

Attica Veterinary Associates

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Newsletter – March 2023

Improving Rumen Development in Dairy Calves

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While calves are born with all four compartments of the ruminant digestive system, the rumen is small and incapable of digesting feeds the way that the adult cow is able. While milk provides the nutrients for the young calf, the rumen must rapidly grow and develop to allow dairy calves to be weaned generally between 60-90 days of age. In order to accomplish this, dairy calves are fed starter grains which promote microbial fermentation and rumen development.



As calves begin consuming starter, bacteria populations in the rumen grow. These bacteria produce volatile fatty acids which provide energy to the calf. Butyrate is especially important in these young calves as this is the volatile fatty acid which is primarily utilized by the rumen for the growth and proliferation of the papillae, the finger-like projections within the rumen wall which gives it the shag-carpet appearance. While grain favors the production of volatile fatty acids for rumen development, it also favors the production of lactic acid or lactate. Lactate can be utilized by the calf for energy, but large quantities in the rumen can decrease rumen pH leading to acidosis. Large amounts of lactic acid can even cause damage to the developing rumen and rumen papillae.

Lactipro FLX is a commercially available product which contains *Megasphaera elsdenii*, or Mega e. Mega e is one of the primary bacteria found within the rumen which consumes lactic acid to maintain the appropriate rumen pH. As Mega e consumes the lactic acid, it is producing butyrate which can then be utilized by the calf to increase rumen development. University studies have shown that when calves receive a single dose of Lactipro in the first few weeks of life, the rumen of these calves is heavier with longer rumen papillae and more dense papillae within the rumen. This more developed rumen leads to heavier calves at weaning and less likelihood of a post-weaning drop off.

While dairy calves are expected to develop a rumen rapidly, the utilization of Lactipro FLX can help improve the development process.

Health paper / show season:

As we start to enter spring show season this is just a reminder to plan ahead far in advance. Be sure to give us plenty of time to get required testing done and back. Be sure to look over both the show / sale requirements as well as the individual state the animal is traveling to. If you have any questions / concerns please contact us.

- Interstate papers (to another state) – are good for that one specific place you are going. They are good for 30 days.
- Intrastate papers (staying in NY state) – are good for 30 days, but once you have them done after May 1st, NYS allows them to be good for the whole county fairs show season.

Get a Jump on Pink Eye This Fly Season:

The predominant bacteria behind pink eye in our area are *Moraxella bovis* and *Moraxella bovoculi*. These pathogens are carried between animals by face flies. The flies feed around the eyes, creating wounds. These wounds allow entrance of the bacteria. Direct contact between animals can transfer the bacteria as well. Eye irritation from dust, pollen, and feed promote shedding from infected animals. A few carrier heifers can serve as a reservoir for infection for an entire pen or barn.

A vaccination program should be a consideration as part of the best management program for WNY dairies. Ideally, we like to vaccinate heifers about 28-45 days before pink eye season. Think about vaccinating by late April to early May.

We stock an injectable autogenous vaccine that provide protection for both strains of bacteria. We order it specifically designed to the strains that are prevalent and common in our practice area. The injectable comes in 50-dose bottles.

The commercial vaccine in stock that provides protection for only *Moraxella bovis* is the combination clostridial/pinkeye vaccine, Alpha 7-MB. This too, requires a booster injection to be fully effective.

For general insect control for pastured animals you may want to consider Merck's Double Barrel VP insecticide ear tags. Remember that 2 ear tags are needed per animal. We have a small stock on hand in 20-tag packages and can order large batches as needed. The tags are approved for use only on non-lactating dairy cattle and calves.

Please be aware that these tags are classified as a hazardous material. Cautions are included on the packaging.

Check with your regular veterinarian for which of these products best meets your farm's needs. Remember too, that a comprehensive fly program is part of pinkeye management.

For Sale:

Round bales of 1st cutting grass hay - \$40/bale

Call John – 716-913-1043