

U of I dairy research seeks to boost feed efficiency, reproductive rates

BY DANIEL GRANT

FarmWeek

Methionine, an amino acid used in the biosynthesis of protein, could be a key factor to improve reproductive rates in dairy cattle.

That's a key finding of ongoing dairy research at the University of Illinois focused on increasing the survival rate of embryos in dairy cows.

"We're always worried about crude protein (the measurement of all forms of protein)," Phil Cardoso, U of I animal scientist and dairy researcher, told FarmWeek. However, "methionine is the first limiting amino acid for dairy cattle."

Dairy cows don't produce methionine, so it must come from the diet.

However, bacteria in the rumen breaks down the key amino acid before the cow can use it.

"In the rumen, some (methionine) will be degraded and the cow will never see it," Cardoso said. "We're looking to protect that amino acid. The idea is to protect it from bugs in the rumen."

U of I researchers supplemented diets of dairy cows with rumen-protected methionine (RPM), the majority of which gets absorbed into the

animal's bloodstream.

And research shows the embryos of those cows had more droplets of lipids, molecules that make up the building blocks of the structure and function of living cells.

The embryos that received RPM subsequently grew larger and survived at a higher rate compared to embryos in untreated cows.

Dairy cows typically lose about 14 to 15 percent of pregnancies. But cows that received

RPM lost only 6 percent of pregnancies.



Phil Cardoso

said Cardoso, who will discuss the findings this week at the Four-State Dairy Nutrition

"We think the extra lipids provided more energy for the embryo so it could get bigger and survive more,"

and Management Conference in Dubuque, Iowa.

U of I dairy research also could help farmers improve feed efficiency of their herds.

A corn fungicide application trial found cows were able to produce the same amount of milk by consuming less silage when it was treated with fungicide compared to untreated corn.

"Feed efficiency went up," Cardoso said. "They were able to produce the same

milk eating less."

A properly timed fungicide application can reduce plant stress. Corn plants that have less stress tend to produce less fiber.

"It leads to better digestion for cows," the dairy researcher noted.

Feeding trials, which began in 2013, show a fungicide application around tasseling produces the most bang for the buck when it comes to feed efficiency.

Prairie Farms on the move; milk donations under way

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Dairy farmers always look for ways to make their operations more efficient, according to Tony Graves, a Richland County (Dundas) milk producer.

And the same focus applies to dairy processors and retailers as they deal with some of the lowest milk prices in seven years.

Graves, who also serves as president of Prairie Farms Dairy and treasurer of the Illinois Milk Producers Association, therefore sees an opportunity as Prairie Farms moves its corporate headquarters from Carlinville (Macoupin County) to Edwardsville (Madison County).

"Prairie Farms has been growing a lot," Graves told the RFD Radio Network®. "Right now, there's corporate staff in five different locations."

There's no specific timetable for the move from Carlinville to Edwardsville. But once complete, the majority of Prairie Farms' corporate staff will be at one location.



Tony Graves

"Like a farm operation, it will make (Prairie Farms) more efficient (by consolidating operations to one location)," Graves said. "It also puts (the corporate office) close

to a large metropolis in St. Louis, which is more attractive to get talent to come in."

Prairie Farms opened its headquarters in Carlinville in 1947. And Graves, part of a fourth-generation dairy operation, said his family has shipped its milk to the cooperative as long as he can remember.

"They (at Prairie Farms) have always been very good to us," Graves said.

So, he jumped at the opportunity nine years ago to get on the Prairie Farms board, which he now leads.

"The big thing we strive for at Prairie Farms is a very aggressive quality program for farmers, and they respond," Graves said.

"If you buy high-quality

milk, you'll have a high-quality product."

Prairie Farms, as part of its effort to promote milk and give back to its home area, during June Dairy Month plans to distribute about 10,000 gallons of milk to local food banks.

It also distributed about 100,000 pints of milk last month at the 100th running of the Indianapolis 500.

Graves' farm also celebrates a 100-year milestone next year as it will mark a century of registered Jerseys on the farm.

Graves said he likes the efficiency, durability and higher butterfat/protein levels produced by the little brown cows.

For more information about Prairie Farms, visit {prairie-farms.com}.