United States
Department of
Agriculture

National
Agricultural
Statistics
Service

Small Grains
2019 Summary

September 2019

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Special Note

When producers were surveyed, there was significant unharvested acreage of barley in Idaho, Maine, Minnesota, Montana, North Dakota, Oregon, South Dakota, and Washington; significant unharvested acreage of oats in Idaho, Maine, Minnesota, Montana, North Dakota, Oregon, and South Dakota; significant unharvested acreage of Durum wheat in Idaho, Montana, and North Dakota; and a large proportion of other spring wheat acreage not yet harvested in Idaho, Minnesota, Montana, North Dakota, South Dakota, and Washington. The unharvested area and expected production were included in the totals published in this report.

NASS will re-contact respondents who previously reported acreage not yet harvested in these States. If the newly collected data justifies any changes, NASS will update the September 30 estimates in the November 8 *Crop Production* report. Stocks estimates are also subject to review since unharvested production is included in the estimate of on-farm stocks.

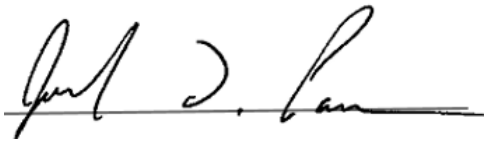
All wheat production totaled 1.96 billion bushels in 2019, up 4 percent from the revised 2018 total of 1.89 billion bushels. Area harvested for grain totaled 38.1 million acres, down 4 percent from the previous year. The United States yield was estimated at 51.6 bushels per acre, up 4.0 bushels from the previous year. The levels of production and changes from 2018 by type were: winter wheat, 1.30 billion bushels, up 10 percent; other spring wheat, 600 million bushels, down 4 percent; and Durum wheat, 57.7 million bushels, down 26 percent.

Oat production was estimated at 54.2 million bushels, up 1 percent from 2018 for comparable States. Yield was estimated at 64.4 bushels per acre, down 0.9 bushel from the previous year for comparable States. Harvested area, at 842,000 acres, was 2 percent above last year for comparable States.

Barley production was estimated at 171 million bushels, up 12 percent from the revised 2018 total of 154 million bushels. The average yield per acre, at 77.4 bushels, was down 0.1 bushel from the previous year. Producers seeded 2.72 million acres in 2019, up 7 percent from last year. Harvested area, at 2.21 million acres, was up 12 percent from 2018.

This report was approved on September 30, 2019.

Secretary of Agriculture
Designate
Warren P. Preston



Agricultural Statistics Board
Chairperson
Joseph L. Parsons

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Oat Area Planted and Harvested, Yield, and Production – States and United States: 2017-2019

State	Area planted [1]			Area harvested		
	2017	2018	2019	2017	2018	2019
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)
Alabama [2]	40	40	(NA)	10	15	(NA)
Arkansas	11	10	5	8	7	3
California	110	110	75	10	6	2
Colorado [2]	50	95	(NA)	9	7	(NA)
Georgia	50	60	70	15	15	15
Idaho	50	40	60	10	10	12
Illinois	35	40	70	20	25	10
Iowa	115	135	215	42	33	69
Kansas	100	120	120	25	18	18
Maine	22	21	22	21	19	19
Michigan	55	75	70	40	50	25
Minnesota	170	180	240	95	105	100
Missouri	30	35	50	13	16	6
Montana	70	70	70	18	23	30
Nebraska	110	125	120	35	22	18
New York	55	69	56	35	43	39
North Carolina	35	30	22	10	11	7
North Dakota	295	300	355	80	105	125
Ohio	60	55	75	20	30	25
Oklahoma	45	50	100	16	10	25
Oregon	25	20	20	10	5	9
Pennsylvania	70	65	85	40	35	50
South Carolina [2]	20	19	(NA)	8	7	(NA)
South Dakota	290	290	245	60	95	75
Texas	455	450	400	60	50	40
Washington [2]	16	17	(NA)	4	4	(NA)
Wisconsin	180	200	265	85	90	120
Wyoming [2]	25	25	(NA)	5	9	(NA)
United States	2,589	2,746	2,810	804	865	842

See footnote(s) at end of table.

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Oat Area Planted and Harvested, Yield, and Production – States and United States: 2017-2019 (continued)

State	Yield			Production		
	2017	2018	2019	2017	2018	2019
	(bushels)	(bushels)	(bushels)	(1,000 bushels)	(1,000 bushels)	(1,000 bushels)
Alabama [2]	60.0	63.0	(NA)	600	945	(NA)
Arkansas	85.0	75.0	70.0	680	525	210
California	65.0	70.0	60.0	650	420	120
Colorado [2]	65.0	50.0	(NA)	585	350	(NA)
Georgia	49.0	71.0	55.0	735	1,065	825
Idaho	71.0	84.0	90.0	710	840	1,080
Illinois	79.0	83.0	65.0	1,580	2,075	650
Iowa	77.0	63.0	58.0	3,234	2,079	4,002
Kansas	54.0	49.0	64.0	1,350	882	1,152
Maine	67.0	67.0	74.0	1,407	1,273	1,406
Michigan	54.0	63.0	57.0	2,160	3,150	1,425
Minnesota	75.0	59.0	62.0	7,125	6,195	6,200
Missouri	65.0	45.0	47.0	845	720	282
Montana	47.0	43.0	45.0	846	989	1,350
Nebraska	49.0	69.0	63.0	1,715	1,518	1,134
New York	55.0	54.0	60.0	1,925	2,322	2,340
North Carolina	66.0	66.0	71.0	660	726	497
North Dakota	58.0	82.0	87.0	4,640	8,610	10,875
Ohio	70.0	65.0	46.0	1,400	1,950	1,150
Oklahoma	42.0	48.0	50.0	672	480	1,250
Oregon	83.0	99.0	99.0	830	495	891
Pennsylvania	58.0	46.0	53.0	2,320	1,610	2,650
South Carolina [2]	51.0	62.0	(NA)	408	434	(NA)
South Dakota	70.0	82.0	83.0	4,200	7,790	6,225
Texas	45.0	50.0	50.0	2,700	2,500	2,000
Washington [2]	42.0	46.0	(NA)	168	184	(NA)
Wisconsin	59.0	61.0	54.0	5,015	5,490	6,480
Wyoming [2]	85.0	57.0	(NA)	425	513	(NA)
United States	61.7	64.9	64.4	49,585	56,130	54,194

(NA) Not available.
[1] Includes area planted in preceding fall.
[2] Estimates discontinued in 2019.

Barley Area Planted and Harvested, Yield, and Production – States and United States: 2017-2019

State	Area planted [1]			Area harvested		
	2017	2018	2019	2017	2018	2019
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)
Alaska	(X)	5	6	(X)	4	5
Arizona	20	14	17	17	11	14
California	75	65	60	29	26	43
Colorado	70	60	54	68	53	52
Delaware	32	25	21	18	14	14
Idaho	530	550	540	510	530	520
Kansas [2]	(NA)	17	14	(NA)	6	4
Maine [2]	(NA)	17	16	(NA)	16	15
Maryland	50	45	32	27	24	17
Michigan [2]	(NA)	20	11	(NA)	5	8
Minnesota	80	80	70	68	67	55
Montana	770	790	920	565	600	765
New York [2]	(NA)	10	10	(NA)	8	4
North Carolina [2]	(NA)	11	11	(NA)	8	6
North Dakota	520	470	580	400	385	450
Oregon	47	43	40	38	26	32
Pennsylvania	60	45	35	45	33	25
South Dakota [2]	(NA)	48	37	(NA)	13	9
Utah	25	21	17	18	16	10
Virginia	30	30	30	11	9	7
Washington	95	85	95	85	67	85
Wisconsin [2]	(NA)	25	24	(NA)	10	8
Wyoming	82	72	81	63	51	66
United States [3]	2,486	2,548	2,721	1,962	1,982	2,214

See footnote(s) at end of table.

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Barley Area Planted and Harvested, Yield, and Production – States and United States: 2017-2019 (continued)

State	Yield			Production		
	2017	2018	2019	2017	2018	2019
	(bushels)	(bushels)	(bushels)	(1,000 bushels)	(1,000 bushels)	(1,000 bushels)
Alaska	(X)	43.0	38.0	(X)	172	190
Arizona	131.0	100.0	126.0	2,227	1,100	1,764
California	50.0	69.0	66.0	1,450	1,794	2,838
Colorado	132.0	145.0	138.0	8,976	7,685	7,176
Delaware	85.0	78.0	80.0	1,530	1,092	1,120
Idaho	95.0	101.0	105.0	48,450	53,530	54,600
Kansas [2]	(NA)	31.0	33.0	(NA)	186	132
Maine [2]	(NA)	73.0	84.0	(NA)	1,168	1,260
Maryland	76.0	70.0	85.0	2,052	1,680	1,445
Michigan [2]	(NA)	43.0	44.0	(NA)	215	352
Minnesota	76.0	76.0	67.0	5,168	5,092	3,685
Montana	51.0	56.0	58.0	28,815	33,600	44,370
New York [2]	(NA)	58.0	52.0	(NA)	464	208
North Carolina [2]	(NA)	80.0	66.0	(NA)	640	396
North Dakota	65.0	74.0	72.0	26,000	28,490	32,400
Oregon	62.0	53.0	78.0	2,356	1,378	2,496
Pennsylvania	70.0	63.0	70.0	3,150	2,079	1,750
South Dakota [2]	(NA)	55.0	44.0	(NA)	715	396
Utah	75.0	86.0	93.0	1,350	1,376	930
Virginia	73.0	70.0	65.0	803	630	455
Washington	53.0	73.0	70.0	4,505	4,891	5,950
Wisconsin [2]	(NA)	45.0	46.0	(NA)	450	368
Wyoming	102.0	100.0	107.0	6,426	5,100	7,062
United States [3]	73.0	77.5	77.4	143,258	153,527	171,343

(NA) Not available.
(X) Not applicable.
[1] Includes area planted in preceding fall.
[2] Estimates began in 2018.
[3] Beginning in 2018, United States total includes data for Alaska. For 2017, Alaska data is not included in United States total.

All Wheat Area Planted and Harvested, Yield, and Production – States and United States: 2017-2019

State	Area planted [1]			Area harvested		
	2017	2018	2019	2017	2018	2019
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)
Alabama	150	160	130	100	110	85
Arizona	115	96	34	105	77	33
Arkansas	200	175	110	125	95	50
California	420	425	420	182	147	122
Colorado	2,260	2,260	2,150	2,029	1,954	2,000
Delaware	75	75	60	60	45	50
Florida [2]	20	15	(NA)	10	10	(NA)
Georgia	160	200	150	70	70	50
Idaho	1,175	1,191	1,195	1,109	1,136	1,130
Illinois	500	600	650	470	560	550
Indiana	290	310	330	240	260	260
Iowa [2]	16	16	(NA)	8	6	(NA)
Kansas	7,600	7,700	6,900	6,950	7,300	6,500
Kentucky	480	450	460	310	300	330
Louisiana [2]	20	15	(NA)	13	10	(NA)
Maryland	410	360	345	185	200	165
Michigan	480	510	540	425	470	480
Minnesota	1,170	1,621	1,450	1,135	1,575	1,410
Mississippi	45	55	45	25	30	21
Missouri	640	740	550	540	520	390
Montana	5,140	5,390	5,450	4,665	5,165	5,295
Nebraska	1,120	1,100	1,070	1,020	1,010	970
Nevada [2]	29	23	(NA)	14	8	(NA)
New Jersey	23	18	19	17	15	14
New Mexico	330	320	360	135	105	105
New York	140	110	90	125	95	66
North Carolina	450	460	290	375	370	225
North Dakota	6,680	7,735	7,505	6,260	7,635	7,365
Ohio	490	490	500	460	450	385
Oklahoma	4,500	4,400	4,200	2,900	2,500	2,750
Oregon	775	800	740	763	770	730
Pennsylvania	210	195	180	150	145	140
South Carolina	90	80	70	75	65	45
South Dakota	1,887	1,883	1,500	1,196	1,628	1,385
Tennessee	370	380	280	275	285	215
Texas	4,700	4,500	4,500	2,350	1,750	2,050
Utah	134	130	125	120	103	116
Virginia	210	230	180	145	155	105
Washington	2,195	2,220	2,260	2,140	2,165	2,205
West Virginia [2]	8	7	(NA)	4	3	(NA)
Wisconsin	210	240	195	170	200	150
Wyoming	135	130	125	105	115	110
United States	46,052	47,815	45,158	37,555	39,612	38,052

See footnote(s) at end of table.

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All Wheat Area Planted and Harvested, Yield, and Production – States and United States: 2017-2019 (continued)

State	Yield			Production		
	2017	2018	2019	2017	2018	2019
	(bushels)	(bushels)	(bushels)	(1,000 bushels)	(1,000 bushels)	(1,000 bushels)
Alabama	77.0	72.0	72.0	7,700	7,920	6,120
Arizona	100.8	102.6	104.0	10,589	7,898	3,432
Arkansas	52.0	55.0	52.0	6,500	5,225	2,600
California	68.2	81.5	59.4	12,404	11,985	7,244
Colorado	43.2	36.1	49.0	87,598	70,504	98,000
Delaware	73.0	71.0	72.0	4,380	3,195	3,600
Florida [2]	37.0	36.0	(NA)	370	360	(NA)
Georgia	47.0	54.0	56.0	3,290	3,780	2,800
Idaho	81.8	91.9	87.8	90,723	104,410	99,170
Illinois	76.0	66.0	67.0	35,720	36,960	36,850
Indiana	74.0	71.0	62.0	17,760	18,460	16,120
Iowa [2]	68.0	58.0	(NA)	544	348	(NA)
Kansas	48.0	38.0	52.0	333,600	277,400	338,000
Kentucky	77.0	66.0	76.0	23,870	19,800	25,080
Louisiana [2]	46.0	65.0	(NA)	598	650	(NA)
Maryland	71.0	63.0	75.0	13,135	12,600	12,375
Michigan	79.0	76.0	71.0	33,575	35,720	34,080
Minnesota	66.9	59.0	57.0	75,935	92,930	80,370
Mississippi	58.0	49.0	47.0	1,450	1,470	987
Missouri	68.0	59.0	63.0	36,720	30,680	24,570
Montana	27.3	38.3	42.2	127,430	197,630	223,290
Nebraska	46.0	49.0	57.0	46,920	49,490	55,290
Nevada [2]	105.7	112.5	(NA)	1,480	900	(NA)
New Jersey	64.0	62.0	66.0	1,088	930	924
New Mexico	30.0	15.0	30.0	4,050	1,575	3,150
New York	67.0	69.0	63.0	8,375	6,555	4,158
North Carolina	55.0	57.0	56.0	20,625	21,090	12,600
North Dakota	37.9	47.6	48.4	237,133	363,483	356,300
Ohio	74.0	75.0	56.0	34,040	33,750	21,560
Oklahoma	34.0	28.0	40.0	98,600	70,000	110,000
Oregon	63.0	67.0	68.0	48,069	51,590	49,640
Pennsylvania	72.0	65.0	73.0	10,800	9,425	10,220
South Carolina	49.0	54.0	48.0	3,675	3,510	2,160
South Dakota	34.8	44.4	48.4	41,678	72,294	67,100
Tennessee	70.0	65.0	67.0	19,250	18,525	14,405
Texas	29.0	32.0	34.0	68,150	56,000	69,700
Utah	52.0	52.0	54.0	6,240	5,356	6,264
Virginia	66.0	60.0	62.0	9,570	9,300	6,510
Washington	66.6	70.8	64.7	142,500	153,210	142,735
West Virginia [2]	69.0	46.0	(NA)	276	138	(NA)
Wisconsin	68.0	71.0	64.0	11,560	14,200	9,600
Wyoming	28.0	34.0	43.0	2,940	3,910	4,730
United States	46.4	47.6	51.6	1,740,910	1,885,156	1,961,734

(NA) Not available.

[1] Includes area planted in preceding fall.

[2] Estimates discontinued in 2019.

Winter Wheat Area Planted and Harvested, Yield, and Production – States and United States: 2017-2019

State	Area planted [1]			Area harvested		
	2017	2018	2019	2017	2018	2019
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)
Alabama	150	160	130	100	110	85
Arizona [2]	25	22	(NA)	16	4	(NA)
Arkansas	200	175	110	125	95	50
California	385	380	390	155	110	100
Colorado	2,250	2,250	2,150	2,020	1,950	2,000
Delaware	75	75	60	60	45	50
Florida [2]	20	15	(NA)	10	10	(NA)
Georgia	160	200	150	70	70	50
Idaho	720	720	730	670	680	680
Illinois	500	600	650	470	560	550
Indiana	290	310	330	240	260	260
Iowa [2]	16	16	(NA)	8	6	(NA)
Kansas	7,600	7,700	6,900	6,950	7,300	6,500
Kentucky	480	450	460	310	300	330
Louisiana [2]	20	15	(NA)	13	10	(NA)
Maryland	410	360	345	185	200	165
Michigan	480	510	540	425	470	480
Minnesota [2]	10	11	(NA)	5	5	(NA)
Mississippi	45	55	45	25	30	21
Missouri	640	740	550	540	520	390
Montana	1,750	1,650	2,000	1,590	1,570	1,900
Nebraska	1,120	1,100	1,070	1,020	1,010	970
Nevada [2]	14	13	(NA)	5	5	(NA)
New Jersey	23	18	19	17	15	14
New Mexico	330	320	360	135	105	105
New York	140	110	90	125	95	66
North Carolina	450	460	290	375	370	225
North Dakota	70	85	85	35	70	70
Ohio	490	490	500	460	450	385
Oklahoma	4,500	4,400	4,200	2,900	2,500	2,750
Oregon	700	720	740	690	695	730
Pennsylvania	210	195	180	150	145	140
South Carolina	90	80	70	75	65	45
South Dakota	910	830	860	520	660	770
Tennessee	370	380	280	275	285	215
Texas	4,700	4,500	4,500	2,350	1,750	2,050
Utah	120	120	125	108	94	116
Virginia	210	230	180	145	155	105
Washington	1,700	1,700	1,750	1,650	1,650	1,700
West Virginia [2]	8	7	(NA)	4	3	(NA)
Wisconsin	210	240	195	170	200	150
Wyoming	135	130	125	105	115	110
United States	32,726	32,542	31,159	25,301	24,742	24,327

See footnote(s) at end of table.

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Winter Wheat Planted and Harvested, Yield, and Production – States and United States: 2017-2019 (continued)

State	Yield			Production		
	2017	2018	2019	2017	2018	2019
	(bushels)	(bushels)	(bushels)	(1,000 bushels)	(1,000 bushels)	(1,000 bushels)
Alabama	77.0	72.0	72.0	7,700	7,920	6,120
Arizona [2]	100.0	40.0	(NA)	1,600	160	(NA)
Arkansas	52.0	55.0	52.0	6,500	5,225	2,600
California	64.0	77.0	50.0	9,920	8,470	5,000
Colorado	43.0	36.0	49.0	86,860	70,200	98,000
Delaware	73.0	71.0	72.0	4,380	3,195	3,600
Florida [2]	37.0	36.0	(NA)	370	360	(NA)
Georgia	47.0	54.0	56.0	3,290	3,780	2,800
Idaho	80.0	90.0	87.0	53,600	61,200	59,160
Illinois	76.0	66.0	67.0	35,720	36,960	36,850
Indiana	74.0	71.0	62.0	17,760	18,460	16,120
Iowa [2]	68.0	58.0	(NA)	544	348	(NA)
Kansas	48.0	38.0	52.0	333,600	277,400	338,000
Kentucky	77.0	66.0	76.0	23,870	19,800	25,080
Louisiana [2]	46.0	65.0	(NA)	598	650	(NA)
Maryland	71.0	63.0	75.0	13,135	12,600	12,375
Michigan	79.0	76.0	71.0	33,575	35,720	34,080
Minnesota [2]	45.0	60.0	(NA)	225	300	(NA)
Mississippi	58.0	49.0	47.0	1,450	1,470	987
Missouri	68.0	59.0	63.0	36,720	30,680	24,570
Montana	42.0	50.0	50.0	66,780	78,500	95,000
Nebraska	46.0	49.0	57.0	46,920	49,490	55,290
Nevada [2]	107.0	120.0	(NA)	535	600	(NA)
New Jersey	64.0	62.0	66.0	1,088	930	924
New Mexico	30.0	15.0	30.0	4,050	1,575	3,150
New York	67.0	69.0	63.0	8,375	6,555	4,158
North Carolina	55.0	57.0	56.0	20,625	21,090	12,600
North Dakota	37.0	43.0	53.0	1,295	3,010	3,710
Ohio	74.0	75.0	56.0	34,040	33,750	21,560
Oklahoma	34.0	28.0	40.0	98,600	70,000	110,000
Oregon	63.0	67.0	68.0	43,470	46,565	49,640
Pennsylvania	72.0	65.0	73.0	10,800	9,425	10,220
South Carolina	49.0	54.0	48.0	3,675	3,510	2,160
South Dakota	40.0	48.0	52.0	20,800	31,680	40,040
Tennessee	70.0	65.0	67.0	19,250	18,525	14,405
Texas	29.0	32.0	34.0	68,150	56,000	69,700
Utah	52.0	52.0	54.0	5,616	4,888	6,264
Virginia	66.0	60.0	62.0	9,570	9,300	6,510
Washington	73.0	76.0	70.0	120,450	125,400	119,000
West Virginia [2]	69.0	46.0	(NA)	276	138	(NA)
Wisconsin	68.0	71.0	64.0	11,560	14,200	9,600
Wyoming	28.0	34.0	43.0	2,940	3,910	4,730
United States	50.2	47.9	53.6	1,270,282	1,183,939	1,304,003

(NA) Not available.

[1] Includes area planted in preceding fall.

[2] Estimates discontinued in 2019.

Other Spring Wheat Area Planted and Harvested, Yield, and Production – States and United States: 2017-2019

State	Area planted			Area harvested		
	2017	2018	2019	2017	2018	2019
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)
Colorado [1]	10	10	(NA)	9	4	(NA)
Idaho	430	460	460	415	445	445
Minnesota	1,160	1,610	1,450	1,130	1,570	1,410
Montana	2,500	2,900	2,900	2,290	2,820	2,860
Nevada [1]	15	10	(NA)	9	3	(NA)
North Dakota	5,350	6,550	6,700	5,050	6,490	6,600
Oregon [1]	75	80	(NA)	73	75	(NA)
South Dakota	970	1,050	640	670	965	615
Utah [1]	14	10	(NA)	12	9	(NA)
Washington	495	520	510	490	515	505
United States	11,019	13,200	12,660	10,148	12,896	12,435

State	Yield			Production		
	2017	2018	2019	2017	2018	2019
	(bushels)	(bushels)	(bushels)	(1,000 bushels)	(1,000 bushels)	(1,000 bushels)
Colorado [1]	82.0	76.0	(NA)	738	304	(NA)
Idaho	85.0	95.0	89.0	35,275	42,275	39,605
Minnesota	67.0	59.0	57.0	75,710	92,630	80,370
Montana	21.0	34.0	37.0	48,090	95,880	105,820
Nevada [1]	105.0	100.0	(NA)	945	300	(NA)
North Dakota	41.0	49.0	49.0	207,050	318,010	323,400
Oregon [1]	63.0	67.0	(NA)	4,599	5,025	(NA)
South Dakota	31.0	42.0	44.0	20,770	40,530	27,060
Utah [1]	52.0	52.0	(NA)	624	468	(NA)
Washington	45.0	54.0	47.0	22,050	27,810	23,735
United States	41.0	48.3	48.3	415,851	623,232	599,990

(NA) Not available.
[1] Estimates discontinued in 2019.

Durum Wheat Area Planted and Harvested, Yield, and Production – States and United States: 2017-2019

State	Area planted			Area harvested		
	2017	2018	2019	2017	2018	2019
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)
Arizona	90	74	34	89	73	33
California	35	45	30	27	37	22
Idaho	25	11	5	24	11	5
Montana	890	840	550	785	775	535
North Dakota	1,260	1,100	720	1,175	1,075	695
South Dakota [1]	7	3	(NA)	6	3	(NA)
United States	2,307	2,073	1,339	2,106	1,974	1,290

State	Yield			Production		
	2017	2018	2019	2017	2018	2019
	(bushels)	(bushels)	(bushels)	(1,000 bushels)	(1,000 bushels)	(1,000 bushels)
Arizona	101.0	106.0	104.0	8,989	7,738	3,432
California	92.0	95.0	102.0	2,484	3,515	2,244
Idaho	77.0	85.0	81.0	1,848	935	405
Montana	16.0	30.0	42.0	12,560	23,250	22,470
North Dakota	24.5	39.5	42.0	28,788	42,463	29,190
South Dakota [1]	18.0	28.0	(NA)	108	84	(NA)
United States	26.0	39.5	44.8	54,777	77,985	57,741

(NA) Not available.
[1] Estimates discontinued in 2019.

Wheat Production by Class – United States: 2017-2019

[Wheat class estimates are based on the latest available data including both surveys and administrative data]

Crop	2017	2018	2019
	(1,000 bushels)	(1,000 bushels)	(1,000 bushels)
Winter			
Hard red	750,132	662,249	833,181
Soft red	293,222	285,558	239,166
Hard white	23,724	19,347	19,954
Soft white	203,204	216,785	211,702
Spring			
Hard red	384,193	587,007	558,901
Hard white	8,772	13,510	11,960
Soft white	22,886	22,715	29,129
Durum	54,777	77,985	57,741
Total	1,740,910	1,885,156	1,961,734

Wheat Class Percentage Estimates

The following percentages are the basis for the United States wheat production by class estimates each year. These estimates are based on the latest varietal or class survey data available. These end-of-season percentages will be used during the 2020 forecast season. However, if an unusual situation significantly distorts a State's normal distribution, then updated percentages will be used to forecast the production by class.

Winter Wheat Production Distribution by Class – States: 2018 and 2019

State	Hard red		Soft red		Hard white		Soft white	
	2018	2019	2018	2019	2018	2019	2018	2019
	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)
Alabama	2	2	98	98	-	-	-	-
Arizona [1]	99	(NA)	-	(NA)	1	(NA)	-	(NA)
Arkansas	-	-	99	100	1	-	-	-
California	88	88	-	-	7	7	5	5
Colorado	91	94	-	-	9	6	-	-
Delaware	-	-	100	100	-	-	-	-
Florida [1]	-	(NA)	92	(NA)	-	(NA)	8	(NA)
Georgia	-	-	99	100	-	-	1	-
Idaho	20	20	-	-	-	-	80	80
Illinois	-	-	100	100	-	-	-	-
Indiana	-	-	100	100	-	-	-	-
Iowa [1]	48	(NA)	52	(NA)	-	(NA)	-	(NA)
Kansas	96	96	1	1	3	3	-	-
Kentucky	-	-	100	100	-	-	-	-
Louisiana [1]	-	(NA)	100	(NA)	-	(NA)	-	(NA)
Maryland	-	-	100	90	-	-	-	10
Michigan	-	-	59	61	-	-	41	39
Minnesota [1]	100	(NA)	-	(NA)	-	(NA)	-	(NA)
Mississippi	-	-	100	100	-	-	-	-
Missouri	1	1	99	99	-	-	-	-
Montana	100	100	-	-	-	-	-	-
Nebraska	93	94	-	-	7	6	-	-
Nevada [1]	36	(NA)	-	(NA)	-	(NA)	64	(NA)
New Jersey	-	-	99	100	-	-	1	-
New Mexico	100	100	-	-	-	-	-	-
New York	3	6	94	92	-	-	3	2
North Carolina	-	-	100	100	-	-	-	-
North Dakota	100	100	-	-	-	-	-	-
Ohio	-	-	100	100	-	-	-	-
Oklahoma	99	99	1	1	-	-	-	-
Oregon	8	8	-	-	-	-	92	92
Pennsylvania	1	-	98	100	-	-	1	-
South Carolina	-	-	100	100	-	-	-	-
South Dakota	100	100	-	-	-	-	-	-
Tennessee	-	-	100	100	-	-	-	-
Texas	93	96	7	4	-	-	-	-
Utah	72	74	-	-	1	2	27	24
Virginia	-	-	100	100	-	-	-	-
Washington	14	14	-	-	-	-	86	86
West Virginia [1]	9	(NA)	90	(NA)	-	(NA)	1	(NA)
Wisconsin	3	2	97	98	-	-	-	-
Wyoming	86	97	-	-	14	3	-	-

- Represents zero.
(NA) Not available.
[1] Estimates discontinued in 2019.

Other Spring Wheat (excluding Durum) Production Distribution by Class – States: 2018 and 2019

State	Hard red		Hard white		Soft white	
	2018	2019	2018	2019	2018	2019
	(percent)	(percent)	(percent)	(percent)	(percent)	(percent)
Colorado [1]	66	(NA)	15	(NA)	19	(NA)
Idaho	50	40	31	29	19	31
Minnesota	100	100	-	-	-	-
Montana	100	100	-	-	-	-
Nevada [1]	6	(NA)	4	(NA)	90	(NA)
North Dakota	100	100	-	-	-	-
Oregon [1]	66	(NA)	1	(NA)	33	(NA)
South Dakota	100	100	-	-	-	-
Utah [1]	57	(NA)	4	(NA)	39	(NA)
Washington	54	27	1	2	45	71

- Represents zero.
(NA) Not available.
[1] Estimates discontinued in 2019.

Winter Wheat Head Population

The National Agricultural Statistics Service conducted objective yield surveys in 10 winter wheat estimating States during 2019. Randomly selected plots in winter wheat fields were visited monthly from May through harvest to obtain specific counts and measurements. Data in this table are actual field counts from this survey.

Winter Wheat Heads per Square Foot – Selected States: 2015-2019

State	2015	2016	2017	2018	2019
	(number)	(number)	(number)	(number)	(number)
Colorado					
July	51.1	43.0	43.4	40.6	49.3
August	49.3	43.6	43.2	41.0	50.8
Final	49.3	43.6	43.2	41.0	50.8
Illinois					
July	56.7	57.4	56.4	60.9	48.1
August	56.9	57.3	56.4	60.9	49.2
Final	56.9	57.3	56.4	60.9	49.2
Kansas					
July	43.1	54.7	44.3	37.3	46.9
August	43.1	54.7	44.6	37.3	47.2
Final	43.1	54.7	44.6	37.3	47.2
Missouri					
July	52.5	53.7	53.9	53.7	56.4
August	52.5	53.7	53.9	53.7	56.4
Final	52.5	53.7	53.9	53.7	56.4
Montana					
July	48.9	54.6	44.4	44.1	45.2
August	47.7	55.2	46.2	44.8	43.5
Final	47.7	55.2	46.2	44.7	43.1
Nebraska					
July	47.9	60.2	52.5	50.5	53.1
August	47.6	60.3	53.3	50.4	53.7
Final	47.6	60.3	53.3	50.4	53.7
Ohio					
July	51.0	58.0	58.2	70.3	52.0
August	51.2	58.0	58.2	70.3	53.0
Final	51.2	58.0	58.2	70.3	53.0
Oklahoma					
July	39.6	41.8	35.7	32.9	38.1
August	39.4	41.8	35.7	32.4	38.1
Final	39.4	41.8	35.7	32.4	38.1
Texas					
July	34.3	34.4	26.6	30.9	34.3
August	34.3	34.4	26.8	30.9	34.3
Final	34.2	34.5	26.8	31.1	34.5
Washington					
July	31.3	36.1	34.3	41.8	34.2
August	31.3	35.3	35.8	42.3	34.3
Final	31.3	35.5	35.7	42.3	34.6
10 State					
July	42.8	48.3	41.2	40.1	44.0
August	42.4	48.4	41.7	40.1	44.1
Final	42.4	48.4	41.7	40.2	44.2

Rye Area Planted and Harvested, Yield, and Production – States and United States: 2017-2019

State	Area planted [1]			Area harvested		
	2017	2018	2019	2017	2018	2019
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)
Georgia [2]	210	190	(D)	25	15	(D)
Minnesota	(D)	(D)	50	(D)	(D)	18
North Dakota	(D)	(D)	85	(D)	(D)	57
Oklahoma	260	240	260	45	50	55
Pennsylvania	(D)	(D)	100	(D)	(D)	14
Wisconsin	(D)	(D)	220	(D)	(D)	20
Other States [3]	1,491	1,581	1,150	230	208	146
United States	1,961	2,011	1,865	300	273	310

State	Yield			Production		
	2017	2018	2019	2017	2018	2019
	(bushels)	(bushels)	(bushels)	(1,000 bushels)	(1,000 bushels)	(1,000 bushels)
Georgia [2]	19.0	26.0	(D)	475	390	(D)
Minnesota	(D)	(D)	39.0	(D)	(D)	702
North Dakota	(D)	(D)	45.0	(D)	(D)	2,565
Oklahoma	24.0	22.0	27.0	1,080	1,100	1,485
Pennsylvania	(D)	(D)	26.0	(D)	(D)	364
Wisconsin	(D)	(D)	34.0	(D)	(D)	680
Other States [3]	37.8	33.4	33.1	8,697	6,942	4,826
United States	34.2	30.9	34.3	10,252	8,432	10,622

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

[1] Includes area planted in preceding fall.

[2] Beginning in 2019, estimates included in Other States.

[3] In 2017 and 2018, Other States include Illinois, Kansas, Maine, Maryland, Michigan, Minnesota, Nebraska, New Jersey, New York, North Carolina, North Dakota, Pennsylvania, South Carolina, South Dakota, Texas, Virginia, and Wisconsin. Beginning in 2019, Other States include Georgia, Illinois, Kansas, Michigan, Nebraska, New York, North Carolina, South Dakota, and Texas.

Small Grain Annual Summary Area Planted and Harvested, Yield, and Production in Domestic Units – United States: 2018-2019

Crop	Area planted		Area harvested	
	2018	2019	2018	2019
	(1,000 acres)	(1,000 acres)	(1,000 acres)	(1,000 acres)
Barley	2,548	2,721	1,982	2,214
Oats	2,746	2,810	865	842
Rye	2,011	1,865	273	310
Wheat, all	47,815	45,158	39,612	38,052
Winter	32,542	31,159	24,742	24,327
Durum	2,073	1,339	1,974	1,290
Other spring	13,200	12,660	12,896	12,435
Crop	Yield per acre		Production	
	2018	2019	2018	2019
	(bushels)	(bushels)	(1,000 bushels)	(1,000 bushels)
Barley	77.5	77.4	153,527	171,343
Oats	64.9	64.4	56,130	54,194
Rye	30.9	34.3	8,432	10,622
Wheat, all	47.6	51.6	1,885,156	1,961,734
Winter	47.9	53.6	1,183,939	1,304,003
Durum	39.5	44.8	77,985	57,741
Other spring	48.3	48.3	623,232	599,990

Small Grain Annual Summary Area Planted and Harvested, Yield, and Production in Metric Units – United States: 2018-2019

Crop	Area planted		Area harvested	
	2018	2019	2018	2019
	(hectares)	(hectares)	(hectares)	(hectares)
Barley	1,031,150	1,101,160	802,100	895,980
Oats	1,111,280	1,137,180	350,060	340,750
Rye	813,830	754,750	110,480	125,450
Wheat, all	19,350,250	18,274,990	16,030,580	15,399,260
Winter	13,169,420	12,609,740	10,012,840	9,844,890
Durum	838,920	541,880	798,860	522,050
Other spring	5,341,910	5,123,380	5,218,880	5,032,320
Crop	Yield per hectare		Production	
	2018	2019	2018	2019
	(metric tons)	(metric tons)	(metric tons)	(metric tons)
Barley	4.17	4.16	3,342,660	3,730,550
Oats	2.33	2.31	814,720	786,620
Rye	1.94	2.15	214,180	269,810
Wheat, all	3.20	3.47	51,305,540	53,389,650
Winter	3.22	3.60	32,221,540	35,489,150
Durum	2.66	3.01	2,122,400	1,571,450
Other spring	3.25	3.24	16,961,600	16,329,050

Crop Comments

Oats: Production was estimated at 54.2 million bushels, up 1 percent from 2018 for comparable States. Yield was estimated at 64.4 bushels per acre, down 0.9 bushel from the previous year for comparable States. Harvested area, at 842,000 acres, was 2 percent above last year for comparable States. Record low acres were harvested in Arkansas, California, Georgia, Illinois, Maine, Missouri, and North Carolina.

Record high yields were estimated in Idaho and North Dakota.

Nationally, oat producers had seeded 50 percent of the 2019 acreage by May 5, four percentage points behind the previous year and 22 percentage points behind the 5-year average. Fifty-three percent of the oat acreage had emerged by May 19, eleven percentage points behind the previous year and 23 percentage points behind the 5-year average. Heading of the oat acreage advanced to 58 percent complete by June 30, twenty-two percentage points behind the previous year and 23 percentage points behind the 5-year average. Oat producers had harvested 32 percent of the acreage by August 4, seventeen percentage points behind both last year and the 5-year average. At that time, harvest progress was at or behind the 5-year average in 8 of the 9 weekly *Crop Progress* estimating States. Eighty-four percent of the Nation's oat acreage was harvested by September 1, nine percentage points behind the previous year and 7 percentage points behind the 5-year average.

Beginning in 2019, oat estimates were discontinued in Alabama, Colorado, South Carolina, Washington, and Wyoming.

Barley: Production was estimated at 171 million bushels, up 12 percent from the revised 2018 total of 154 million bushels. The average yield, at 77.4 bushels per acre, was down 0.1 bushel from the previous year. Producers seeded 2.72 million acres in 2019, up 7 percent from 2018. Harvested area, at 2.21 million acres, was up 12 percent from 2018.

Record high yields were estimated in Oregon, Utah, and Wyoming.

Two percent of the Nation's barley was planted by April 7, one percentage point behind the previous year and 7 percentage points behind the 5-year average. Nationwide, barley producers had seeded 28 percent of the Nation's acreage by April 28, four percentage points ahead of the previous year but 13 percentage points behind the 5-year average. By April 28, emergence was evident in 6 percent of the Nation's barley acreage, equal to the previous year but 9 percentage points behind the 5-year average. Nationally, 94 percent of the barley acreage was sown by June 2, two percentage points behind the previous year and 3 percentage points behind the 5-year average. Seventy-three percent of the barley acreage had emerged by June 2, seven percentage points behind the previous year and 12 percentage points behind the 5-year average. Heading of the Nation's barley acreage advanced to 55 percent complete by July 7, nineteen percentage points behind the previous year and 20 percentage points behind the 5-year average. By August 4, barley producers had harvested 3 percent of the Nation's acreage, 11 percentage points behind the previous year and 15 percentage points behind the 5-year average. Overall, 74 percent of the barley acreage was reported in good to excellent condition on August 11, compared with 81 percent at the same time last year. By September 22, ninety-two percent of the barley acreage was harvested, 7 percentage points behind both the previous year and 5-year average.

Winter wheat: Winter wheat production for 2019 totaled 1.30 billion bushels, up 10 percent from the revised 2018 total of 1.18 billion bushels. The United States yield, at 53.6 bushels per acre, was up 5.7 bushels from 2018. Area harvested for grain was estimated at a record low 24.3 million acres, down 2 percent from the previous year. Record high yields were estimated in Colorado, Maryland, Montana, Nebraska, New Jersey, Oklahoma, Pennsylvania, and Wyoming for 2019.

Compared with 2018, harvested acreage was up 1 percent, or 185,000 acres, in the major Hard Red Winter (HRW) growing States, the primary winter wheat producing area. As a result of the increased harvested acreage and higher yields in 2019, HRW production totaled 833 million bushels, up 26 percent from 2018.

In the Soft Red Winter (SRW) growing area, planted and harvested acreage decreased from 2018. SRW production totaled 239 million bushels, down 16 percent from 2018.

White winter production totaled 232 million bushels, down 2 percent from the previous year. Harvested acreage in the Pacific Northwest (Idaho, Oregon, and Washington) was up 3 percent from 2018. Yields were up in Oregon but down in Idaho and Washington compared with last year.

Seeding of the 2019 winter wheat acreage began in early September with 5 percent of the intended 2019 acreage sown by September 9, equal to both the previous year and the 5-year average. Winter wheat planting progress was most advanced in the Pacific Northwest as of September 9. By the end of September, producers had sown 43 percent of the Nation's winter wheat acreage, 9 percentage points ahead of the previous year and 3 percentage points ahead of the 5-year average. Nationwide, 14 percent of the winter wheat crop was emerged by September 30, four percentage points ahead of the previous year but unchanged from the 5-year average. Emergence was at or behind the 5-year average pace in 11 of the 18 weekly *Crop Progress* estimating States.

By October 7, producers had sown 57 percent of the Nation's winter wheat acreage, 11 percentage points ahead of the previous year and 3 percentage points ahead of the 5-year average. By October 28, producers had sown 78 percent of the Nation's winter wheat acreage, 5 percentage points behind the previous year and 7 percentage points behind the 5-year average. Winter wheat planting was nearing completion in 6 of the 18 weekly *Crop Progress* estimating States at that time. Nationally, emergence was 63 percent complete by October 28, unchanged from the previous year but 4 percentage points behind the 5-year average. Overall, 53 percent of the 2019 winter wheat acreage was reported in good to excellent condition on October 28, compared with 52 percent at the same time the previous year.

By November 4, producers had sown 84 percent of the Nation's winter wheat acreage, 6 percentage points behind both the previous year and the 5-year average. Nationally, emergence was 70 percent complete by November 4, four percentage points behind the previous year and 7 percentage points behind the 5-year average. Overall, 51 percent of the 2019 winter wheat acreage was rated in good to excellent condition on November 4, 2018, four percentage points below the same time the previous year. By November 25, winter wheat planting was complete or nearing completion in all weekly *Crop Progress* estimating States except Arkansas, California, Missouri, and North Carolina, with 95 percent of the Nation's winter wheat acreage sown, 4 percentage points behind both the previous year and the 5-year average. Nationally, winter wheat emergence was 86 percent complete by November 25, five percentage points behind the previous year and 6 percentage points behind the 5-year average. Overall, 55 percent of the 2019 winter wheat acreage was rated in good to excellent condition on November 25, five percentage points above the same time the previous year.

On March 31, fifty-six percent of the 2019 winter wheat acreage was reported in good to excellent condition, compared with 32 percent at the same time last year.

By April 7, three percent of the Nation's winter wheat acreage had reached the headed stage, equal to last year but 1 percentage point behind the 5-year average. Sixty percent of the 2019 winter wheat acres was reported in good to excellent condition as of April 7, thirty percentage points above the same time last year. In Kansas, the largest winter wheat-producing State, 58 percent of the acreage was rated in good to excellent condition at that time. In Texas, where areas of the State had been abnormally to moderately dry, 47 percent of the winter wheat acreage was in rated good to excellent condition.

By May 12, forty-two percent of the Nation's winter wheat acreage had reached the headed stage, 1 percentage point behind last year and 12 percentage points behind the 5-year average. For the week ending May 12, sixty-four percent of the 2019 winter wheat acreage was reported in good to excellent condition, 28 percentage points above the same time last year. In Kansas, 56 percent of the winter wheat crop was rated in good to excellent condition at that time, a decrease of 2 percentage point from the previous week.

As of June 2, seventy-six percent of the Nation's winter wheat acreage had reached the headed stage, 6 percentage points behind last year and 8 percentage points behind the 5-year average. Heading progress was behind by 30 percentage points or more compared with the 5-year average in Michigan, Nebraska, and South Dakota at that time. On June 2, sixty-four percent of the 2019 winter wheat acreage was reported in good to excellent condition, 27 percentage points above the same time last year. Harvest of the 2019 acreage began in early June with eight percent harvested by June 16, seventeen percentage points behind last year and 12 percentage points behind the 5-year average. Harvest was at or behind

the 5-year average in all of the weekly *Crop Progress* estimating States at that time. By June 30, ninety-seven percent of the Nation's winter wheat acreage had reached the headed stage, 3 percentage points behind both last year and the 5-year average. Twenty-eight percent of Kansas's winter wheat acreage was harvested by June 30, forty percentage points behind last year and 33 percentage points behind the 5-year average. On June 30, sixty-three percent of the 2019 winter wheat acreage was reported in good to excellent condition, 26 percentage points above the same time last year.

Forty-seven percent of the 2019 winter wheat acreage was harvested by July 7, fourteen percentage points behind both last year and the 5-year average. Eighty-two percent of the 2019 winter wheat acreage was harvested by August 4, seven percentage points behind last year and 10 percentage points behind the 5-year average. Winter wheat harvest progress continued with advances of 16 percentage points or more reported in Michigan, Montana, Nebraska, Oregon, South Dakota, and Washington during the week ending August 4.

Harvest of the 2019 acreage was wrapping up by late August. Ninety-six percent was harvested by August 25, four percentage points behind last year and 3 percentage points behind the 5-year average. Winter wheat harvest progress was complete or nearing completion in all weekly *Crop Progress* estimating States except Idaho, Montana, South Dakota, and Washington.

Beginning in 2019, winter wheat estimates were discontinued in Arizona, Florida, Iowa, Louisiana, Minnesota, Nevada, and West Virginia.

Other spring wheat: Production for 2019 was estimated at 600 million bushels, down 4 percent from the 2018 total of 623 million bushels. Harvested area totaled 12.4 million acres, down 4 percent from 2018. The United States yield was estimated at 48.3 bushels per acre, tied with the 2018 record high. A record high yield was estimated in North Dakota for 2019. Of the total production, 559 million bushels were Hard Red Spring wheat, down 5 percent from the 2018 total.

Seeding of the 2019 spring wheat acreage began in early April. Spring wheat planting progress was behind the 5-year average pace in all 6 weekly *Crop Progress* estimating States and planting had not yet begun in the Northern Plains as of April 7. By April 28, thirteen percent of the spring wheat acreage was seeded, 4 percentage points ahead of last year but 20 percentage points behind the 5-year average. Spring wheat planting progress was behind the 5-year average pace in all weekly *Crop Progress* estimating States at that time.

By May 12, forty-five percent of the spring wheat acreage was seeded, 9 percentage points behind last year and 22 percentage points behind the 5-year average. Spring wheat planting progress was behind the 5-year average pace in all weekly *Crop Progress* estimating States. By May 12, ten percent of the Nation's spring wheat acreage had emerged, 3 percentage points behind the previous year and 24 percentage points behind the 5-year average.

By June 2, ninety-three percent of the spring wheat acreage was seeded, 3 percentage points behind both last year and the 5-year average. South Dakota was the furthest behind compared with the State's 5-year average pace. Sixty-nine percent of the Nation's spring wheat acreage had emerged by June 2, nine percentage points behind the previous year and 15 percentage points behind the 5-year average. On June 2, eighty-three percent of the Nation's spring wheat acreage was rated in good to excellent condition, 13 percentage points above the same time last year.

Fifty-six percent of the Nation's spring wheat acres had reached the headed stage by July 7, twenty-two percentage points behind last year and 17 percentage points behind the 5-year average. Based on conditions as of July 7, seventy-eight percent of the Nation's spring wheat acreage was rated in good to excellent condition, 3 percentage points above the previous week but 2 percentage points below the same time last year.

Harvest of the 2019 spring wheat acreage began during the week ending August 4. At that time, two percent of the spring wheat was harvested, 10 percentage points behind last year and 12 percentage points behind the 5-year average. Harvest progress was behind the 5-year average in all 6 weekly *Crop Progress* estimating States. On August 4, seventy-three percent of the Nation's spring wheat acreage was rated in good to excellent condition, 1 percentage point below the same time last year.

As of September 1, fifty-five percent of the spring wheat acreage was harvested, 31 percentage points behind last year and 23 percentage points behind the 5-year average. On September 1, sixty-seven percent of the Nation's spring wheat acreage was rated in good to excellent condition, 7 percentage points below the same time last year. By September 22, eighty-seven percent of the spring wheat acreage was harvested, 12 percentage points behind last year and 10 percentage points behind the 5-year average. Spring wheat harvest progress was complete or nearing completion in all weekly *Crop Progress* estimating States, except Montana and North Dakota.

Beginning in 2019, spring wheat estimates were discontinued in Colorado, Nevada, Oregon, and Utah.

Durum wheat: Production for 2019 was estimated at 57.7 million bushels, down 26 percent from the revised 2018 total of 78.0 million bushels. Area harvested for grain totaled 1.29 million acres, down 35 percent from the previous year. The United States yield was estimated at a record high 44.8 bushels per acre, up 5.3 bushels from the 2018 yield. Record high yields were estimated in Montana and North Dakota for 2019. Production in North Dakota, the largest Durum wheat-producing State, was down 31 percent from 2018. Declines in production are attributed to declines in harvested acres across the Nation. Harvest began in the two major Durum-wheat producing States of Montana and North Dakota in early August. As of September 22, harvest was 51 percent complete in Montana and 73 percent complete in North Dakota.

Beginning in 2019, Durum wheat estimates were discontinued in South Dakota.

Rye: Production for 2019 was estimated at 10.6 million bushels, up 41 percent from the 2018 total for comparable States. Harvested area totaled 310,000 acres, up 65,000 acres from 2018 for comparable States. The United States yield, at 34.3 bushels per acre, was up 3.5 bushels from the previous year for comparable States.

Beginning in 2019, rye estimates were discontinued in Maine, Maryland, New Jersey, South Carolina, and Virginia.

Statistical Methodology

Survey procedures: Objective yield and farm operator surveys were conducted to gather information on small grain acreage, yield, and production. The objective yield survey was conducted in 10 States that accounted for 74 percent of the 2019 winter wheat production. Early in the growing season, farm operators were interviewed to seek permission to randomly locate two sample plots in selected winter wheat fields. Throughout the growing season, counts such as number of stalks, heads in late boot, and number of emerged heads were collected from these plots. The plots were revisited each month until crop maturity when the heads were clipped, threshed, and weighed. After the farm operator harvested the sample field, enumerators revisited the sample to collect data in order to measure harvesting loss.

Data from operators was collected by mail, internet, telephone, or personal interview to obtain information on crop acreage, yield and production for the 2019 crop year. Approximately 63,100 producers were interviewed during the first two weeks of September and asked questions pertaining to planted and harvested area as well as yield and production.

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 with previous years. Each Regional Field Office submits an estimate and written analysis for their State to the Agricultural Statistics Board (ASB). The ASB uses the survey data, administrative data, and the State analysis to prepare the estimates published in this report.

Revision Policy: Estimates contained in this report may be revised in the *Crop Production Annual Summary* report published in January should new information become available. Previous year acreage, yield, and production estimates can be revised in the *Small Grain Summary* published the following year, if new information is available that would justify a change. Estimates will also be reviewed after data for the 5-year Census of Agriculture are available. No revisions will be made after that date.

Reliability: The surveys used to make the acreage, yield, and production estimates contained in this report are subject to sampling and non-sampling type errors that are common to all surveys. Reliability of the objective yield and farmer survey must be treated separately because the survey designs for the two surveys are different. The objective yield indications are subject to sampling variability because all acres of winter wheat are not included in the sample.

The farm operator survey indications are also subject to sampling variability because all operations with small grains are not included in the sample. This variability, as measured by the relative standard error at the National level, is approximately 1.7 percent for winter wheat, 6.3 percent for Durum wheat, and 4.0 percent for other spring wheat. This means that chances are approximately 95 out of 100 that survey estimates for production will be within plus or minus 3.4 percent for winter wheat, 12.6 percent for Durum wheat, and 8.0 percent for other spring wheat of the value that could be developed by averaging the estimates produced from all possible samples selected from the same population and surveyed using the same procedures. The relative standard errors for barley, oats, and rye are 4.8, 4.9, and 11.3 percent, respectively.

Survey indications are also subject to non-sampling errors such as omission, duplication, imputation for missing data, and mistakes in reporting, recording, and processing the data. These errors cannot be measured directly, but they are minimized through rigid quality controls in the data collection process and a careful review of all reported data for consistency and reasonableness.

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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- David Colwell – Current Agricultural Industrial Reports ..... (202) 720-8800
- Chris Hawthorn– Corn, Flaxseed, Proso Millet ..... (202) 720-9526
- James Johanson – County Estimates, Hay ..... (202) 690-8533
- Jeff Lemmons – Oats, Soybeans ..... (202) 690-3234
- Jannety Mosley – Crop Weather, Barley ..... (202) 720-7621
- Sammy Neal – Peanuts, Rice ..... (202) 720-7688
- Jean Porter – Rye, Wheat ..... (202) 720-8068
- Chris Singh – Cotton, Cotton Ginnings, Sorghum ..... (202) 720-5944
- Travis Thorson – Sunflower, Other Oilseeds ..... (202) 720-7369

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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@nass.usda.gov.