

Conservation Corner for March 29, 2016

The Milky Way - Part 2

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This is the second of a two-part article on technology on dairy farms in our area.

Information gathering on the farm

There is a lot of data that farmers keep on their cows, whether it's breeding information, medication/vaccination information, or genetic information. Farms use computer programs such as those from NorthStar Cooperative and Genex Cooperative to help gather and manage that data.

Genomics is something a few farms in the area keep track of. Genomics is the mapping of genes in an organism. Why would a farm want that information? Some farms use this data to improve their herds, but also to sell the bulls they have raised. Dairy farmers are constantly trying to improve their herd genetics through breeding. There are actual semen salespeople and semen catalogs for most large livestock. Knowing a genome will help a farm improve their own herd by reducing a bad trait or improving another trait. Paula Molhoek of End Road Dairy Farm helps the farm do just that. End Road sells bulls locally, and sometimes even sells semen and frozen embryos globally.

New technologies are also being used in milk testing. A hired technician will come to a farm and take samples of milk from each cow that is milked. The milk is tested for its components like butterfat, protein, water content. It can also be tested to see if the cow is pregnant.

Calves wear Coats?

On a dairy farm, calves are born year-round even during the brutal winter months. Pregnant cows are grouped together so that the herdsman can keep an eye on them. When a calf is born the milk from its momma is given to it within 12 hours. The colostrums, or first milk, contains antibodies that the calf needs to build its immunity system, since it's born without that immunity in place. The calf is typically given several feedings of colostrum before it's switched to either a milk replacer or milk from the farm.

Winter is hard on everyone, but especially on newborn calves. Cows that are ready to calve are put in a more protected barn with dry bedding such as straw. However, the weather can still be really inhospitable for newborns. Often farmers put a newborn into a calf warmer. The calf warmer is a little hutch that has a heater in it that quickly dries the calf and warms it up, which is a better alternative than putting a really cold calf in your house bathtub or mudroom. Because cold, wet calves will get sick and are hard to get healthy again, winter calves may also get a coat to wear. Dry bedding like straw is ideal for calves to snuggle under and insulate themselves.

Calves are often housed separately in little houses called calf hutches. Hutches are used so that calves don't spread diseases to each other like they would in a group housing environment. Each hutch has a spot for a water bucket and feed bucket. Even though the calves get milk up to about

6-8 weeks of age twice a day, continuous access to water is crucial to keep calves healthy. Feed for calves is also specially formulated for them. It's often a sweeter feed laced with molasses to entice the calf to explore the feed. By eight weeks of age the feed bucket will be empty each feeding. Second cutting hay, which is softer than and not as stemmy as first cutting, is sometimes given to month old calves too.

Cow food – more than just grass

Dairy farms work with a nutritionist. Not for themselves but for the cows. Cows are like high performing athletes, and need perfect nutrition to produce 8-12 gallons of milk a day.

Dairy farmers in this part of the state raise alfalfa, corn and some small grains like oats or barley. The alfalfa is either harvested as dry hay, or chopped into haylage which is fermented hay. Corn is used in two different ways. Chopped corn is when the whole plant is chopped before the ear is fully mature. The chopped corn is then stored in a silo (ensiled) to create corn silage. High moisture corn is corn that is harvested when it is more mature. In this case, only the ear is harvested, and it is then fermented. Oats and barley can be chopped green in early summer to be ensiled or combined in the late summer for grain that can be ground for the cows. The leftover plant matter is straw. Straw is great bedding and can be used in a ration as a filler.

The nutritionist takes samples of the feed every month or even more often and sends it off to a lab to be analyzed. Why? Each field harvested or even the timing of when the feed was harvested changes the nutrition of the feed. Any deficiencies are made up with other feeds like soybean meal, cottonseed meal, spent brewers grains (from beer making) sugar beet pulp (from the sugar plant in Michigan) and other feeds that only cows can use. Vitamins and minerals are typically added to the feed mix too. The nutritionist gives a diet recommendation for not only the milking cows but for other animals on the farm (such as dry cows) too. Many farms have three or more rations to mix and feed out.

How does a farm put all this feed together? It's not like you can mix the feed in a blender? Or can you? Well, sort of . . . All the feed ingredients are scooped by a loader tractor into a mixer wagon. The wagon has a weigh scale on it to show the farmer how much of each feed ingredient she needs to add to the mixer, and augers that blend them all together. When all the feed has been mixed, the cows are fed their blended food for the day. Milk cows are fed about 50-70 pounds of feed a day depending on weather. Obviously immature animals are fed less. Many farms have separate rations for each group of animals on the farm.

Women in agriculture

Women have always been involved in farming, but now more women, like the ones featured in this article, are taking a more active and visible role in farming. The technology talked about in these two articles has made it possible for this increased involvement. Attitudes about women's roles in agriculture have changed, and are continuing to evolve. Women are now 30% of all principal owners of farms in this country, and by the looks of things, that number will continue to increase.

The women that have been featured in these two articles are from farms that have worked with the Michigan Agriculture Environmental Assurance Program (MAEAP). This program enables

farmers to identify any environmental risks that may be on their farm, and to address them before they become a problem. Jodi Venema DeHate is the MAEAP technician covering Missaukee, Wexford, Kalkaska, and Crawford counties. You can contact her at 231-839-7193 or jodi.dehate@macd.org for more information about MAEAP.



Paula Molhoek and her cow Menna. Paula works hard to get to know her animals and their genetics.



Molly Plugger with a calf wearing a calf coat. The coat will help to keep the calf warm and healthy through the winter months.