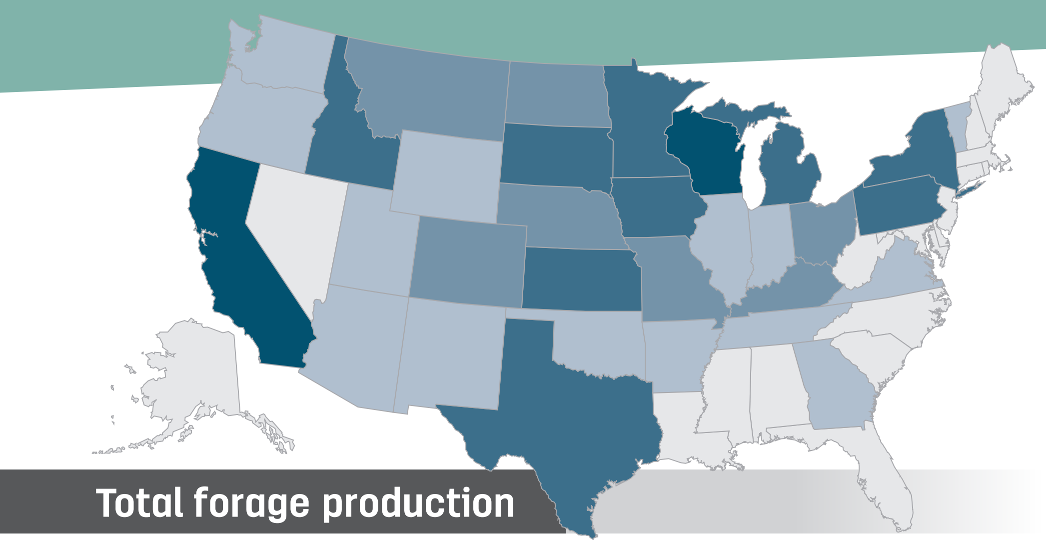
2022 U.S. forage statistics

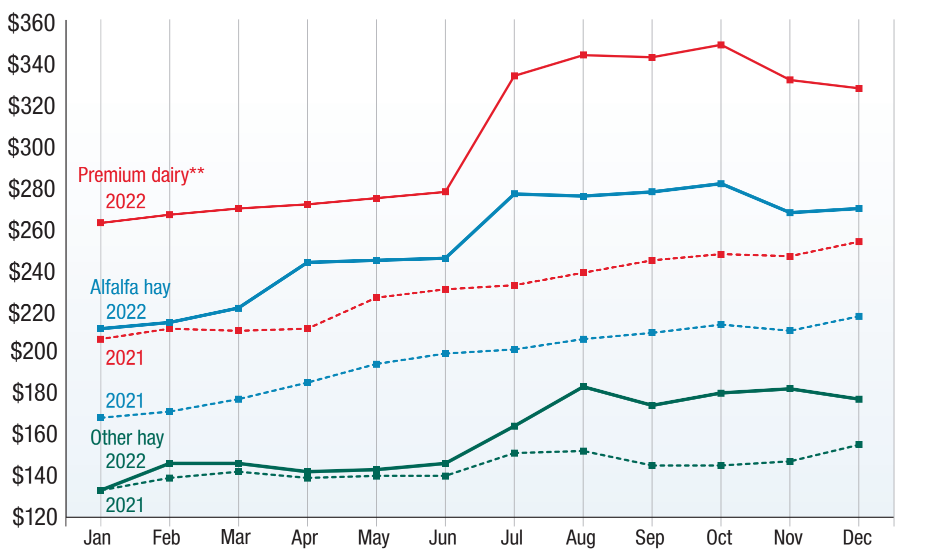


Total forage production

Total forage production is represented by the total of alfalfa, other hay, silage and greenchop production.

U.S. monthly average* prices, alfalfa, other and Premium dairy hay

2021-22 (dollars per ton)



* Average prices paid in 27 major hay-producing states

**Weighted average price for Premium/Supreme alfalfa hay in the five largest milk-producing states: California, Idaho, New York, Texas and Wisconsin.

Source: *USDA National Agricultural Statistics Service*

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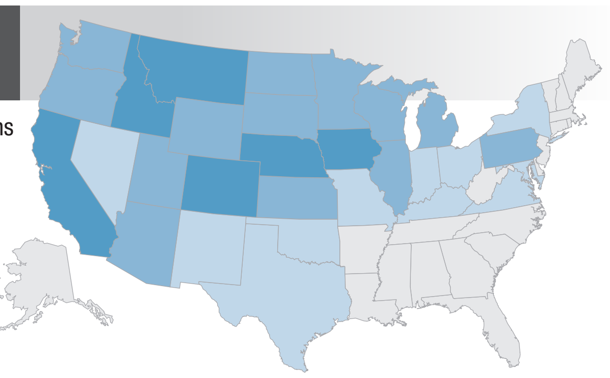
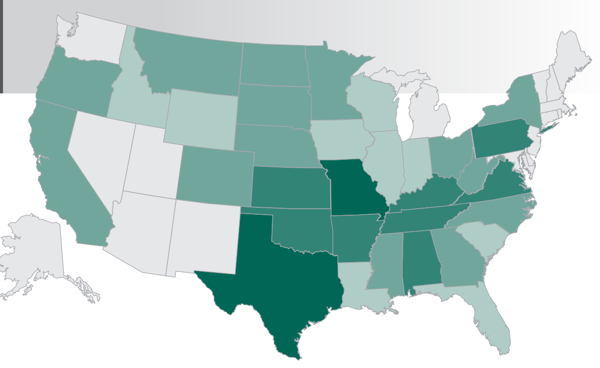
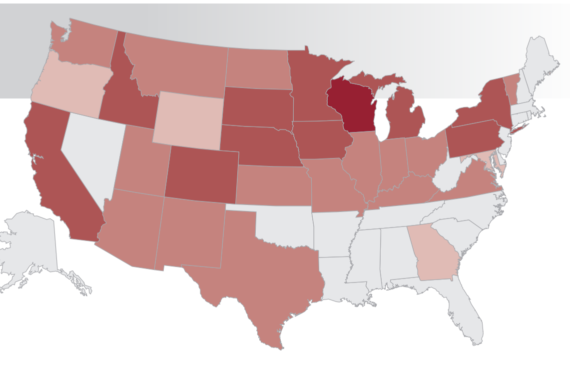
Total alfalfa hay production



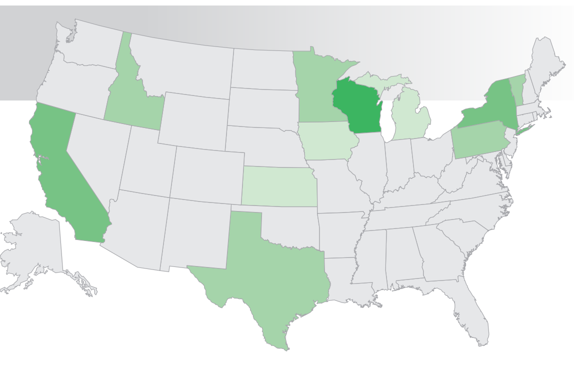
Total other hay production



Total corn silage production



Total greenchop production



2022 national forage review

Progressive Forage Editor **Dave Natzke**

Prices

Prices for all classes of dry hay rose through most of 2022 (see line graph).

The 2022 price for dairy-quality alfalfa hay peaked in October at $348 per ton, $95 higher than the peak a year earlier. It ended the year averaging about $304 per ton, up $73 from 2021's average.

Spurred on by both domestic and export demand, 2022 U.S. prices for all alfalfa hay* averaged more than $252 per ton, up $56 from 2021. Monthly average prices peaked at $281 per ton in October.

Prices for all other hay averaged $160 per ton in 2022, up about $17 from 2021, topping out at $183 per ton in August.

Alfalfa hay carried a premium over other hay for most of the year, topping $112 per ton ($276 per ton of alfalfa versus $164 for other hay) in July.

Production

Nationally, dry hay production in 2022 was marked by declines in both harvested acreage and yield. Compared to a year earlier:

• *All dry hay:* Production was estimated at 112.8 million tons, down 6% from 2021. Area harvested was estimated at 49.5 million acres, down 2%; average yield, at 2.28 tons per acre, was down 0.09 ton. Record-low harvested acres were estimated in Colorado, Delaware, Nebraska, Ohio, Oregon and Wisconsin.

• *Alfalfa and alfalfa mixtures:* Production was estimated at just under 48 million tons, down 3% from 2021. Harvested area, at 14.9 million acres, was down 2% while yield averaged 3.22 tons per acre, down 0.01 ton. Record-low harvested acres were estimated in Arkansas, California, Delaware, Rhode Island and Tennessee, while record-high harvested acres was estimated in Nevada.

• *All other hay:* 2022 production topped 64.8 million tons, down 9% from 2021. Harvested area, at 34.6 million acres, was down 2%; average yield was estimated at 1.87 tons per acre, down 0.13 ton. Record-low harvested acres were estimated in Indiana, Nebraska, Oregon and Wisconsin, while record-high harvested acres and yield were estimated in Utah.

• *Total forage:* The USDA's total forage estimation program covers 17 states. Haylage and greenchop are converted to 13% moisture and combined with dry hay production to derive total forage estimates.

With dry hay, the 17-state total for all forage production was 75 million tons, down 8%. About 38.5 million tons were alfalfa and alfalfa mixtures, also down 8%.

All haylage and greenchop forages were harvested from 3.96 million acres in 2022, down about 4%, and slightly lower yields dropped total production to 28.16 million tons, down 6%.

• *Corn silage:* Production was estimated at 129 million tons for 2022, down 1% from 2021. Area harvested for silage was estimated at 6.86 million acres, up 6%; average yield was estimated at 18.7 tons per acre, down 1.4 ton.

• *Sorghum silage:* Production was estimated at 5.66 million tons, up 11% from 2021. Area harvested for silage was estimated at 525,000 acres, up 59% from the previous year; yield averaged 10.8 tons per acre, down 4.6 tons per acre.

• *New seedings of alfalfa and alfalfa mixtures:* After setting two-decade lows in 2021, acreage newly seeded to alfalfa in 2022 was estimated at 1.68 million acres, up 2% from 2021 but still the second-lowest total in 25 years. About 1.29 million acres (77%) of new seeding was concentrated in 22 of 24 major dairy states, but new seeding in those states was down about 26,000 acres compared to a year earlier.

• *Hay stocks:* Heading into the 2022 growing season, all dry hay stocks stored on U.S. farms on May 1, 2022, totaled about 16.77 million tons, down 7% from a year earlier. With lower production, hay inventories as of Dec. 1, 2022, totaled about 71.91 million tons, down 9% from Dec. 1, 2021, and the lowest December inventory since 1954. Sharpest year-over-year declines were located in an area from Texas to Iowa, including Nebraska, Oklahoma, Missouri, Kansas and Colorado. That was offset somewhat by increases to the north in an area stretching from Oregon and Washington to Minnesota, including Idaho, Montana, Wyoming, North Dakota and South Dakota.

Hay "disappearance," a proxy for use, totaled 57.7 million tons for the period May 1 – Dec. 1, 2022, down 3% from the same period in 2020.

Exports

Strong demand from China supported alfalfa hay exports all year, but a weak December left 2022 alfalfa hay export volumes below 2021's record high. At 2.847 million metric tons, total 2022 alfalfa hay exports came in about 15,000 MT less than the year before. China was the destination for about 57% of all U.S. alfalfa hay exports during the year, topping 1.63 million MT. Exports of alfalfa hay peaked in August at more than 337,100 MT and averaged about 237,250 MT per month.

In contrast, exports of other hay continued to soften all year, with the annual total of just under 1.2 million MT, the lowest volume in at least 17 years. Japan maintained its spot as the top market, taking about 59% of other hay shipments during the year, followed by South Korea, at 24%. Monthly exports of other hay peaked in March-May and averaged about 99,590 MT per month, down nearly 17,000 MT from 2021.

Weather and drought

By Jan. 3, 2023, hay growers had endured 119 consecutive weeks in which drought covered 40% of the contiguous U.S. During 2022, national drought coverage peaked at just under 63% in October, an area stretching from the Pacific Coast to the western Corn Belt.

USDA Drought Monitor maps estimated U.S. hay-producing acreage considered under drought conditions fluctuated between a low of 30% in June to a high of 69% at the end of October. The area of drought-impacted alfalfa acreage ranged from a low of 41% in June to a high of 69% in early November.

** Monthly average prices calculated by USDA are across all hay qualities. Among major hay-producing states, the range of monthly prices can vary by $100 per ton or more.*

2022 U.S. forage statistics

Tama | FORAGE FIRST — WHEN YIELD AND QUALITY MATTER | MARCREST | PROGRESSIVE PUBLISHING dairy | forage | beef

19 Washington 4,600 ▲ +0.8%

15	1,872	27	899
15	360	4	290
+50%	60	5	1,375
28	650	23	55

18 Montana 5,250 ▲ +17.7%

2	2,870	18	1,246
2	1,400	43	890
-25%	60	18	1,134
6	2,290	24	54

27 Oregon 3,433 ▲ +2.9%

16	1,540	22	1,081
16	350	13	470
+75%	35	3	812
23	820	33	29

6 Idaho 12,832 ▲ +6.1%

4	4,558	30	770
4	1,060	14	350
-13%	100	1	6,090
11	1,410	13	210

29 Wyoming 3,171 ▲ +40.9%

12	1,595	29	784
12	550	46	560
+17%	35	8	792
17	1,110	29	33

35 Nevada 1,726 ▲ +0.3%

18	1,254	41	230
18	285	27	115
+109%	23	13	242
34	400	38	11

24 Utah 3,884 ▲ +16.4%

13	2,009	32	627
13	490	2	190
+11%	50	7	1,248
26	680	25	52

16 Colorado 6,455 ▼ -27.4%

10	1,769	24	981
10	610	32	530
+10%	55	22	3,705
16	1,140	14	190

2 California 16,121 ▲ +4.9%

14	3,240	21	1,178
14	450	3	380
NC	60	4	8,970
21	830	8	345

26 Arizona 3,483 ▼ -23.4%

20	2,132	38	259
20	260	1	55
-25%	30	2	1,092
36	315	27	39

32 New Mexico 2,060 ▼ -28.8%

26	600	43	140
26	125	45	100
+100%	10	6	1,320
39	225	22	55

49 Alaska 20 ▼ -13.0%

43	NA	48	20
43	NA	49	20
NA	NA	49	0
47	20	49	0

14 North Dakota 7,275 ▲ +83.3%

3	2,145	14	1,680
3	1,100	40	1,050
+83%	55	40	3,450
7	2,150	12	230

3 Minnesota 14,159 ▲ +30.1%

9	1,984	19	1,218
9	640	19	580
+35%	135	16	9,675
14	1,220	3	450

8 South Dakota 11,472 ▲ +26.0%

1	2,805	13	1,755
1	1,650	47	1,300
+7.7%	70	45	6,600
4	2,950	2	550

12 Nebraska 9,982 ▼ -12.1%

6	2,449	10	1,890
6	790	44	1,350
+22%	110	44	5,375
8	2,140	5	430

10 Kansas 10,518 ▲ +4.1%

8	2,046	6	3,315
8	660	36	1,950
-44%	50	46	4,620
5	2,610	6	420

21 Oklahoma 4,325 ▼ -18.2%

24	440	5	3,500
24	220	48	2,800
+57%	55	48	385
3	3,020	28	35

7 Texas 12,170 ▼ -23.8%

28	378	1	6,150
28	90	41	4,100
-25%	15	41	3,900
1	4,190	11	260

5 Iowa 12,964 ▲ +15.0%

7	2,701	25	940
7	730	24	470
+15%	75	17	8,400
15	1,200	7	400

13 Missouri 7,885 ▲ +4.0%

25	338	2	5,490
25	130	34	3,050
-25%	15	47	1,650
2	3,180	16	150

1 Wisconsin 31,100 ▲ +37.3%

5	2,480	35	510
5	800	37	300
-13%	260	10	19,800
18	1,100	1	880

20 Illinois 4,565 ▲ +44.0%

22	876	34	548
22	240	18	255
-25%	30	9	2,760
33	495	17	120

11 Michigan 10,439 ▲ +14.2%

11	1,456	36	437
11	560	29	230
NC	60	21	6,600
24	790	9	330

25 Indiana 3,786 ▼ -4.8%

21	910	31	676
2	260	8	260
+33%	40	12	2,200
32	520	18	100

15 Ohio 6,666 ▲ +20.0%

19	868	17	1,375
19	280	9	550
+33%	40	14	3,740
22	830	15	170

17 Kentucky 5,880 ▼ -19.4%

27	396	3	4,224
27	110	15	1,920
+25%	10	27	1,260
9	2,030	21	70

23 Tennessee 4,087 ▼ -12.9%

34	37	4	3,570
34	12	20	1,700
NC	3	35	480
10	1,712	32	30

30 Arkansas 2,268 ▼ -16.2%

40	8	8	2,180
40	3	23	1,090
NC	1	32	80
19	1,093	43	5

40 Louisiana 981 ▼ -2.9%

43	NA	26	936
43	NA	12	390
NA	NA	37	45
35	390	47	3

37 Mississippi 1,255 ▼ -16.3%

43	NA	20	1,180
43	NA	26	590
NA	NA	39	75
29	590	44	5

33 Alabama 1,896 ▼ -16.1%

43	NA	12	1,836
43	NA	6	680
NA	NA	36	60
25	680	45	4

31 Georgia 2,200 ▼ -3.4%

43	NA	15	1,540
43	NA	5	550
NA	NA	11	660
31	550	30	30

38 Florida 1,231 ▼ -8.8%

43	NA	28	806
43	NA	7	310
NA	NA	29	425
37	310	34	25

41 South Carolina 706 ▼ -19.4%

43	NA	33	594
43	NA	17	270
NA	NA	43	112
38	270	41	8

34 North Carolina 1,868 ▼ -9.8%

37	18	16	1,430
37	6	16	650
+50%	3	42	420
27	656	31	30

22 Virginia 4,286 ▲ +3.9%

30	96	9	2,100
30	30	22	1,000
+17%	7	15	2,090
20	1,030	19	95

36 West Virginia 1,290 ▲ +18.1%

32	35	23	1,045
32	15	31	550
-67%	1	19	210
30	565	40	10

44 New Jersey 313 ▼ -0.3%

33	35	42	182
33	13	30	96
NC	2	33	96
43	109	42	6

28 Vermont 3,189 ▲ +81.6%

31	51	37	315
31	15	21	150
-50%	2	26	1,558
41	165	20	82

45 New Hampshire 278 ▼ -5.1%

39	10	46	59
39	5	39	37
NC	1	25	209
46	42	39	11

43 Connecticut 552 ▲ +19.2%

36	15	45	77
36	7	35	45
NC	1	20	460
45	52	36	23

42 Maine 679 ▼ -9.9%

35	21	39	250
35	9	25	125
NC	2	30	408
42	134	35	24

46 Massachusetts 265 ▼ -0.7%

38	9	44	91
38	5	38	55
NC	1	38	165
44	60	37	11

4 New York 13,944 ▲ +24.6%

23	624	11	1,850
23	240	33	1,000
-33%	60	31	7,480
13	1,240	4	440

48 Rhode Island 46 ▼ -14.8%

42	2	49	12
42	1	28	6
NA	NA	34	32
49	7	48	2

9 Pennsylvania 10,715 ▲ +13.6%

17	1,116	7	2,600
17	310	10	1,040
+11%	50	28	5,490
12	1,350	10	305

39 Maryland 1,169 ▲ +3.8%

29	164	40	245
29	40	42	175
-60%	2	24	760
40	215	26	40

47 Delaware 85 ▼ -5.6%

41	6	47	22
41	2	11	9
NC	1	23	57
48	11	46	3

Source: *Crop Production 2022 Summary Report, USDA, NASS. Statistical ties are represented by the same numerical ranking.*

Legend

State ranking-total forage production: **7** — **Texas**

All forage production (in thousands of tons): **12,170** ▼ **-23.8%** — Percentage increase/decrease in forage production 2021-2022

28 (State ranking-alfalfa yield)	378 (Alfalfa yield, in thousands of tons)	38 (State ranking-other hay yield)	6,150 (Other hay yield, in thousands of tons)
28 (State ranking-alfalfa acres)	90 (Alfalfa acres, in thousands of acres)	5 (State ranking-other hay acres)	4,100 (Other hay acres, in thousands of acres)
-25% (Percentage increase/decrease of alfalfa new plantings)	15 (Alfalfa new plantings, in thousands of acres)	36 (State ranking-corn silage yield)	3,900 (Corn silage yield, in thousands of tons)
4 (State ranking-total hay acres)	6,150 (2022 Total hay acres, in thousands of acres)	13 (State ranking-corn silage acres)	260 (Corn silage acres, in thousands of acres)

Total U.S. forage acres
in thousands of acres

Other hay	34,633
Alfalfa	14,913
Silage	6,860
Greenchop	3,957
Combined total	**60,363**

Total U.S. tons harvested
in thousands of tons

Silage	18.7 tons/acre	128,567
Other hay	1.9 tons/acre	64,843
Alfalfa	3.2 tons/acre	47,958
Greenchop	7.1 tons/acre	28,156
Combined total		**269,524**

United States
269,524 ▲ **+7.6%**

47,958 ▼ -2.6%	64,843 ▼ -8.6%
14,913 ▼ -2.2%	34,633 ▼ -2.4%
1,675 ▲ +1.8%	128,567 ▼ -1.3%
49,546 ▼ -2.3%	6,860 ▲ +5.8%

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