

Weather, economics lead to small somatic cell count increase

Progressive Dairyman Editor Dave Natzke

Although the increase was small, a 2015 summary of Dairy Herd Improvement (DHI) test-day results revealed somatic cell counts (SCC) were up compared to a year earlier. Milk quality specialists and veterinarians contacted by *Progressive Dairyman* suggest two reasons for the increase: weather and economics.

Nationally, average 2015 test-day herd SCC was 204,000 cells per mL, up 4,000 cells per mL from 2014. It marked the second consecutive year average test-day SCC posted a small increase.

Prior to 2014, average test-day herd SCC has declined eight straight years and was down nearly 100,000 since 2005, according to the Council of Dairy Cattle Breeding and the USDA's Animal Improvement Programs Laboratory.

Of reporting states, 21 had lower 2015 average SCC than in 2014; 25 states had higher averages. Perhaps surprisingly, several Southwestern states exhibited the largest increases compared to a year earlier, with New Mexico, Texas, California and Arizona among the top five for year-over-year increases.

Climate factors into the risk for higher SCC, a measure of milk quality and udder health. According to the National Oceanic and Atmospheric Administration, 2015 average temperatures and precipitation were above average across the South and extending all the way to the Pacific Northwest. Precipitation was also above average in many major dairy states, especially Texas and New Mexico.

Another factor is economics. USDA data shows the U.S. milking herd grew throughout most of 2015, as dairy farmers built on record-high 2014 milk prices, and lower production costs helped maintain income margins for much of the year.

Combined with high dairy replacement cow and heifer costs, producers held on to more cows longer, including those with elevated SCC levels.

This map includes individual state data for herd test days, average number of cows per herd, average daily milk yield and average SCC on test day. It also breaks out two categories of SCC levels: the percent of days at greater than 750,000 cells per mL, the current federal limit for bulk tank SCC for Grade A producers; and the percent of test days at greater than 400,000 cells per mL, the current maximum level for milk headed to European Union and some other export markets. (A few states have lower SCC limits compared to federal requirements.)

Herd test days higher than the federal limit may overestimate the percentage of herds shipping milk exceeding that limit because milk from cows treated for mastitis is excluded from the bulk tank, even though it is included in DHI test data. **PD**

	Herd test days	Cows per herd (head)	Avg. daily milk yield (lbs./cow)	Avg. SCC 1,000 c/mL	Percent herd test days with SCC greater than	
					750,000 c/mL	400,000 c/mL
Alaska	NA	NA	NA	NA	NA	NA
Colorado	262	1197.7	77.5	197	1.1	5
Idaho	1,282	1,303.5	78.9	178	0.4	3.7
Montana	198	138.5	77.9	192	1.5	7.1
Oregon	1,275	260.3	65.4	182	1.5	6
Utah	824	205.9	71.4	174	1.9	6.2
Nevada	63	519	74.1	171	0	0
Washington	1,301	372.6	75.4	171	0.5	3.8
Wyoming	NA	NA	NA	NA	NA	NA

	Herd test days	Cows per herd (head)	Avg. daily milk yield (lbs./cow)	Avg. SCC 1,000 c/mL	Percent herd test days with SCC greater than	
					750,000 c/mL	400,000 c/mL
Illinois	2,926	123.4	76.4	231	1.5	15.2
Indiana	2,452	116.6	75.7	214	1	11.8
Iowa	5,624	159.6	78.5	209	2	13
Michigan	5,866	240.2	81.9	155	0.6	4.7
Minnesota	17,010	119.5	77.8	245	1.9	16.2
Missouri	2,323	84	65.1	293	3.8	21.4
Nebraska	839	239.3	76.1	223	2	21.8
North Dakota	174	201.3	76.2	221	1.1	9.2
South Dakota	846	372.9	77.2	254	1.8	14.8
Wisconsin	37,473	141.3	83.7	196	2.1	11.4

204,000
NATIONAL AVERAGE TEST-DAY SCC
(IN CELLS/ML)

	Herd test days	Cows per herd (head)	Avg. daily milk yield (lbs./cow)	Avg. SCC 1,000 c/mL	Percent herd test days with SCC greater than	
					750,000 c/mL	400,000 c/mL
Arizona	162	1,525.7	73.2	213	0.6	6.8
California	6,822	953.6	76.9	204	1.3	6.3
Hawaii	NA	NA	NA	NA	NA	NA
Kansas	1,295	99.3	69.8	254	2.1	20.3
Oklahoma	390	81.6	62.8	304	6.4	30.3
New Mexico	126	3,449.5	74.4	201	0	2.4
Texas	936	1044.8	65.4	224	1.5	19.2

	Herd test days	Cows per herd (head)	Avg. daily milk yield (lbs./cow)	Avg. SCC 1,000 c/mL	Percent herd test days with SCC greater than	
					750,000 c/mL	400,000 c/mL
Alabama	155	94.6	51.9	367	1.9	36.1
Arkansas	153	101.5	54.3	386	8.5	34
Connecticut	721	129.2	75.5	198	1	12.2
Delaware	182	176.5	76.9	232	0	4.4
Florida	237	926.1	74.9	245	0.8	17.7
Georgia	788	231.1	71.4	264	1.9	21.6
Kentucky	1,220	91.2	74.4	221	4.2	17.1
Louisiana	242	95.4	54.7	379	5.8	50.4
Maine	1,204	105	70.9	188	0.4	7.6
Maryland	2,582	101.7	71.6	219	2.4	15.2
Massachusetts	655	64.2	66.8	185	0.9	6.9
Mississippi	227	154.5	65.4	273	0.9	28.6
New Hampshire	677	112.8	71.3	187	1.5	7.8
New Jersey	414	62.1	68.4	256	0.7	14
New York	16,115	177.5	77.8	194	0.6	9.4
North Carolina	1,128	170.6	73.4	260	0.9	19.5
Ohio	6,848	112.8	73.4	202	0.9	8.2
Pennsylvania	35,125	70.5	74.8	206	1.5	10.4
Rhode Island	63	44.4	65	216	3.2	25.4
South Carolina	326	167.8	63.3	342	1.8	31.6
Tennessee	909	105.6	65.5	328	4.1	32.1
Vermont	3,018	137	73.5	155	0.2	4.2
Virginia	3,197	136.1	73.6	251	1.7	16.5
West Virginia	260	83.6	64.8	241	0.8	15.4

U.S. ANNUAL

Test-day milk yield and somatic cell count (SCC) from Dairy Herd Improvement herds, U.S. (2010-2015)

Year	Herd test days	Cows per herd (head)	Avg. daily milk yield (lbs./cow)	Avg. SCC 1,000 c/mL	Percent herd test days with SCC greater than	
					750,000 c/mL	400,000 c/mL
2015	166,970	185.9	77.2	204	1.6	11.6
2014	173,260	177.3	76.2	200	1.6	11.6
2013	177,944	167.8	75.2	199	1.5	11.6
2012	184,927	161.8	74.2	200	1.5	12.0
2011	191,375	154.6	73.1	217	2.3	15.7
2010	198,218	145.2	72.7	228	2.7	18.0

HERD SIZE

Test-day milk yield and somatic cell count (SCC) from Dairy Herd Improvement herds during 2015, by herd size

Herd size (head)	Herd test days	Cows per herd (head)	Avg. daily milk yield (lbs./cow)	Avg. SCC 1,000 c/mL	Percent herd test days with SCC greater than	
					750,000 c/mL	400,000 c/mL
<50	65,065	28.1	64.6	241	3.5	17
50 - 99	47,842	69.8	69.9	226	0.6	11
100 - 149	16,995	120.8	72.4	218	0.2	8.4
150 - 199	8,345	172.1	74.8	209	0.2	6.6
200 - 299	8,544	242.3	76.9	203	0.1	5.7
300 - 499	7,735	384.1	80.5	199	0.2	4.4
500 - 999	6,640	693	81.6	196	0	2.5
1000 - 1999	3,796	1393.3	82.2	196	0	1.2
2000 - 2999	1,036	2435.3	78.7	199	0.1	2
>3000	972	5069.1	77.2	197	0	0.8
All herds	166,970	185.9	77.2	204	1.6	11.6

To see the full report, visit <https://www.cdcb.us/publish/dhi/current/sccrpt.htm>