

Continued from page 4

**227**  
cow dairies  
in Oregon

stay in the country to work on the ranch, and immigration issues are compounding the problem as the industry has largely relied on Hispanic laborers to fill positions.

This is partly because as the minimum wage has increased, said Rosa, ranchers would rather pay a skilled laborer than a high-school kid that might be goofing off half the time.

“The labor situation is getting more and more serious and more and more difficult for us all the time,” said Rosa.

Beef cattle account for about 85 percent of Oregon’s bovine population; the rest are in dairies.

Oregon houses one of the largest dairies in the nation near Boardman, called Threemile Canyon Farms. And another mega-dairy is moving in about 25 miles away. Together these facilities will house up to 100,000 dairy cows and calves.

There are 227 cow dairies in Oregon, and about 20 percent are organic. Organic dairies typically graze cows on pesticide-free pasture during the dry months and bring them into a barn structure during the wet months.

Conventional dairy practices vary, with some confining cattle year-round, feeding them a mixture of grain and grass.

Tammy Dennee, the legislative director at Oregon Dairy Farmers Association told the Oregon Board of Agriculture at a meeting in

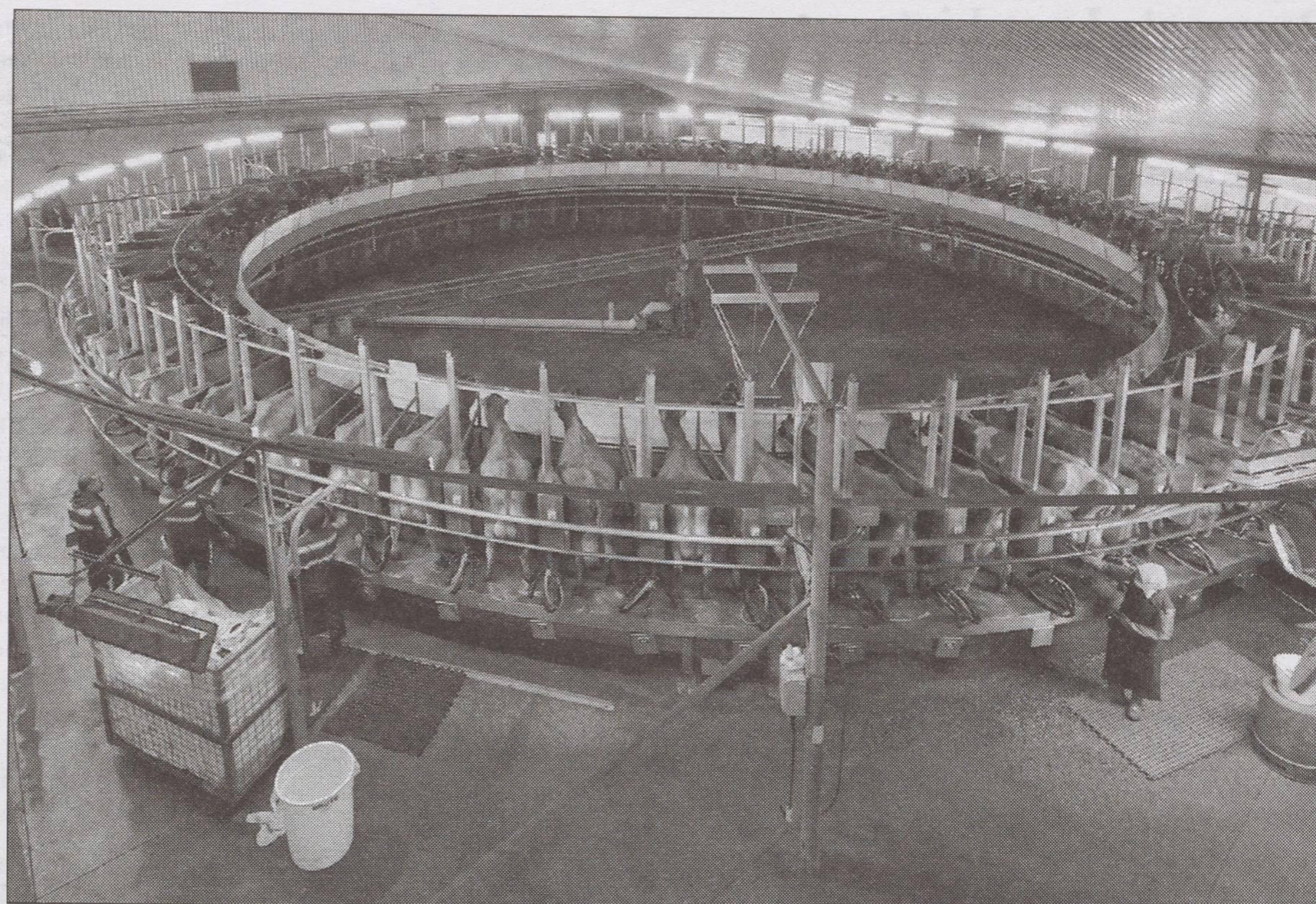


PHOTO COURTESY OF THREEMILE CANYON FARMS

May that in recent years, Oregon has lost about six dairies annually.

Many dairy operators blame this decline on large dairies moving in, saying that it’s hard to compete when dairy giants flood the market with milk, resulting in lower margins that only they can afford to ride out.

But despite the shrinking number of smaller and mid-sized dairies, in 2016 the state saw record-setting production levels with 2.6 billion pounds of dairy products produced, according to USDA data.

That’s nearly a billion pounds more than just 16 years earlier.

*Cows are milked on a carousel at Threemile Canyon Farms.*

## Oregon’s largest source of methane



PHOTO BY ARKADY BROWN

While individual cattle ranchers and dairy farmers may have different business philosophies as it relates to organic versus conventional, one fact is undeniable: They raise an animal that consumes massive

amounts of resources while producing large volumes of powerful greenhouse gases.

Oregon’s 1.3 million cattle produce more methane than any other source in the state, including all municipal and industrial landfills combined, according to data obtained from Oregon’s Department

of Environmental Quality, or DEQ.

According to the Intergovernmental Panel on Climate Change, the warming effect of methane is 86 times as potent as carbon dioxide over a 20-year period, and 34 times as strong over a 100-year period.

DEQ’s modeling assumes methane is just 25 times as potent as carbon dioxide. This is based on an earlier version of the IPCC report, published in 2007, for a 100-year period. In the short term, however, methane has a much greater carbon dioxide equivalent than DEQ methods reflect.

Cows also produce nitrous oxide in their manure, a gas with warming potential 265 times greater than carbon dioxide.

According to DEQ modeling, Oregon’s cattle produce nearly 3 million metric tons of carbon dioxide equivalent in these two gases per year. That equates to about 5 percent of the state’s total greenhouse gas emissions.

But that’s just what comes out of the cow. It doesn’t account for emissions related to transporting, processing, growing their feed

or the carbon sequestration potential lost when cows eat all the vegetation, including young trees, along stream banks.

In Portland, residents are encouraged to utilize the curbside composting program to help lower methane emissions at city landfills. So what are policymakers on the state level doing to rein in the state’s largest source of methane gas?

The answer is not much.

While dairies and feedlots are known to emit harmful pollutants in addition to greenhouse gases, such as ammonia, hydrogen sulfide and particulates, they are exempted from air quality monitoring.

A bill aimed at removing this exemption from dairies died this legislative session despite widespread concerns that the 30,000-cow dairy coming in 25 miles away from Threemile Canyon Farms would compound air quality issues in the Boardman area.

Bills seeking to implement a carbon-trading program this session, which also failed, altogether excluded agricultural industries from their proposed carbon-counting systems.

“Because agriculture feeds people, usually it’s a more incentive-based program,” said Jana Gastellum, program director of climate at Oregon Environmental Council, one of the bill’s primary backers.

Oregon is falling far short of meeting its goal of reducing emissions to 14 million metric tons by 2050, and there is no comprehensive plan to address emissions from the agricultural sector.

“It would be really great for Oregon to have a broader strategy for how we are going to hit those overall pollution caps,” Gastellum said.

While cattle’s contribution of 5 percent of total state emissions may not seem

significant, if the industry continues unchecked and Oregon eventually meets its emissions goal, cattle will account for 21 percent of the state’s greenhouse gas emissions. Even more if the industry continues to grow and more large dairies move in.

Additionally, as carbon dioxide emissions go down, so will the aerosols emitted when we burn fossil fuels, which actually have a cooling effect by reflecting the sun’s energy back into space. Therefore, it’s critical that more powerful greenhouse gases, such as methane and nitrous oxide, be addressed.

California implemented a carbon cap-and-trade program four years ago, and dairies there are required to lower their methane emissions 40 percent by 2030.

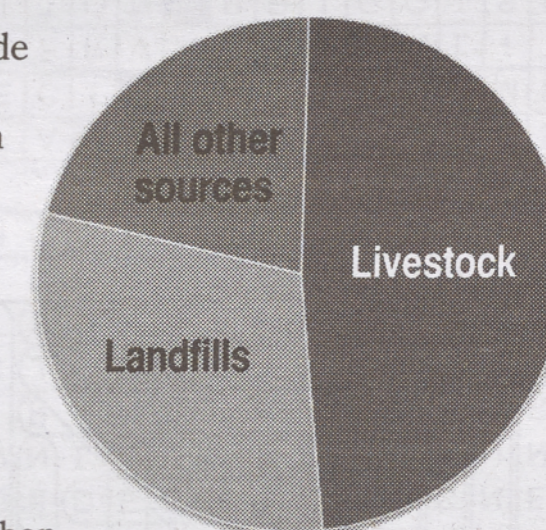
The Oregon Global Warming Commission issued a warning to the state Legislature in its February report:

“While individual agencies have taken up both emissions reduction and adaptation issues episodically, the State has no overall climate change adaptation/preparation strategy, action plan or investment criteria.”

The report also indicated agriculture has been responsible for 8 to 9 percent of the state’s greenhouse gas emissions since 2002, with livestock being the primary source.

But that percentage is an estimate.

“We have a very rough read on what’s coming out of agriculture,” said Angus Duncan, the commission’s chair. But, he added, “the issue of methane generally, and of agricultural methane, we think is a significant one.”



## METHANE EMISSIONS

Oregon’s top methane emissions sources in 2014 (the latest year data are available).

SOURCE: OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Continued on page 7