

2023 was a year of lower annual milk production

Progressive Dairy Editor Audrey Schmitz

Lower milk prices, dairy income margins that reached catastrophic levels, and shrinking heifer and cow numbers that restricted supplies and increased costs of replacement animals all contributed to an uncommon trend in 2023 – total annual milk production that was lower than the year before. Dairy herd attrition and consolidation continued.

U.S. milk production
U.S. milk production fell to 226.36 billion pounds in 2023, down 52 million pounds from 2022. Annual milk production had exceeded year-earlier totals for most of the past quarter century, down only in 2001 and 2009.

Fifteen states registered annual milk production increases during 2023, led by South Dakota and Indiana. Offsetting those gains, 31 states yielded production declines compared with 2022, led by Arkansas and Mississippi.

State ranking
Based on annual milk production, there were several minor changes in major dairy state rankings compared to 2022. Kentucky and North Carolina moved ahead to 26 and 27, respectively, while Missouri fell two positions to 28. New Jersey moved ahead of Mississippi to 42.

Licensed herds
In another year of attrition and consolidation, the annual average number of dairy farms commercially licensed to sell milk fell to 26,290, a decline of 1,642 (about 6%) from the year before and down about 20,685 (44%) since 2013.

On a percentage basis, year-over-year declines were fairly steady across the U.S., but 90% of the decline in herd numbers occurred in the Midwest and East. Wisconsin remains the nation's leader in the number of herds, at 5,920, but it declined by 430 in 2023. Herd numbers were down a combined 350 in Minnesota and New York, and down 160 in Michigan.

Cow numbers
The U.S. cow herd averaged 9.386 million cows in 2023, down 14,000 head from 2022's average. The year featured some growth in cow numbers during the first quarter, a trend that reversed as milk prices and income margins slipped to catastrophic levels. By November, cow numbers fell to about 9.345 million head, down 56,000 head from January 2023.

Nine states increased cow numbers in 2023, but almost two-thirds of the total increase came in just two states, South Dakota and Idaho.

Twenty-eight states had fewer cows than the year before, with 11 others unchanged. Largest declines were in New Mexico (-17,000), California (-5,000) and Missouri (-5,000).

California remains the national leader in cow numbers with 1.714 million head, followed by Wisconsin with 1.27 million head.

Herd size
The national average dairy herd size grew to 357 cows in 2023, up 20 cows (6%) from 2022. The Southwest showed the largest increase, up 66 head, and held claim to the largest average herd size, at 1,756 head.

The largest herds were in New Mexico, which averaged 2,710 cows, a 92-cow increase from 2022.

Dairy herds averaged more than 2,000 head in four states (New Mexico, Arizona, Texas and Wyoming) and more than 1,000 head in seven others. The size of Midwest herds grew by an average

U.S. dairy industry 15-year overview

Year	Total milk production (in millions of lbs)	Number of cows (in thousands)	Milk per cow (lbs per year)	Licensed dairy herds	Average herd size
2009	189,334	9,203	20,573	54,942	168
2010	192,848	9,119	21,148	53,132	172
2011	196,164	9,194	21,336	51,291	179
2012	200,537	9,233	21,720	49,281	187
2013	201,231	9,224	21,816	46,975	196
2014	206,054	9,257	22,259	44,809	207
2015	208,597	9,314	22,396	43,534	214
2016	212,405	9,325	22,778	41,819	223
2017	215,466	9,392	22,941	40,219	234
2018	217,568	9,398	23,150	37,468	251
2019	218,441	9,337	23,395	34,207	273
2020	223,220	9,388	23,777	31,657	297
2021	226,293	9,449	23,949	29,842	317
2022	226,462	9,402	24,087	27,932	337
2023	226,364	9,386	24,117	26,290	357

Dairy receipts as a % of farm's total farm receipts

Top 10	Milk per cow (lbs of milk)	Number of licensed herds	Top 10	State	Percentage
Michigan	27,564	Wisconsin 5,920	Vermont		65%
Wyoming	26,226	Pennsylvania 4,940	New York		54%
Colorado	25,930	New York 3,040	Wisconsin		47%
Texas	25,802	Minnesota 1,855	New Mexico		45%
New York	25,522	Ohio 1,465	Idaho		38%
Wisconsin	25,294	California 1,070	Pennsylvania		27%
Idaho	25,228	Michigan 850	Michigan		24%
Nebraska	24,815	Iowa 750	Arizona		23%
Iowa	24,679	Indiana 700	New Hampshire		22%
New Mexico	24,587	Vermont 500	Nevada		21%

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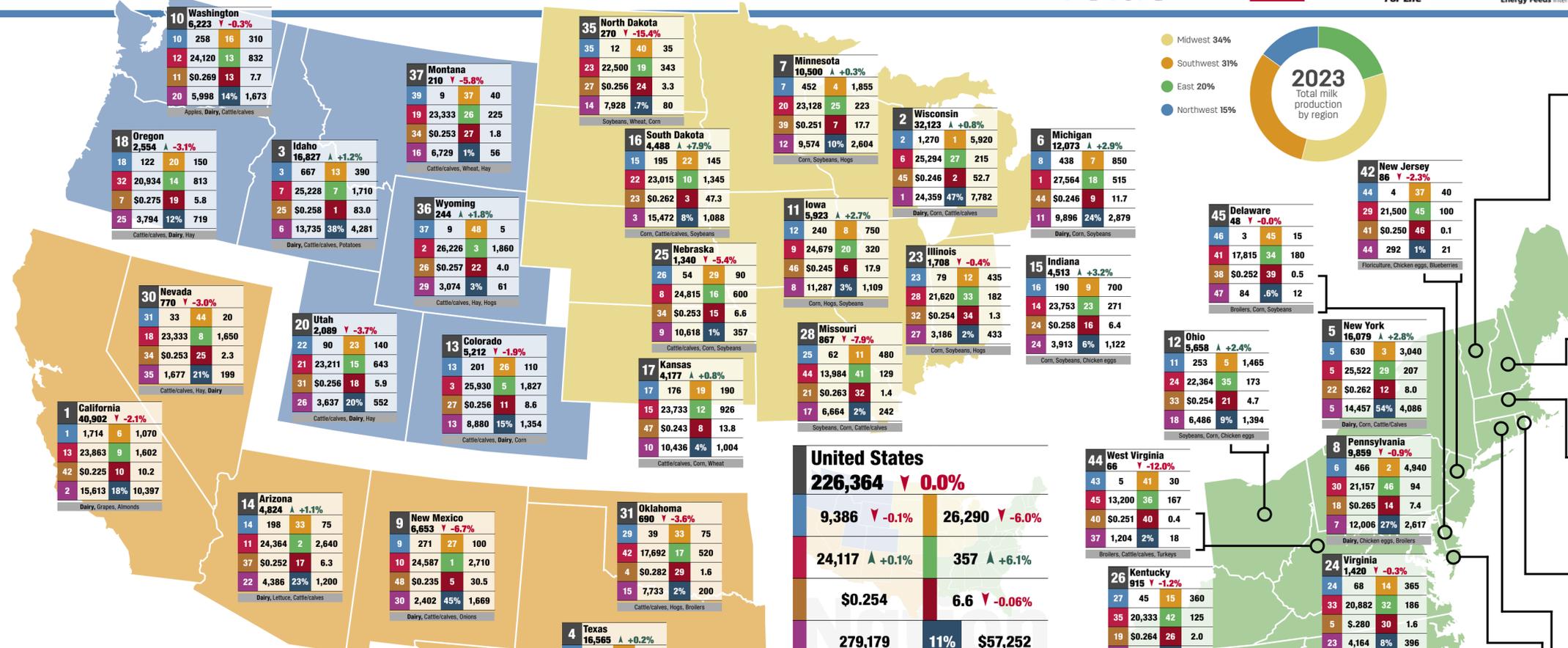
2023 U.S. dairy statistics



10-year changes by state

State rank - total milk production	State	Total milk production (in millions of lbs)	Total milk production (in millions of lbs)	Change in total milk from 2013-2023	Number of cows (1,000 head)	Number of cows (1,000 head)	Change in number of cows 2013-2023	Milk per cow (lbs. per year)	Milk per cow (lbs. per year)	Change in milk per cow 2013-2023	Number of licensed dairy herds	Number of licensed dairy herds	Change in licensed dairy herds from 2013-2023	Average herd size	Average herd size	Change in average herd size from 2013-2023
		2013	2023		2013	2023		2013	2023		2013	2023		2013	2023	
1	California	41,256	40,102	-354	1,780	1,714	-66	23,178	23,863	+685	1,535	1,070	-465	1,160	1,602	+442
2	Wisconsin	27,572	32,123	+4,551	1,271	1,270	-1	21,693	25,294	+3,601	10,860	5,920	-4,940	117	215	+97
3	Idaho	13,431	16,827	+3,396	573	667	+94	23,440	25,228	+1,788	550	390	-160	1,042	1,710	+668
4	Texas	9,610	16,565	+6,955	437	642	+205	21,991	25,802	+3,811	460	310	-150	950	2,071	+1,121
5	New York	13,463	16,079	+2,616	610	630	+20	22,070	25,522	+3,452	5,040	3,040	-2,000	121	207	+86
6	Michigan	9,164	12,073	+2,909	380	438	+58	24,116	27,564	+3,448	2,030	850	-1,180	187	515	+328
7	Minnesota	9,138	10,500	+1,362	464	452	-12	19,694	23,230	+3,536	3,865	1,855	-2,010	120	244	+124
8	Pennsylvania	10,552	9,859	-693	533	466	-67	19,797	21,157	+1,360	7,200	4,940	-2,260	74	94	+20
9	New Mexico	8,057	6,653	-1,394	323	271	-52	24,944	24,587	-357	140	100	-40	2,307	2,710	+403
10	Washington	6,336	6,223	-113	266	258	-8	23,820	24,120	+300	480	310	-170	554	834	+27
11	Iowa	4,607	5,923	+1,316	208	240	+32	22,149	24,679	+2,530	1,425	750	-675	146	320	+174
12	Ohio	5,448	5,658	+210	270	253	-17	20,178	22,364	+2,186	2,930	1,465	-1,465	92	173	+81
13	Colorado	3,328	5,212	+1,884	137	201	+64	24,292	25,930	+1,638	130	110	-20	1,054	1,827	+773
14	Arizona	4,489	4,824	+335	190	198	+8	23,626	24,364	+738	110	75	-35	1,727	2,640	+913
15	Indiana	3,830	4,513	+683	176	190	+14	21,761	23,753	+1,992	1,315	700	-615	134	271	+138
16	South Dakota	2,023	4,488	+2,465	94	195	+101	21,521	23,015	+1,494	275	145	-130	342	1,345	+1,003
17	Kansas	2,932	4,177	+1,245	134	176	+42	21,881	23,733	+1,852	325	190	-135	412	926	+514
18	Oregon	2,514	2,554	+40	123	122	-1	20,439	20,934	+495	260	150	-110	473	813	+340
19	Vermont	2,606	2,536	-70	134	117	-17	19,448	21,675	+2,227	930	500	-430	144	234	+90
20	Utah	2,131	2,089	-42	95	90	-5	22,432	23,211	+779	220	140	-80	432	643	+211
21	Georgia	1,568	2,027	+459	80	91	+11	19,600	22,275	+2,675	240	90	-150	333	1,011	+678
22	Florida	2,383	1,950	-433	123	96	-27	19,374	20,320	+939	130	55	-75	946	1,745	+799
23	Illinois	1,830	1,708	-122	96	79	-17	19,063	21,620	+2,557	745	435	-310	129	182	+53
24	Virginia	1,742	1,420	-322	95	68	-27	18,337	20,882	+2,545	640	365	-275	148	186	+38
25	Nebraska	1,165	1,340	+175	54	54	NC	21,574	24,815	+3,241	200	90	-110	270	600	+330
26	Kentucky	1,070	915	-155	71	45	-26	15,070	20,333	+5,263	780	360	-420	91	125	+34
27	North Carolina	935	894	-41	46	38	-8	20,326	23,526	+3,200	250	120	-130	184	317	+133
28	Missouri	1,349	867	-482	92	62	-30	14,663	13,984	-679	1,290	480	-810	71	129	+58
29	Maryland	972	846	-126	50	40	-10	19,440	21,150	+1,710	470	300	-170	106	133	+27
30	Nevada	639	770	+131	29	33	+4	22,034	23,333	+1,299	20	20	NC	1,450	1,650	+200
31	Oklahoma	779	690	-89	45	39	-6	17,311	17,692	+381	180	75	-105	250	520	+270
32	Maine	606	543	-63	31	25	-6	19,548	21,720	+2,172	300	150	-150	103	167	+63
33	Tennessee	765	467	-298	48	25	-23	15,938	18,680	+2,742	390	130	-260	123	192	+69
34	Connecticut	370	427	+57	18	18	NC	20,556	23,722	+3,166	130	85	-45	138	212	+73
35	North Dakota	341	270	-71	18	12	-6	18,944	22,500	+3,556	110	35	-75	164	343	+179
36	Wyoming	128	244	+116	6	9	+3	21,367	26,226	+4,859	20	4	-16	300	2,325	+2,025
37	Montana	298	210	-88	14	9	-5	21,286	23,333	+2,047	70	40	-30	200	225	+25
38	New Hampshire	272	208	-64	13	10	-3	20,923	20,800	-123	120	90	-30	111	108	+3
39	Massachusetts	230	179	-51	13	9	-4	17,922	19,889	+2,197	155	100	-55	84	90	+6
40	South Carolina	264	148	-116	16	8	-8	16,500	18,500	+2,000	80	25	-55	200	320	+120
41	Louisiana	206	101	-105	16	8	-8	12,875	12,625	-250	130	60	-70	123	133	+10
42	New Jersey	127	86	-41	7	4	-3	18,143	21,500	+3,357	75	40	-35	93	100	+7
43	Mississippi	186	74	-112	14	6	-8	13,286	12,333	-953	100	40	-60	140	150	+10
44	West Virginia	152	66	-86	10	5	-5	15,200	13,200	-2,000	80	30	-50	125	167	+42
45	Delaware	94	48	-46	4.9	3	-2	19,521	17,815	-1,706	40	15	-25	123	180	+58
46	Arkansas	105	33	-72	9	3	-6	11,667	11,000	-667	85	25	-60	106	120	+14
47	Alabama	117	28	-89	9	2	-7	13,000	14,000	+1,000	45	10	-35	200	200	NC
48	Rhode Island	17	10	-7	0.9	0.5	0	19,000	19,400	+400	15	9	-6	60	56	-4
U.S. total		201,231	226,364	+25,133	9,224	9,386	+162	21,816	24,117	+2,301	46,975	26,290	-20,685	196	357	+161

Source: February 2023 Milk Production Report, USDA. Statistical ties are represented by the same numerical ranking.



Legend

- State ranking - total milk production
- Total milk production (in millions of lbs)
- State ranking - number of cows
- Number of cows (in thousands)
- State ranking - milk lbs per cow
- Milk per cow (lbs)
- State ranking - 2022 Value of milk per lb.
- 2022 Value of milk per lb.
- State ranking - all forage production
- All forage production (in thousands of tons)
- State ranking - 2022 dairy receipts as a percentage of state's total farm receipts
- 2022 dairy receipts as a percentage of state's total farm receipts
- State ranking - 2022 dairy receipts annual total
- 2022 dairy receipts annual total (in millions of dollars)
- State's 2022 top 3 farm commodities
- Percentage increase/decrease in total milk from 2022-2023
- State ranking - number of licensed dairy herds
- Number of licensed dairy herds
- State ranking - average herd size
- Average herd size
- State ranking - GMPM
- Gallons of milk per person per month (GMPM)

United States

226,364 ∇ 0.0%

9,386 ∇ -0.1% **26,290** ∇ -6.0%

24,117 ∇ +0.1% **357** ∇ +6.1%

\$0.254 **6.6** ∇ -0.06%

279,179 **11%** **\$57,252**

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Top 100 dairy counties (based on May 2023's milk production)

Rank	State	County	Rank	State	County
1	CA	Tulare	51	WI	Outagamie
2	CA	Merced	52	PA	Franklin
3	CA	Kings	53	NY	St. Lawrence
4	CA	Kern	54	ID	Canyon
5	CA	Stanislaus	55	MI	Sanilac
6	ID	Cassia	56	NM	Lea
7	ID	Gooding	57	WI	Calumet
8	CO	Weld	58	CA	Riverside
9	CA	Fresno	59	ID	Lincoln
10	TX	Hartley	60	WA	Grant
11	WA	Yakima	61	WA	Whatcom
12	AZ	Maricopa	62	VT	Franklin
13	ID	Jerome	63	OH	Wayne
14	CA	San Joaquin	64	TX	Dallam
15	PA	Lancaster	65	VT	Addison
16	AZ	Pinal	66	NY	Ontario
17	ID	Twin Falls	67	ID	Elmore
18	NM	Curry	68	KS	Gray
19	CA	Madera	69	MI	Missaukee
20	WI	Fond du Lac	70	NY	Jefferson
21	TX	Moore	71	WI	Oconto
22	TX	Parmer	72	WA	Franklin
23	WI	Manitowoc	73	CA	San Bernardino
24	NM	Chaves	74	WI	Green
25	TX	Castro	75	TX	Bailey
26	WI	Clark	76	WI	Sheboygan
27	NY	Cayuga	77	WI	Lafayette
28	WI	Marathon	78	GA	Macon
29	WI	Dane	79	MI	Ionia
30	MI	Stearns	80	NY	Livingston
31	NH	Roseworth	81	NY	Onondaga
32	WI	Brown	82	TX	Comanche
33	WI	Kewaunee	83	SD	Grant
34	TX	Deaf Smith	84	ID	Owyhee
35	TX	Erath	85	SD	Mimaha
36	NY	Worming	86	SD	Brookings
37	WI	Shawano	87	PA	Lebanon
38	TX	Huron	88	WI	Dunn
39	TX	Lamb	89	WI	Waupaca
40	CO	Morgan	90	VA	Rockingham
41	MI	Clinton	91	TX	Halle
42	MI	Gratiot	92	WI	Chippewa
43	IA	Sioux	93	NY	Lewis
44	OR	Morrow	94	IA	O'Brien
45	MI	Stevens	95	MI	Lenawee
46	IN	Jasper	96	OR	Tillamook
47	WI	Grant	97	MI	Winona
48	KS	Hamilton	98	SD	Turner
49	NY	Genesee	99	MI	Morison
50	WI	Dodge	100	WI	Marquette