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AGRICULTURE

Thursday, Apr. 22, 2010

Cattle feed may be cause of air

woes

Study: Manure, belching not No. 1 cause of dairy pollution

By Mark Grossi
mgrossi@fresnobee.com

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FRESNO — Feed for dairy cows appears to be the biggest single source of a key ozone-making gas in the smoggy San Joaquin Valley.

The finding overturns a suspicion experts had several years ago that dairy air pollution mostly comes from manure and cow belching.

Fermenting corn silage and other feed create almost twice as much reactive organic gas as cars do, says a study by the University of California at Davis. Organic gases cook together with nitrogen oxides from cars to make some of the worst ozone problems in the country.



Cows at Robert Gioletti & Sons Dairy, Inc., are photographed in Turlock, Calif., Thursday, Nov. 12, 2009. Gioletti has 1800 cows on his farm which produce about 15,000 gallons of milk daily. (ALISON

The study, published last month in the journal "Environmental Science & Technology," will help local air officials as they revise rules for dairies in the next two months.

When the rules were made several years ago, many experts considered the region's 2 million cows and their manure as the primary source of these gases. Under the rules the industry spent millions of dollars cleaning up barns, corrals and manure storage areas in the nation's most productive dairy region.

But the latest study shows much bigger gas plumes are coming from fermenting silage piles, said researcher Michael Kleeman, a professor of civil and environmental engineering at Davis. Kleeman led the most recent study.

"The piles are covered, but there's always some leakage," Kleeman said. "And when you feed the animals, the feed is out in the open air." A dairy

industry spokesman said farmers are not upset about complying with earlier rules and will continue to support clean-air efforts in reducing emissions from feed piles.

Pollution control for feed might include better coverage of the piles and tighter compression of the feed within the piles to slow the formation of the organic gases, said J.P. Cativiela, representing the industry advocacy group Dairy Cares in Sacramento.

Research ongoing since 2006

Since the first dairy rules passed in June 2006, Davis researchers have studied animal waste, pesticides, silage and other sources to determine the biggest contributor of reactive organic gases, Kleeman said.



Researchers gathered samples of air at dairies and tested it. The animal feed had a lot of ethanol and similar gases that help form ozone.

"The study really points out the importance of this source," Kleeman said.

The reactive organic gases are only half of the valley's ozone problem. Nitrogen oxide or NOx from vehicles combines with the gases to produce ozone, and NOx seems more important to control, says the San Joaquin Valley Air Pollution Control District.

NOx reduction more efficiently slows the formation of ozone than reduction of the organic gases, air officials say. They emphasize NOx

reduction in their ozone cleanup.

Air activists disagree, saying organic gases are just as important and the air district is not aggressive enough in regulating them.

Lawyer Brent Newell of the Center on Race, Poverty and the Environment, representing many valley air activists, says the study affirms their contentions.

"This study shows that the air district and U.S. Environmental Protection Agency have to stop pretending to regulate the dairy industry and finally take meaningful action to protect public health," he said.

Air district officials say they do regulate organic gases in accordance with clean air law. When the district revises dairy rules in June, animal feed will be a primary target.

"We will try to focus on feed handling," said district executive director Seyed Sadredin. "We might get a lot of pollution reduction by simply having farmers feed the animals out of sacks instead of spreading the feed out on the ground in the open."

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bmenezes wrote on 04/23/2010 10:23:03 AM:
I thought ethanol was good for the environment. That it was the answer to our energy needs. Now they're saying its an ozone gas? These idiots don't know what they're doing.

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geno0 wrote on 04/23/2010 08:49:10 AM:
Is there something that the cows could eat that would make them less gassy? BUT, lets not pick on the cows, they do good things for us! If people do not like the dairies, then move!

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wierwille wrote on 04/23/2010 08:33:20 AM:
I've been told by folks that raise cattle for meat that corn is used to marble the meat but cows can't really digest it or assimilate it. Perhaps another grain would be better and less "off gassing."

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ktdg96 wrote on 04/23/2010 07:56:37 AM:
Does Seyed Sadredin really expect farmers to feed the cows out of bags?!?! Give me a break, I don't think Seyed has been to a dairy farm in a long time! Just another way to squeeze even more money out of what was once a very profitable industry in the central valley.



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El_Guey wrote on 04/23/2010 07:41:10 AM:

Well if I have to chose between the silage and the cars, get rid of the cars. Shrink the population in the Valley and stop the over the hill commutes. Everything else is regulated so why not that too.



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gdebree wrote on 04/23/2010 07:14:27 AM:

don't forget milk processing aka Hilmar Cheese. Dairy = silage, and poop (pee), flies too and they are also one of our most profitable industries.

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