Crop Production

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Winter Wheat Production Down 8 Percent from 2021
Orange Production Up 2 Percent from April Forecast

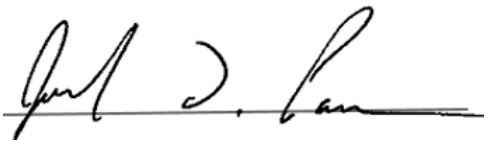
Winter wheat production is forecast at 1.17 billion bushels, down 8 percent from 2021. As of May 1, the United States yield is forecast at 47.9 bushels per acre, down 2.3 bushels from last year's average yield of 50.2 bushels per acre. Area expected to be harvested for grain or seed is forecast at 24.5 million acres, down 4 percent from last year.

Hard Red Winter production, at 590 million bushels, is down 21 percent from a year ago. Soft Red Winter, at 354 million bushels, is down 2 percent from 2021. White Winter, at 230 million bushels, is up 38 percent from last year. Of the White Winter production, 15.7 million bushels are Hard White and 214 million bushels are Soft White.

The United States all orange forecast for the 2021-2022 season is 3.88 million tons, up 2 percent from the previous forecast but down 12 percent from the 2020-2021 final utilization. The Florida all orange forecast, at 40.2 million boxes (1.81 million tons), is up 5 percent from the previous forecast but down 24 percent from last season's final utilization. In Florida, early, midseason, and Navel varieties are forecast at 18.2 million boxes (819,000 tons), unchanged from the previous forecast but down 20 percent from last season's final utilization. The Florida Valencia orange forecast, at 22.0 million boxes (990,000 tons), is up 10 percent from the previous forecast but down 27 percent from last season's final utilization. California and Texas orange production forecasts were carried forward from the previous forecast.

This report was approved on May 12, 2022.

Secretary of Agriculture
Designate
Robert Bonnie



Agricultural Statistics Board
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Contents

Winter Wheat Area Harvested, Yield, and Production – States and United States: 2021 and Forecasted May 1, 2022 5

Durum Wheat Area Harvested, Yield, and Production – States and United States: 2021 and Forecasted May 1, 2022 6

Wheat Production by Class – United States: 2021 and Forecasted May 1, 2022 6

Hay Stocks on Farms – States and United States: December 1 and May 1, 2020-2022 7

Utilized Production of Citrus Fruits by Crop – States and United States: 2020-2021 and Forecasted May 1, 2022 8

Peach Production by Type – California: 2021 and Forecasted May 1, 2022 9

Almonds Production – State and United States: 2021 and Forecasted May 1, 2022 9

Cotton Area Planted, Harvested, and Yield by Type – States and United States: 2020 and 2021 10

Cotton Production and Bales Ginned by Type – States and United States: 2020 and 2021 11

Cottonseed Production and Farm Disposition – States and United States: 2020 and 2021 12

Cotton Harvest Loss per Acre – Selected States: 2017-2021 12

Cotton Cumulative Boll Counts – Selected States: 2017-2021 13

Crop Area Planted and Harvested, Yield, and Production in Domestic Units – United States: 2021 and 2022 14

Crop Area Planted and Harvested, Yield, and Production in Metric Units – United States: 2021 and 2022 16

Fruits and Nuts Production in Domestic Units – United States: 2021 and 2022 18

Fruits and Nuts Production in Metric Units – United States: 2021 and 2022 19

Percent of Normal Precipitation Map 20

Departure from Normal Temperature Map 20

April Weather Summary 21

April Agricultural Summary 21

Crop Comments 23

Statistical Methodology 25

Reliability of May 1 Crop Production Forecasts 26

Information Contacts 27

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Winter Wheat Area Harvested, Yield, and Production – States and United States: 2021 and Forecasted May 1, 2022

State	Area harvested		Yield per acre		Production	
	2021	2022	2021	2022	2021	2022
	(1,000 acres)	(1,000 acres)	(bushels)	(bushels)	(1,000 bushels)	(1,000 bushels)
Arkansas	145	160	58.0	55.0	8,410	8,800
California	80	80	82.0	59.0	6,560	4,720
Colorado	1,880	1,600	37.0	31.0	69,560	49,600
Idaho	640	730	71.0	91.0	45,440	66,430
Illinois	610	660	79.0	75.0	48,190	49,500
Indiana	270	240	85.0	76.0	22,950	18,240
Kansas	7,000	6,950	52.0	39.0	364,000	271,050
Kentucky	350	365	87.0	80.0	30,450	29,200
Maryland	160	140	79.0	75.0	12,640	10,500
Michigan	560	425	81.0	79.0	45,360	33,575
Mississippi	70	75	59.0	51.0	4,130	3,825
Missouri	490	620	65.0	67.0	31,850	41,540
Montana	1,730	1,900	31.0	39.0	53,630	74,100
Nebraska	840	900	49.0	41.0	41,160	36,900
North Carolina	345	385	56.0	67.0	19,320	25,795
North Dakota	60	90	33.0	47.0	1,980	4,230
Ohio	515	460	85.0	76.0	43,775	34,960
Oklahoma	2,950	2,400	39.0	25.0	115,050	60,000
Oregon	705	720	45.0	61.0	31,725	43,920
South Dakota	720	720	38.0	45.0	27,360	32,400
Tennessee	330	330	71.0	76.0	23,430	25,080
Texas	2,000	1,300	37.0	32.0	74,000	41,600
Virginia	120	150	67.0	63.0	8,040	9,450
Washington	1,690	1,800	42.0	67.0	70,980	120,600
Wisconsin	245	220	75.0	70.0	18,375	15,400
Other States [1]	959	1,079	61.5	57.6	59,000	62,132
United States	25,464	24,499	50.2	47.9	1,277,365	1,173,547

[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 2022 Summary* report.

Durum Wheat Area Harvested, Yield, and Production – States and United States: 2021 and Forecasted May 1, 2022

[Area harvested for the United States and remaining States will be published in the *Acreage* report released June 2022. Yield and production will be published in the *Crop Production* report released July 2022. Blank data cells indicate estimation period has not yet begun]

State	Area harvested		Yield per acre		Production	
	2021	2022	2021	2022	2021	2022
	(1,000 acres)	(1,000 acres)	(bushels)	(bushels)	(1,000 bushels)	(1,000 bushels)
Arizona	52	59	90.0	108.0	4,680	6,372
California	20	24	110.0	112.0	2,200	2,688
Idaho	7		77.0		539	
Montana	635		16.0		10,160	
North Dakota	820		24.0		19,680	
United States	1,534		24.3		37,259	

Wheat Production by Class – United States: 2021 and Forecasted May 1, 2022

[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	2021	2022
	(1,000 bushels)	(1,000 bushels)
Winter		
Hard red	749,489	590,037
Soft red	360,689	353,503
Hard white	20,283	15,690
Soft white	146,904	214,317
Spring		
Hard red	297,366	
Hard white	5,662	
Soft white	28,112	
Durum	37,259	
Total	1,645,764	

Hay Stocks on Farms – States and United States: December 1 and May 1, 2020-2022

State	December 1		May 1	
	2020	2021	2021	2022
	(1,000 tons)	(1,000 tons)	(1,000 tons)	(1,000 tons)
Alabama	1,800	1,550	300	240
Arizona	300	180	20	10
Arkansas	1,800	1,700	240	260
California	1,640	1,200	220	280
Colorado	1,700	2,000	230	580
Connecticut	30	38	6	5
Delaware	10	10	2	2
Florida	520	460	60	75
Georgia	1,210	1,260	290	190
Idaho	2,500	2,350	410	530
Illinois	1,000	950	270	260
Indiana	800	900	150	240
Iowa	2,430	3,120	430	720
Kansas	5,000	5,000	910	670
Kentucky	3,825	3,750	950	980
Louisiana	660	640	160	180
Maine	150	105	21	30
Maryland	290	275	57	66
Massachusetts	60	34	9	8
Michigan	900	1,100	190	270
Minnesota	2,240	1,460	400	330
Mississippi	1,050	1,000	170	180
Missouri	6,000	5,700	1,000	1,100
Montana	4,800	2,900	970	450
Nebraska	4,200	4,650	1,000	1,250
Nevada	400	490	90	52
New Hampshire	36	42	5	5
New Jersey	90	85	10	14
New Mexico	210	240	40	30
New York	1,000	1,700	290	550
North Carolina	1,120	950	190	150
North Dakota	3,700	2,100	950	520
Ohio	1,300	1,400	210	360
Oklahoma	4,100	4,260	1,150	600
Oregon	1,600	920	290	220
Pennsylvania	1,410	1,440	275	340
Rhode Island	4	5	1	1
South Carolina	400	450	125	80
South Dakota	5,800	3,300	2,200	1,090
Tennessee	2,930	3,000	570	530
Texas	6,400	8,200	1,200	1,600
Utah	1,250	1,000	170	290
Vermont	145	157	35	34
Virginia	2,050	1,800	480	280
Washington	1,100	1,100	220	180
West Virginia	770	790	145	105
Wisconsin	1,790	2,105	570	630
Wyoming	1,500	1,150	325	200
United States	84,020	79,016	18,006	16,767

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

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

Crop and State	Utilized production boxes [1]		Utilized production ton equivalent	
	2020-2021	2021-2022	2020-2021	2021-2022
	(1,000 boxes)	(1,000 boxes)	(1,000 tons)	(1,000 tons)
Oranges				
California, all [2]	49,000	51,300	1,960	2,052
Early, mid, and Navel [3]	41,300	43,000	1,652	1,720
Valencia	7,700	8,300	308	332
Florida, all	52,950	40,200	2,383	1,809
Early, mid, and Navel [3]	22,700	18,200	1,022	819
Valencia	30,250	22,000	1,361	990
Texas, all [2]	1,050	350	45	15
Early, mid, and Navel [3]	1,000	250	43	11
Valencia	50	100	2	4
United States, all	103,000	91,850	4,388	3,876
Early, mid, and Navel [3]	65,000	61,450	2,717	2,550
Valencia	38,000	30,400	1,671	1,326
Grapefruit				
California [2]	4,200	4,100	168	164
Florida, all	4,100	3,400	174	145
Texas [2]	2,400	2,000	96	80
United States	10,700	9,500	438	389
Tangerines and mandarins [4]				
California [2]	28,800	21,000	1,152	840
Florida	890	800	42	38
United States	29,690	21,800	1,194	878
Lemons [2]				
Arizona	750	1,500	30	60
California	20,100	23,000	804	920
United States	20,850	24,500	834	980

[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: 2021 and Forecasted May 1, 2022

Type	Total production	
	2021	2022
	(tons)	(tons)
Freestone	279,000	250,000
Clingstone	226,000	190,000
Total	505,000	440,000

Almonds Production – State and United States: 2021 and Forecasted May 1, 2022

State	Total production (shelled basis)	
	2021	2022
	(1,000 pounds)	(1,000 pounds)
California	2,915,000	2,800,000
United States	2,915,000	2,800,000

Cotton Area Planted, Harvested, and Yield by Type – States and United States: 2020 and 2021

Type and State	Area planted		Area harvested		Yield per acre	
	2020	2021	2020	2021	2020	2021
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(pounds)	(pounds)
Upland						
Alabama	450.0	405.0	446.0	401.0	790	826
Arizona	125.0	120.0	123.0	119.0	1,179	1,275
Arkansas	525.0	480.0	520.0	475.0	1,179	1,248
California	34.0	26.0	33.5	25.5	2,006	1,920
Florida	98.0	92.0	93.0	90.0	532	640
Georgia	1,190.0	1,170.0	1,180.0	1,160.0	887	914
Kansas	195.0	110.0	181.0	102.0	796	880
Louisiana	170.0	110.0	165.0	104.0	986	1,011
Mississippi	530.0	445.0	525.0	430.0	1,079	997
Missouri	295.0	315.0	287.0	310.0	1,144	1,260
New Mexico	43.0	36.0	26.0	26.0	1,052	1,108
North Carolina	360.0	375.0	330.0	365.0	759	1,017
Oklahoma	525.0	495.0	430.0	440.0	710	756
South Carolina	190.0	210.0	179.0	207.0	802	986
Tennessee	280.0	275.0	275.0	270.0	1,066	1,036
Texas	6,800.0	6,350.0	3,150.0	5,550.0	696	666
Virginia	80.0	75.0	79.0	74.0	772	1,109
United States	11,890.0	11,089.0	8,022.5	10,148.5	841	813
American Pima						
Arizona	6.5	9.0	6.5	8.8	1,034	982
California	147.0	88.0	146.0	87.0	1,562	1,501
New Mexico	10.5	12.5	10.5	12.0	663	640
Texas	38.0	17.0	31.0	16.0	666	780
United States	202.0	126.5	194.0	123.8	1,352	1,287
All						
Alabama	450.0	405.0	446.0	401.0	790	826
Arizona	131.5	129.0	129.5	127.8	1,171	1,254
Arkansas	525.0	480.0	520.0	475.0	1,179	1,248
California	181.0	114.0	179.5	112.5	1,645	1,596
Florida	98.0	92.0	93.0	90.0	532	640
Georgia	1,190.0	1,170.0	1,180.0	1,160.0	887	914
Kansas	195.0	110.0	181.0	102.0	796	880
Louisiana	170.0	110.0	165.0	104.0	986	1,011
Mississippi	530.0	445.0	525.0	430.0	1,079	997
Missouri	295.0	315.0	287.0	310.0	1,144	1,260
New Mexico	53.5	48.5	36.5	38.0	940	960
North Carolina	360.0	375.0	330.0	365.0	759	1,017
Oklahoma	525.0	495.0	430.0	440.0	710	756
South Carolina	190.0	210.0	179.0	207.0	802	986
Tennessee	280.0	275.0	275.0	270.0	1,066	1,036
Texas	6,838.0	6,367.0	3,181.0	5,566.0	696	666
Virginia	80.0	75.0	79.0	74.0	772	1,109
United States	12,092.0	11,215.5	8,216.5	10,272.3	853	819

Cotton Production and Bales Ginned by Type – States and United States: 2020 and 2021

Type and State	Production in 480-pound net weight bales [1]		Lint seed ratio		Bales ginned in 480-pound net weight bales [2]	
	2020	2021	2020	2021	2020	2021
	(1,000 bales)	(1,000 bales)	(ratio)	(ratio)	(bales)	(bales)
Upland						
Alabama	734.0	690.0	(NA)	(NA)	715,850	662,750
Arizona	302.0	316.0	(NA)	(NA)	303,100	302,400
Arkansas	1,277.0	1,235.0	(NA)	(NA)	1,348,350	1,322,950
California	140.0	102.0	(NA)	(NA)	140,400	114,200
Florida	103.0	120.0	(NA)	(NA)	91,600	100,300
Georgia	2,180.0	2,210.0	(NA)	(NA)	2,207,950	2,244,100
Kansas	300.0	187.0	(NA)	(NA)	204,650	130,800
Louisiana	339.0	219.0	(NA)	(NA)	352,400	219,450
Mississippi	1,180.0	893.0	(NA)	(NA)	1,147,100	876,300
Missouri	684.0	814.0	(NA)	(NA)	633,150	750,250
New Mexico	57.0	60.0	(NA)	(NA)	26,700	19,300
North Carolina	522.0	773.0	(NA)	(NA)	559,450	819,000
Oklahoma	636.0	693.0	(NA)	(NA)	515,000	545,450
South Carolina	299.0	425.0	(NA)	(NA)	260,000	370,500
Tennessee	611.0	583.0	(NA)	(NA)	602,400	585,400
Texas	4,570.0	7,700.0	(NA)	(NA)	4,798,550	7,925,250
Virginia	127.0	171.0	(NA)	(NA)	123,450	169,050
United States	14,061.0	17,191.0	(NA)	(NA)	14,030,100	17,157,450
American Pima						
Arizona	14.0	18.0	(NA)	(NA)	13,100	17,850
California	475.0	272.0	(NA)	(NA)	474,250	271,400
New Mexico	14.5	16.0	(NA)	(NA)	17,150	15,700
Texas	43.0	26.0	(NA)	(NA)	40,550	25,200
United States	546.5	332.0	(NA)	(NA)	545,050	330,150
All						
Alabama	734.0	690.0	(NA)	(NA)	715,850	662,750
Arizona	316.0	334.0	(NA)	(NA)	316,200	320,250
Arkansas	1,277.0	1,235.0	0.432	0.432	1,348,350	1,322,950
California	615.0	374.0	(NA)	(NA)	614,650	385,600
Florida	103.0	120.0	(NA)	(NA)	91,600	100,300
Georgia	2,180.0	2,210.0	0.460	0.464	2,207,950	2,244,100
Kansas	300.0	187.0	(NA)	(NA)	204,650	130,800
Louisiana	339.0	219.0	(NA)	(NA)	352,400	219,450
Mississippi	1,180.0	893.0	0.431	0.437	1,147,100	876,300
Missouri	684.0	814.0	(NA)	(NA)	633,150	750,250
New Mexico	71.5	76.0	(NA)	(NA)	43,850	35,000
North Carolina	522.0	773.0	(NA)	(NA)	559,450	819,000
Oklahoma	636.0	693.0	(NA)	(NA)	515,000	545,450
South Carolina	299.0	425.0	(NA)	(NA)	260,000	370,500
Tennessee	611.0	583.0	(NA)	(NA)	602,400	585,400
Texas	4,613.0	7,726.0	0.433	0.435	4,839,100	7,950,450
Virginia	127.0	171.0	(NA)	(NA)	123,450	169,050
United States	14,607.5	17,523.0	(NA)	(NA)	14,575,150	17,487,600

(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: 2020 and 2021

State	Production		Farm disposition				Seed for planting [2]	
			Sales to oil mills		Other [1]			
	2020	2021	2020	2021	2020	2021	2020	2021
	(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	205.0	200.0	20.0	23.0	185.0	177.0	2.6	2.5
Arizona	107.0	113.0	-	-	107.0	113.0	0.8	0.8
Arkansas	402.0	390.0	292.0	291.0	110.0	99.0	3.0	3.3
California	214.0	128.0	77.0	31.0	137.0	97.0	1.0	1.1
Florida	28.0	34.0	20.0	25.0	8.0	9.0	0.6	0.6
Georgia	613.0	612.0	253.0	238.0	360.0	374.0	5.7	5.7
Kansas	99.0	57.0	-	-	99.0	57.0	1.0	0.6
Louisiana	109.0	68.0	63.0	41.0	46.0	27.0	0.7	1.2
Mississippi	373.0	276.0	195.0	189.0	178.0	87.0	3.1	3.4
Missouri	210.0	245.0	52.0	133.0	158.0	112.0	2.1	2.1
New Mexico	22.0	24.0	-	1.0	22.0	23.0	0.3	0.4
North Carolina	146.0	218.0	-	12.0	146.0	206.0	2.6	2.8
Oklahoma	189.0	205.0	123.0	118.0	66.0	87.0	2.8	2.9
South Carolina	84.0	119.0	-	-	84.0	119.0	1.0	1.4
Tennessee	186.0	183.0	108.0	156.0	78.0	27.0	1.9	2.1
Texas	1,448.0	2,403.0	590.0	1,263.0	858.0	1,140.0	40.8	37.9
Virginia	33.0	48.0	-	-	33.0	48.0	0.5	0.6
United States	4,468.0	5,323.0	1,793.0	2,521.0	2,675.0	2,802.0	70.5	69.4

- 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 2021. 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: 2017-2021

State	2017	2018	2019	2020	2021
	(pounds)	(pounds)	(pounds)	(pounds)	(pounds)
Arkansas	80	100	73	53	43
Georgia	127	342	269	236	158
Louisiana [1]	79	165	(NA)	(NA)	(NA)
Mississippi	59	87	104	97	85
North Carolina [1]	65	174	(NA)	(NA)	(NA)
Texas	60	59	43	58	61
4-State [2]	72	123	90	100	76

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

Cotton Cumulative Boll Counts – Selected States: 2017-2021

[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	2017	2018	2019	2020	2021
	(number)	(number)	(number)	(number)	(number)
Arkansas					
September	911	891	900	994	990
October	839	910	896	849	838
November	825	892	925	820	809
December	825	892	900	820	807
Final	825	892	900	820	807
Georgia					
September	593	605	598	606	597
October	608	737	783	747	658
November	680	712	790	761	669
December	684	719	799	784	694
Final	684	713	803	785	694
Louisiana [1]					
September	648	759	(NA)	(NA)	(NA)
October	667	734	(NA)	(NA)	(NA)
November	665	739	(NA)	(NA)	(NA)
December	665	739	(NA)	(NA)	(NA)
Final	665	739	(NA)	(NA)	(NA)
Mississippi					
September	904	871	944	900	957
October	810	895	895	867	807
November	804	846	904	877	848
December	797	846	901	875	849
Final	797	846	901	875	851
North Carolina [1]					
September	637	601	(NA)	(NA)	(NA)
October	705	641	(NA)	(NA)	(NA)
November	769	714	(NA)	(NA)	(NA)
December	769	719	(NA)	(NA)	(NA)
Final	769	719	(NA)	(NA)	(NA)
Texas					
September	592	570	458	576	491
October	602	576	438	581	512
November	603	553	456	595	538
December	615	583	459	608	539
Final	614	582	461	608	539
4-State [2]					
September	633	627	551	645	567
October	635	661	562	661	573
November	649	640	579	671	595
December	656	659	580	683	599
Final	656	657	593	693	597

(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: 2021 and 2022

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

Crop	Area planted		Area harvested	
	2021	2022	2021	2022
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)
Grains and hay				
Barley	2,660	2,941	1,948	
Corn for grain [1]	93,357	89,490	85,388	
Corn for silage	(NA)		6,481	
Hay, all	(NA)	(NA)	50,736	50,332
Alfalfa	(NA)		15,246	
All other	(NA)		35,490	
Oats	2,550	2,547	650	
Proso millet	725		662	
Rice	2,532	2,452	2,488	
Rye	2,133		294	
Sorghum for grain [1]	7,305	6,205	6,490	
Sorghum for silage	(NA)		331	
Wheat, all	46,703	47,351	37,163	
Winter	33,648	34,236	25,464	24,499
Durum	1,635	1,915	1,534	
Other spring	11,420	11,200	10,165	
Oilseeds				
Canola	2,152.0	2,158.0	2,089.0	
Cottonseed	(X)		(X)	
Flaxseed	325	360	268	
Mustard seed	103.0		89.3	
Peanuts	1,585.2	1,571.0	1,545.0	
Rapeseed	14.3		12.5	
Safflower	152.0		135.0	
Soybeans for beans	87,195	90,955	86,332	
Sunflower	1,288.5	1,416.0	1,243.8	
Cotton, tobacco, and sugar crops				
Cotton, all	11,215.5	12,234.0	10,272.3	
Upland	11,089.0	12,058.0	10,148.5	
American Pima	126.5	176.0	123.8	
Sugarbeets	1,160.0	1,143.4	1,107.6	
Sugarcane	(NA)		935.2	
Tobacco	(NA)	(NA)	218.9	226.3
Dry beans, peas, and lentils				
Chickpeas	368.5	303.6	351.0	
Dry edible beans	1,394.0	1,313.0	1,335.6	
Dry edible peas	977.0	1,088.0	834.0	
Lentils	708.0	788.0	549.0	
Potatoes and miscellaneous				
Hops	(NA)		60.9	
Maple syrup	(NA)		(NA)	
Mushrooms	(NA)		(NA)	
Peppermint oil	(NA)		44.0	
Potatoes	943.0		935.7	
Spearmint oil	(NA)		14.9	

See footnote(s) at end of table.

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

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

Crop	Yield per acre		Production	
	2021	2022	2021	2022
			(1,000)	(1,000)
Grains and hay				
Barley ..... bushels	60.4		117,673	
Corn for grain ..... bushels	177.0		15,115,170	
Corn for silage ..... tons	20.1		130,317	
Hay, all ..... tons	2.37		120,196	
Alfalfa ..... tons	3.23		49,245	
All other ..... tons	2.00		70,951	
Oats ..... bushels	61.3		39,836	
Proso millet ..... bushels	23.2		15,376	
Rice [2] ..... cwt	7,709		191,796	
Rye ..... bushels	33.4		9,808	
Sorghum for grain ..... bushels	69.0		447,810	
Sorghum for silage ..... tons	15.4		5,083	
Wheat, all ..... bushels	44.3		1,645,764	
Winter ..... bushels	50.2	47.9	1,277,365	1,173,547
Durum ..... bushels	24.3		37,259	
Other spring ..... bushels	32.6		331,140	
Oilseeds				
Canola ..... pounds	1,302		2,720,550	
Cottonseed ..... tons	(X)		5,323.0	
Flaxseed ..... bushels	10.1		2,708	
Mustard seed ..... pounds	491		43,834	
Peanuts ..... pounds	4,135		6,389,300	
Rapeseed ..... pounds	1,809		22,616	
Safflower ..... pounds	1,001		135,175	
Soybeans for beans ..... bushels	51.4		4,435,232	
Sunflower ..... pounds	1,530		1,902,985	
Cotton, tobacco, and sugar crops				
Cotton, all [2] ..... bales	819		17,523.0	
Upland [2] ..... bales	813		17,191.0	
American Pima [2] ..... bales	1,287		332.0	
Sugarbeets ..... tons	33.2		36,751	
Sugarcane ..... tons	35.1		32,838	
Tobacco ..... pounds	2,183		477,973	
Dry beans, peas, and lentils				
Chickpeas [2] ..... cwt	815		2,861	
Dry edible beans [2] ..... cwt	1,701		22,721	
Dry edible peas [2] ..... cwt	1,025		8,549	
Lentils [2] ..... cwt	606		3,327	
Potatoes and miscellaneous				
Hops ..... pounds	1,900		115,630.9	
Maple syrup ..... gallons	(NA)		3,424	
Mushrooms ..... pounds	(NA)		757,987	
Peppermint oil ..... pounds	104		4,566	
Potatoes ..... cwt	438		409,671	
Spearmint oil ..... pounds	119		1,775	

(NA) Not available.
(X) Not applicable.
[1] Area planted for all purposes.
[2] Yield in pounds.

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

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

Crop	Area planted		Area harvested	
	2021	2022	2021	2022
	(hectares)	(hectares)	(hectares)	(hectares)
Grains and hay				
Barley	1,076,480	1,190,190	788,340	
Corn for grain [1]	37,780,640	36,215,710	34,555,670	
Corn for silage	(NA)		2,622,800	
Hay, all [2]	(NA)	(NA)	20,532,350	20,368,860
Alfalfa	(NA)		6,169,900	
All other	(NA)		14,362,450	
Oats	1,031,960	1,030,750	263,050	
Proso millet	293,400		267,900	
Rice	1,024,680	992,300	1,006,870	
Rye	863,200		118,980	
Sorghum for grain [1]	2,956,260	2,511,100	2,626,440	
Sorghum for silage	(NA)		133,950	
Wheat, all [2]	18,900,240	19,162,480	15,039,490	
Winter	13,617,010	13,854,970	10,305,030	9,914,500
Durum	661,670	774,980	620,790	
Other spring	4,621,560	4,532,530	4,113,670	
Oilseeds				
Canola	870,890	873,320	845,400	
Cottonseed	(X)		(X)	
Flaxseed	131,520	145,690	108,460	
Mustard seed	41,680		36,140	
Peanuts	641,510	635,770	625,250	
Rapeseed	5,790		5,060	
Safflower	61,510		54,630	
Soybeans for beans	35,286,940	36,808,580	34,937,700	
Sunflower	521,440	573,040	503,350	
Cotton, tobacco, and sugar crops				
Cotton, all [2]	4,538,800	4,950,980	4,157,100	
Upland	4,487,610	4,879,750	4,107,000	
American Pima	51,190	71,230	50,100	
Sugarbeets	469,440	462,720	448,230	
Sugarcane	(NA)		378,470	
Tobacco	(NA)	(NA)	88,600	91,580
Dry beans, peas, and lentils				
Chickpeas	149,130	122,860	142,050	
Dry edible beans	564,140	531,360	540,500	
Dry edible peas	395,380	440,300	337,510	
Lentils	286,520	318,900	222,170	
Potatoes and miscellaneous				
Hops	(NA)		24,630	
Maple syrup	(NA)		(NA)	
Mushrooms	(NA)		(NA)	
Peppermint oil	(NA)		17,810	
Potatoes	381,620		378,670	
Spearmint oil	(NA)		6,030	

See footnote(s) at end of table.

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

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

Crop	Yield per hectare		Production	
	2021	2022	2021	2022
	(metric tons)	(metric tons)	(metric tons)	(metric tons)
Grains and hay				
Barley	3.25		2,562,030	
Corn for grain	11.11		383,943,000	
Corn for silage	45.07		118,221,590	
Hay, all [2]	5.31		109,039,980	
Alfalfa	7.24		44,674,310	
All other	4.48		64,365,660	
Oats	2.20		578,220	
Proso millet	1.30		348,720	
Rice	8.64		8,699,720	
Rye	2.09		249,130	
Sorghum for grain	4.33		11,374,900	
Sorghum for silage	34.42		4,611,220	
Wheat, all [2]	2.98		44,790,360	
Winter	3.37	3.22	34,764,180	31,938,720
Durum	1.63		1,014,020	
Other spring	2.19		9,012,150	
Oilseeds				
Canola	1.46		1,234,020	
Cottonseed	(X)		4,828,940	
Flaxseed	0.63		68,790	
Mustard seed	0.55		19,880	
Peanuts	4.64		2,898,140	
Rapeseed	2.03		10,260	
Safflower	1.12		61,310	
Soybeans for beans	3.45		120,707,230	
Sunflower	1.71		863,180	
Cotton, tobacco, and sugar crops				
Cotton, all [2]	0.92		3,815,180	
Upland	0.91		3,742,900	
American Pima	1.44		72,280	
Sugarbeets	74.38		33,339,950	
Sugarcane	78.71		29,790,130	
Tobacco	2.45		216,800	
Dry beans, peas, and lentils				
Chickpeas	0.91		129,770	
Dry edible beans	1.91		1,030,610	
Dry edible peas	1.15		387,780	
Lentils	0.68		150,910	
Potatoes and miscellaneous				
Hops	2.13		52,450	
Maple syrup	(NA)		17,120	
Mushrooms	(NA)		343,820	
Peppermint oil	0.12		2,070	
Potatoes	49.07		18,582,370	
Spearmint oil	0.13		810	

(NA) Not available.
(X) Not applicable.
[1] Area planted for all purposes.
[2] Total may not add due to rounding.

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

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

Crop		Production	
		2021	2022
Citrus [1]			
Grapefruit	1,000 tons	438	389
Lemons	1,000 tons	834	980
Oranges	1,000 tons	4,388	3,876
Tangerines and mandarins	1,000 tons	1,194	878
Noncitrus			
Apples, commercial	million pounds	9,848.5	
Apricots	tons	41,740	
Avocados	tons	150,740	
Blueberries, Cultivated	1,000 pounds	669,100	
Blueberries, Wild (Maine)	1,000 pounds	105,000	
Cherries, Sweet	tons	378,300	
Cherries, Tart	million pounds	172.1	
Coffee (Hawaii)	1,000 pounds	28,440	
Cranberries	barrel	7,074,000	
Dates	tons	59,450	
Grapes	tons	6,050,000	
Kiwifruit (California)	tons	40,100	
Nectarines (California)	tons	116,500	
Olives (California)	tons	101,000	
Papayas (Hawaii)	1,000 pounds	13,400	
Peaches	tons	688,770	
Pears	tons	701,500	
Plums (California)	tons	83,500	
Prunes (California)	tons	222,000	
Raspberries	1,000 pounds	178,900	
Strawberries	1,000 cwt	26,700.0	
Nuts and miscellaneous			
Almonds, shelled (California)	1,000 pounds	2,915,000	2,800,000
Hazelnuts, in-shell (Oregon)	tons	77,500	
Macadamias (Hawaii)	1,000 pounds	51,000	
Pecans, in-shell	1,000 pounds	255,300	
Pistachios (California)	1,000 pounds	1,155,000	
Walnuts, in-shell (California)	tons	725,000	

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

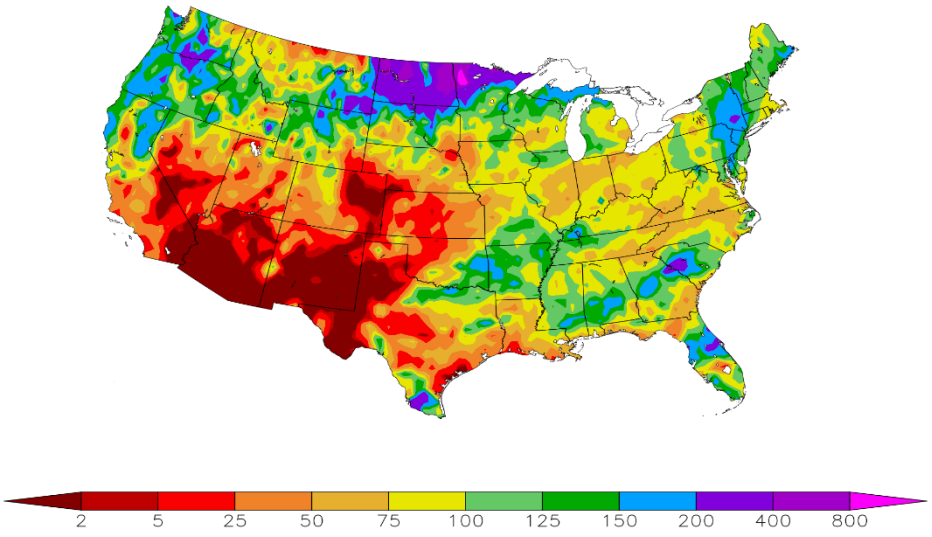
Fruits and Nuts Production in Metric Units – United States: 2021 and 2022

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

Crop	Production	
	2021	2022
	(metric tons)	(metric tons)
Citrus [1]		
Grapefruit	397,350	352,890
Lemons	756,590	889,040
Oranges	3,980,730	3,516,250
Tangerines and mandarins	1,083,180	796,510
Noncitrus		
Apples, commercial	4,467,200	
Apricots	37,870	
Avocados	136,750	
Blueberries, Cultivated	303,500	
Blueberries, Wild (Maine)	47,630	
Cherries, Sweet	343,190	
Cherries, Tart	78,060	
Coffee (Hawaii)	12,900	
Cranberries	320,870	
Dates	53,930	
Grapes	5,488,470	
Kiwifruit (California)	36,380	
Nectarines (California)	105,690	
Olives (California)	91,630	
Papayas (Hawaii)	6,080	
Peaches	624,840	
Pears	636,390	
Plums (California)	75,750	
Prunes (California)	201,400	
Raspberries	81,150	
Strawberries	1,211,090	
Nuts and miscellaneous		
Almonds, shelled (California)	1,322,220	1,270,060
Hazelnuts, in-shell (Oregon)	70,310	
Macadamias (Hawaii)	23,130	
Pecans, in-shell	115,800	
Pistachios (California)	523,900	
Walnuts, in-shell (California)	657,710	

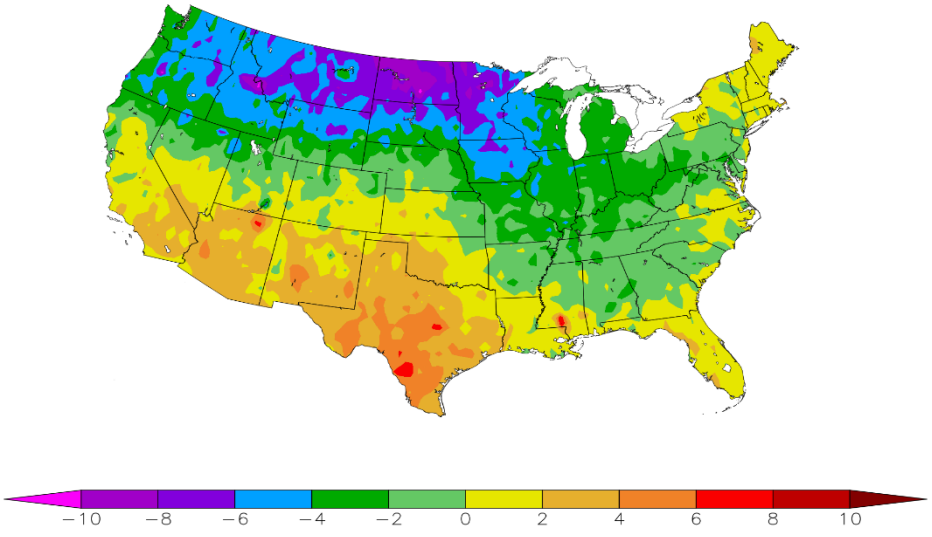
[1] Production years are 2020-2021 and 2021-2022.

Percent of Normal Precipitation (%)
4/1/2022 – 4/30/2022



NOAA Regional Climate Centers

Departure from Normal Temperature (F)
4/1/2022 – 4/30/2022



NOAA Regional Climate Centers

April Weather Summary

A resurgent La Niña helped to fuel an active storm track, resulting in cool, wet conditions across much of the Nation's northern tier. April temperatures generally averaged at least 4°F below normal from eastern Washington into the upper Great Lakes region and were more than 8°F below normal in parts of North Dakota. The heaviest precipitation, relative to normal, fell across the northern Plains, where multiple rounds of heavy rain and wind-driven snow eased or eradicated drought. In fact, moderate to major flooding developed late in the month in the Red River Valley, north of Fargo, North Dakota.

Meanwhile, severe thunderstorms frequently accompanied several strong cold fronts crossing the Plains, Midwest, and South, with most of the month's more than 200 tornadoes—based on preliminary reports—occurring on April 4-6, 11-13, 22-23, and 29-30. Dozens of tornadoes were spotted on April 5 from Mississippi to South Carolina, followed by an impressive, early-season Midwestern tornado outbreak on April 12 from eastern Nebraska to southeastern Minnesota. The South endured another significant tornado outbreak on April 12-13, while severe weather across the Plains peaked on April 22 and 29.

Despite late-month thunderstorms across the Nation's mid-section, drought continued to intensity across the southern half of the High Plains, amid sharp temperature fluctuations, periodic high winds, and occasional blowing dust. Nearly half (43 percent of the Nation's winter wheat was rated in very poor to poor condition on May 1, the greatest amount in those two categories at this time of year since April-May 1996. In addition, more than half (56 percent) of the U.S. rangeland and pastures were rated in very poor to poor condition on May 1, very close to the record-high value of the last quarter-century—59 percent very poor to poor for several weeks in late-summer 2012.

In fact, much of the Nation's southwestern quadrant, stretching from California to the High Plains, remained mired in significant drought, with potentially serious implications for water supplies, rangeland and pastures, and rain-fed crops. By May 3, more than half of the Lower 48 States had been in drought since late-November 2021, a span of 24 weeks. Additionally, more than 40 percent of the country experienced drought each week from September 29, 2020, to May 3, 2022, an 84-week streak that has broken the *United States Drought Monitor*-era record (previously, 68 weeks from June 19, 2012 – October 1, 2013).

Despite the worsening Southwestern situation, which included several large, destructive, wildfires, national drought coverage decreased 4 percentage points, from 58 to 54 percent, during the 5-week period ending May 3. Most of the reduction in drought coverage occurred in the North and parts of the South, including the southeastern Plains and the Mississippi Delta. Farther west, early-season wildfires in Arizona and New Mexico burned hundreds of thousands of acres of vegetation and destroyed hundreds of homes. In northeastern New Mexico, near Las Vegas, the Calf Canyon Fire—sparked on April 19—joined with an escaped prescribed burn (the Hermits Peak Fire)—to scorch more than 165,000 acres and destroy more than 250 structures.

Elsewhere, cool, damp Midwestern conditions limited April fieldwork, leading to a sluggish planting pace for corn and soybeans. By May 1, topsoil moisture ranged from 24 to 40 percent surplus in all Midwestern States except Iowa, Nebraska, and South Dakota. On the same date, only 14 percent of the Nation's intended corn acreage had been planted, well behind the 5-year average pace of 33 percent. This represented the slowest planting pace since 2013, when only 8 percent of the corn had been planted by May 1.

April Agricultural Summary

April was cooler than normal for most of the northern half of the Nation. Much of the Pacific Northwest, Northern Plains, and Northern Rockies recorded temperatures 4°F or more below normal. In contrast, temperatures were warmer than normal for much of the southern half of the Nation. Parts of the Gulf Coast and much of the Southern Plains and Southwest recorded temperatures 2°F or more above normal for the month. While much of the West remained dry, at least twice the normal amount of precipitation was recorded in large parts of the Northern Plains, as well as locations in the Pacific Northwest, Rockies, and South Texas. In the East, locations in Florida, Georgia, New York, and South Carolina recorded at least twice the normal amount of precipitation.

By April 3, producers had planted 2 percent of the Nation's corn crop, equal to both last year and the 5-year average. By April 17, producers had planted 4 percent of the Nation's corn crop, 3 percentage points behind last year and 2 percentage points behind the 5-year average. By May 1, producers had planted 14 percent of the Nation's corn crop, 28 percentage points behind last year and 19 percentage points behind the 5-year average. At that time, planting progress was furthest advanced in North Carolina and Texas with 80 percent and 74 percent planted, respectively. Three percent of the Nation's corn acreage had emerged by May 1, four percentage points behind the previous year and 3 percentage points behind the 5-year average.

One percent of the Nation's soybean acreage was planted by April 17, two percentage points behind last year and 1 percentage point behind the 5-year average. Eight percent of the Nation's soybean acreage was planted by May 1, fourteen percentage points behind last year and 5 percentage points behind the 5-year average. By May 1, planting progress was furthest advanced in Louisiana and Mississippi with 59 percent and 48 percent planted, respectively.

By April 3, four percent of the Nation's winter wheat crop was headed, equal to last year but 1 percentage point ahead of the 5-year average. By April 17, seven percent of the Nation's winter wheat crop was headed, two percentage points behind last year and 5 percentage points behind the 5-year average. By May 1, twenty-three percent of the Nation's winter wheat crop was headed, 3 percentage points behind last year and 6 percentage points behind the 5-year average. On May 1, twenty-seven percent of the 2022 winter wheat crop was reported in good to excellent condition, 21 percentage points below the same time last year. In Kansas, the largest winter wheat-producing State, 25 percent of the winter wheat acreage was rated in good to excellent condition.

Nationwide, 4 percent of the cotton crop was planted by April 3, two percentage points behind both the previous year and the 5-year average. By April 17, ten percent of the cotton crop was planted, 1 percentage point behind the previous year but 1 percentage point ahead of the 5-year average. By May 1, sixteen percent of the cotton crop was planted, 1 percentage point ahead of both the previous year and the 5-year average. At that time, planting progress was furthest advanced in California and Arizona with 95 percent and 71 percent planted, respectively.

Thirteen percent of the Nation's sorghum acreage was planted by April 3, one percentage point behind both the previous year and the 5-year average. Seventeen percent of the Nation's sorghum acreage was planted by April 17, two percentage points ahead of the previous year but 2 percentage points behind the 5-year average. Twenty percent of the Nation's sorghum acreage was planted by May 1, equal to the previous year but 3 percentage points behind the 5-year average. Texas had planted 66 percent of its sorghum acreage by May 1, equal to the previous year but 5 percentage points behind the 5-year average.

By April 3, producers had seeded 12 percent of the 2022 rice acreage, 1 percentage point behind the previous year and 4 percentage points behind the 5-year average. By April 3, six percent of the Nation's rice acreage had emerged, 1 percentage point behind both last year and the 5-year average. By April 17, producers had seeded 22 percent of the 2022 rice acreage, 10 percentage points behind the previous year and 14 percentage points behind the 5-year average. By April 17, thirteen percent of the Nation's rice acreage had emerged, 3 percentage points behind last year and 5 percentage points behind the 5-year average. By May 1, producers had seeded 45 percent of the 2022 rice acreage, 17 percentage points behind the previous year and 11 percentage points behind the 5-year average. At that time, planting progress was furthest advanced in Louisiana and Texas with 87 percent and 82 percent planted, respectively. By May 1, twenty-four percent of the Nation's rice acreage had emerged, 12 percentage points behind last year and 14 percentage points behind the 5-year average.

Nationally, oat producers had seeded 25 percent of this year's acreage by April 3, two percentage points ahead of the previous year but 1 percentage point behind the 5-year average. Twenty-three percent of the Nation's oat acreage was emerged by April 3, five percentage points ahead of the previous year but equal to the 5-year average. Nationally, oat producers had seeded 34 percent of this year's acreage by April 17, fourteen percentage points behind the previous year and 5 percentage points behind the 5-year average. Twenty-four percent of the Nation's oat acreage was emerged by April 17, six percentage points behind the previous year and 4 percentage points behind the 5-year average. Nationally, oat producers had seeded 45 percent of this year's acreage by May 1, twenty-five percentage points behind the previous year and 13 percentage points behind the 5-year average. Thirty-one percent of the Nation's oat acreage was emerged by May 1, fifteen percentage points behind the previous year and 9 percentage points behind the 5-year average.

Five percent of the Nation's barley crop was planted by April 3, equal to last year but 2 percentage points ahead of the 5-year average. Seventeen percent of the Nation's barley crop was planted by April 17, seven percentage points behind last year but 2 percentage points ahead of the 5-year Thirty-six percent of the Nation's barley crop was planted by May 1, fourteen percentage points behind last year and 1 percentage point behind the 5-year average. At that time, planting progress was furthest advanced in Washington and Idaho with 65 percent and 57 percent planted, respectively. Ten percent of the Nation's barley crop had emerged by May 1, six percentage points behind the previous year and 2 percentage points behind the 5-year average.

By April 3, three percent of the spring wheat crop was seeded, equal to last year but 1 percentage point ahead of the 5-year average By April 17, eight percent of the spring wheat crop was seeded, 10 percentage points behind last year and 1 percentage point behind the 5-year average. By May 1, nineteen percent of the spring wheat crop was seeded, 27 percentage points behind last year and 9 percentage points behind the 5-year average. At that time, planting progress was furthest advanced in Washington with 75 percent planted, 10 percentage points behind last year but 1 percentage point ahead of the 5-year average. By May 1, five percent of the Nation's spring wheat crop had emerged, 8 percentage points behind the previous year and 2 percentage points behind the 5-year average.

Nationally, peanut producers had planted 2 percent of the 2022 peanut acreage by April 17, equal to both the previous year and the 5-year average. Nationally, peanut producers had planted 10 percent of the 2022 peanut acreage by May 1, equal to the previous year but 3 percentage points behind the 5-year average. Producers in Florida had planted 27 percent of the 2022 intended acreage by May 1, equal to the previous year but 2 percentage points ahead of the 5-year average.

By April 3, two percent of the sugarbeet crop was planted, 2 percentage points behind last year but equal to the 5-year average. By April 17, seven percent of the sugarbeet crop was planted, 17 percentage points behind last year and 9 percentage points behind the 5-year average. By May 1, eighteen percent of the sugarbeet crop was planted, 58 percentage points behind last year and 29 percentage points behind the 5-year average. Idaho had planted 88 percent of its sugarbeet acreage by May 1, four percentage points behind last year but equal to the 5-year average.

Crop Comments

Winter wheat: Production is forecast at 1.17 billion bushels, down 8 percent from 2021. As of May 1, the United States yield is forecast at 47.9 bushels per acre, down 2.3 bushels from last year's average yield of 50.2 bushels per acre. Area expected to be harvested for grain is forecast at 24.5 million acres, down 4 percent from last year. If realized, the 2022 United States winter wheat abandonment of 28.4 percent will be the highest since 2002. Dry conditions in Colorado, Kansas, Oklahoma, and Texas are factoring into the increased abandonment.

As of May 1, twenty-seven percent of the winter wheat acreage in the 18 major producing States was rated in good to excellent condition, 21 percentage points lower than at the same time last year. Nationally, 23 percent of the winter wheat crop was headed by May 1, six percentage points behind the 5-year average pace.

As of May 1, the winter wheat crop in Kansas, Oklahoma, and Texas was rated in good to excellent condition at 25 percent, 17 percent, and 8 percent, respectively. Early spring drought conditions have caused condition ratings to decline compared with last year in these States.

As of May 1, the winter wheat crop in Idaho, Oregon, and Washington was rated in good to excellent condition at 52 percent, 57 percent, and 54 percent, respectively. In contrast to the Southern Plains States, the Pacific Northwest States are expecting improved yields over last year.

Durum wheat: Production of Durum wheat in Arizona and California is forecast at a collective 9.06 million bushels, up 32 percent from last year.

Hay stocks on farms: All hay stored on United States farms as of May 1, 2022, totaled 16.8 million tons, down 7 percent from May 1, 2021. Disappearance from December 1, 2021 – May 1, 2022, totaled 62.2 million tons, down 6 percent from the same period a year earlier.

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

Grapefruit: The United States 2021-2022 grapefruit crop is forecast at 389,000 tons, down 2 percent from the previous forecast and down 11 percent from last season's final utilization. The Florida forecast, at 3.40 million boxes (145,000 tons), is down 6 percent from previous forecast and down 17 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 878,000 tons, unchanged from the previous forecast but down 26 percent from the last season's final utilization. The Florida tangerine and mandarin forecast, at 800,000 boxes (38,000 tons) is unchanged from the previous forecast but down 10 percent from last season. The California tangerine and mandarin forecast was carried forward from the previous forecast.

Peaches: The California 2022 peach crop production is forecast at 440,000 tons, down 13 percent from 2021. The California Freestone crop is forecasted at 250,000 tons, down 10 percent from last season. The California Freestone crop experienced a freeze in February. Harvest of early variety peaches has begun. The California Clingstone crop is forecast at 190,000 tons, down 16 percent from the previous season. Full bloom occurred on March 6, approximately the same time as last year. In April, frost damage was reported. Across growing regions, chilling hours remained the same or increased from the previous year.

Almonds: The 2022 California almond production (shelled basis) is forecast at 2.80 billion pounds, down 4 percent from the previous year.

Similar to last year's weather pattern, the 2022 almond crop experienced a mostly dry winter throughout the State, with snowpack and water levels well below normal. The almond flowers began blooming during the warm weather in early February, and was favorable for pollination, with warmer temperatures bringing on a shorter bloom period. A freeze in late February in the Northern part of the State, impacted the early crop and left acres unharvested, without an adequate nut set. Yields varied across regions, due to the many different varieties. Excellent weather in April helped crop development, and some rain provided a short relief to areas battling drought conditions.

2021 Cotton Final: All cotton production is estimated at 17.5 million 480-pound bales, 20 percent higher than the 2020 crop. The United States yield for all cotton is estimated at 819 pounds per acre, down 34 pounds from the previous year.

Upland cotton production is estimated at 17.2 million 480-pound bales, up 22 percent from the 2020 crop. The United States yield for upland cotton is estimated at 813 pounds per acre, down 28 pounds from 2020.

American Pima production is estimated at 332,000 bales (480-pounds), down 39 percent from 2020. The United States yield is estimated at 1,287 pounds per acre, down 65 pounds from the previous season.

Cottonseed: Cottonseed production in 2021 totaled 5.32 million tons, up 19 percent from the previous year. Sales to oil mills accounted for 47 percent of the disposition. The remaining 53 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 29 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 September. 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 6.4 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 6.4 percent. Chances are 9 out of 10 (90 percent confidence level) that the difference will not exceed 11.1 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 73 million bushels, ranging from 6 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	2.4	4.1	131	18	441	11	9
Wheat							
Winter wheat ..... bushels	6.4	11.1	73	6	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
- David Colwell – Current Agricultural Industrial Reports ..... (202) 720-8800
- Michelle Harder – Barley, County Estimates, Hay ..... (202) 690-8533
- James Johanson – Rye, Wheat ..... (202) 720-8068
- Greg Lemmons – Corn, Flaxseed, Proso Millet ..... (202) 720-9526
- Becky Sommer – Cotton, Cotton Ginnings, Sorghum ..... (202) 720-5944
- Travis Thorson – Sunflower, Other Oilseeds ..... (202) 720-7369
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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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- Cornell's Mann Library has launched a new website housing NASS's and other agency's archived reports. The new website, https://usda.library.cornell.edu. All email subscriptions containing reports will be sent from the new website, https://usda.library.cornell.edu. To continue receiving the reports via e-mail, you will have to go to the new website, create a new account and re-subscribe to the reports. If you need instructions to set up an account or subscribe, they are located at: https://usda.library.cornell.edu/help. You should whitelist notifications@usda-esmis.library.cornell.edu in your email client to avoid the emails going into spam/junk folders.

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