Beef Newsletter

CALF HEALTH MEETING with Dr. Ray Reynen

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Since the calf is the only product generated by the beef cow, the productivity and profitability of the cow-calf enterprise depend upon the maximum number of cows being pregnant at the end of the breeding season, the maximum number of healthy calves being born, and the maximum number of calves survive to weaning at the maximum possible weight.

Central Ontario Veterinary Services hosted Dr Ray Reynen for a discussion on calf health and survival on 25 January 2020. Dr Reynen is a Technical Services Veterinarian with Merck Animal Health, and a former partner with Heartland Veterinary Services in Listowel, Ontario. Here some of the high points that came out of Dr Reynen's presentation.

Mineral Nutrition

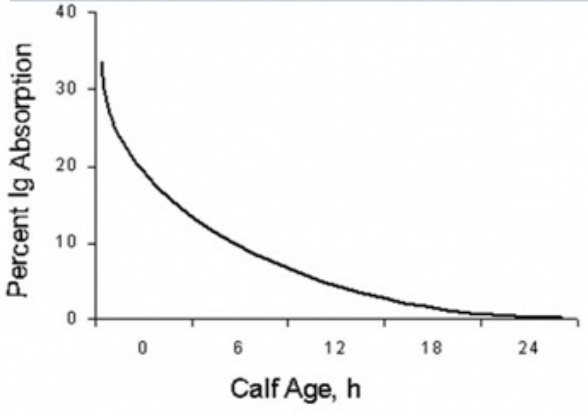
Ensuring adequate mineral intake is essential to achieving maximum pregnancy rates, ensuring that cows calve successfully, and ensuring that the placentas are not retained. The proper amount and balance of the major minerals Calcium, Phosphorus, and Magnesium must be consumed by the cow, along with smaller but vital quantities of the micronutrients Copper, Manganese, Zinc, Cobalt, and Selenium. If cows will not consume enough mineral, it can be mixed half-and-half with loose blue Cobalt Iodized Salt.

Like soils in the rest of Ontario, Simcoe County soils are deficient in Selenium. Cows should receive Selenium injections before breeding and before calving, in addition to receiving a mineral containing Selenium. Calves should be injected with Selenium at birth to prevent White Muscle Disease, again at a month of age, at turnout, and at weaning.

Body Condition

Cows in poor body condition will not produce enough good quality colostrum to protect their calves, will not milk well enough to raise thrifty calves, and will not cycle early enough to calve at the same time next year. Every day that a cow calves after the beginning of the calving season is a day of gain lost to the calf, and potential income lost to the operation.

Colostrum



Calves are born with no resistance to disease, and they must acquire immunity by absorbing antibodies from colostrum within the first 6 hours of life. While it is true that calves that do not suckle immediately after birth do retain the ability to absorb antibodies longer, it is a fact that the amount of antibody absorbed declines after birth and is essentially at zero by 24 hours of age.

There is no way of knowing how much colostrum a beef calf has consumed by nursing, but if there is any fear that colostrum intake may have been inadequate or delayed, powdered colostrum or frozen colostrum must be given by feeding tube.

The colostrum of dairy cows is of lower concentration than that of beef cows, so 4 liters of powdered or frozen dairy colostrum must be given.

Vaccination

Vaccination of cows prior to calving against the principal causes of calf scours increases the level of antibodies against these diseases in their colostrum.

When the calf consumes the colostrum, the antibodies are absorbed and are available to protect the calf from scours. If the calving season is longer than 6 weeks, the later-calving cows should be revaccinated in order to ensure that they retain a high level of immunity and pass it to their calves in colostrum.

Antibodies absorbed from colostrum typically protect calves from pneumonia until approximately 4 weeks of age. Calves can be vaccinated at birth or within the first month of age against viral and bacterial causes of pneumonia using live vaccines such as Inforce 3 and Once PMH. This immunity develops rapidly but is short-lived, so it may be necessary to vaccinate calves more than once during the first 3 months of age.

Vaccines against Clostridial diseases such a tetanus and blackleg can be given to cows before calving to protect calves until 3 months of age through immunity from colostrum. Calves from unvaccinated cows should be vaccinated at birth and receive a booster 6 weeks later, and then revaccinated after 3 months of age. Tetanus protection should be given when elastrator bands are used for castration. Blackleg is a sporadic disease in our area, but every year we encounter at least one episode in a herd where more than one calf is lost.

Housing

Clean, dry bedding is essential to prevent scours and is a good investment whatever the price. Likewise, clean, dry air is essential to prevent pneumonia. Overcrowded yards and barns are impossible to keep dry and well-ventilated. Each cow-calf pair requires 150 square feet of pen space in a barn, or just over 12 feet by 12 feet square. The entire volume of air in a barn should be replaced 4 times every hour in order to remove ammonia, moisture, and pathogens from the air. In a dry yard outdoors, each cow-calf pair requires 400 square feet, or 20 feet by 20 feet square; more space is required if the footing is wet.

Treatment of Calf Scours

If a calf develops scours, the main treatment is oral electrolytes, because dehydration is what kills scouring calves. A calf that is scouring but appears otherwise normal is already 5% dehydrated; these calves should be given 2 liters of oral electrolytes by feeding tube twice daily in addition to the milk they get from the cow. If the calf is not nursing, it should get 2 litres of electrolytes 4 times a day. When it feels better, it will nurse from the cow. Electrolyte treatment should continue until scouring stops. Antibiotics are only used if the calf has a rectal temperature over 39C (102F). Nuflor or Borgal are our choices in those cases. Treatment with electrolytes 2 to 4 times a day is given depending upon whether or not the calf is nursing. If the calf cannot get up, please don't wait to call us. Intravenous rehydration can save many of these calves if they are not let go too long.

To set up a herd health appointment, please contact us at 705-722-3232 or info@centralontariovet.com

We are very grateful to Dr Reynen for lending us his time and expertise.

If there are any topics you are interested in learning more about, please let us know.