policy: The May 1 production forecast will not be revised; instead, a new forecast will be made each month throughout the growing season. End-of-season wheat estimates are made after harvest. At the end of the wheat marketing season, a balance sheet is calculated using carryover stocks, production, exports, millings, feeding, and ending stocks. Revisions are then made if the balance sheet relationships or other administrative data warrant changes. End-of-season orange estimates will be published in the *Citrus Fruits Summary* released in August. The orange 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 May 1 production forecast, the "Root Mean Square Error," a statistical measure based on past performance, is computed. The deviation between the May 1 production forecast and the final estimate is expressed as a percentage of the final estimate. The average of the 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 May 1 winter wheat production forecast is 5.7 percent. This means that chances are two out of three that the current production forecast will not be above or below the final estimate

by more than 5.7 percent. Chances are 9 out of 10 (90 percent confidence level) that the difference will not exceed 9.9 percent.

Also, shown in the following table is a 20-year record for selected crops of the differences between the May 1 forecast and the final estimate. Using winter wheat again as an example, changes between the May 1 forecast and final estimate during the last 20 years have averaged 69 million bushels, ranging from 5 million to 245 million bushels. The May 1 forecast has been below the final estimate 8 times and above 12 times. This does not imply that the May 1 winter wheat forecast this year is likely to understate or overstate final production.

Reliability of May 1 Crop Production Forecasts

[Based on data for the past twenty years]

Crop	Root mean square error	90 percent confidence interval	Difference between forecast and final estimate				
			Production			Years	
			Average	Smallest	Largest	Below final	Above final
	(percent)	(percent)	(millions)	(millions)	(millions)	(number)	(number)
Oranges [1] .....tons	3.8	6.5	151	18	450	10	10
Wheat							
Winter wheat ..... bushels	5.7	9.9	69	5	245	8	12

[1] Quantity is in thousands of units.

USDA, National Agricultural Statistics Service Information Contacts

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

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- Joshua Bates – Hemp, Oats, Soybeans ..... (202) 690-3234
- Natasha Bruton – Barley, Cotton System Consumption and Stocks, Grain Crushings ..... (202) 690-1042
- David Colwell – Fats and Oils, Flour Milling Products ..... (202) 720-8800
- Michelle Harder – County Estimates, Hay ..... (202) 690-8533
- James Johanson – Rye, Wheat ..... (202) 720-8068
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- Becky Sommer – Cotton, Cotton Ginnings, Sorghum ..... (202) 720-5944
- Travis Thorson – Sunflower, Other Oilseeds ..... (202) 720-7369
- Lihan Wei – Peanuts, Rice ..... (202) 720-7688

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- Robert Little – Apricots, Dry Beans, Lettuce, Macadamia, Maple Syrup, Nectarines, Pears, Snap Beans, Spinach, Tomatoes ..... (202) 720-3250
- Krishna Rizal – Artichokes, Cauliflower, Celery, Garlic, Grapefruit, Kiwifruit, Lemons, Mandarins and tangerines, Mint, Mushrooms, Olives, Oranges, Pistachios ..... (202) 720-5412
- Chris Singh – Apples, Blueberries, Cucumbers, Hazelnuts, Potatoes, Pumpkins, Raspberries, Squash, Strawberries, Sugarbeets, Sugarcane, Sweet Potatoes ..... (202) 720-4285
- Antonio Torres – Cantaloupes, Dry Edible Peas, Green Peas, Honeydews, Lentils, Papayas, Peaches, Sweet Cherries, Tart Cherries, Walnuts, Watermelons ..... (202) 720-2157
- Chris Wallace – Avocados, Bell Peppers, Broccoli, Cabbage, Chickpeas, Chile Peppers, Dates, Floriculture, Grapes, Hops, Pecans ..... (202) 720-4215

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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.