Virtual Beef

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In This Issue

Canada and Ontario helping farmers affected by wildlife damage…Ontario livestock and poultry farmers now have a more consistent and transparent process for compensation when their animals are injured or killed by predatory wildlife.

The newly updated Ontario Wildlife Damage Compensation Program (OWDCP) standardizes the requirements farmers need to meet to receive compensation. In addition, a new single-stage appeal process simplifies the process to address program application concerns and disputes.

As of January 1, 2017, standardized compensation rates for animals came into effect for farmers across the province. Rates are based on the average price a farmer would receive in the open market for an animal with similar characteristics, such as age and weight.

The compensation rates, program guidelines and application forms are available at www.ontario.ca/predation.

This publication is available in electronic format at www.omafra.gov.on.ca/english/livestock/beef/news.html. Single paper copies may be obtained by calling 1-877-424-1300.

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Becoming a Preferred Tenant for Grazing Rented Farms

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Background

With the increasing cost of land in Ontario, cow-calf and backgrounding producers will increasingly be competing for rental land to access grazing. OMAFRA has factsheets in development to enable a discussion on the value of grazing livestock for rural landowners and to help beef farmers try to make leases that work for long-term investments such as pasture. This article features highlights and excerpts of one document-in-process to help beef producers become the 'tenants of choice' of non-farming landowners.

Land Use Challenges in Ontario

Ontario has experienced widespread conversion of forages to grain and oilseed production. The total area of Canadian crop and pasture land used for the production of soybeans, wheat and corn increased from 28% in 1976 to 57% in 2011, resulting in a rapidly shrinking area of land for forage production as in Figure 1. At the same time farmland rental is widespread and growing. Only 60% of Ontario's farmland is owned by farmers and 40% is owned by non-users and rental costs have risen by up to 50% in recent years. Beef farmers know all too well what these statistics mean in practice; that they get beat out in the competition for land to be grazed, especially in year-to-year leasing situations as these lands are lost from forages to cash crops.

Forages and grazed cattle produce agricultural and environmental benefits valuable to landowners, such as improved soil health. However, these benefits require longer timelines than year-to-year decision making allows and are more difficult to implement on rented lands, as beef farmers well know. Non-farming landowners can benefit from beef grazing tenants by sustainable management of their land and this is a case which needs to be made to these landlords.

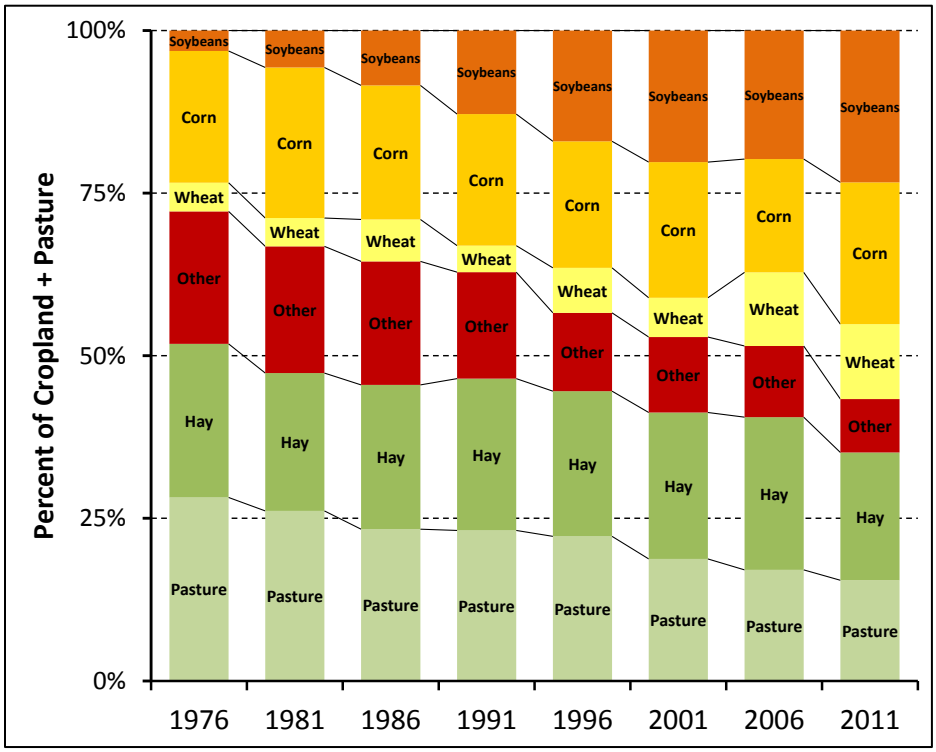

Figure 1. Changing Canadian agricultural land use: demonstrating a long-term increase in land area for grain and oilseed production and decreasing area for pasture, hay, and other forages.
Source: Statistics Canada, Census of Agriculture

Forages and Grazed Livestock Create Agroecological Benefits

The ecology of farmed systems is called agroecology. Declining forage production in favour of continuous grain and oilseed production (three or fewer crops in rotation) exposes farmland to degradation, such as organic matter loss, soil erosion and nutrient runoff; an agroecological challenge. These challenges threaten Ontario's future agricultural productivity and soil health has recently become a major focus for Ontario. Of interest to the grazer and his landlord is that many land management challenges caused by continuous cash cropping can be addressed by re-integrating livestock and forages onto the same land base.

Forage-based livestock production improves soil quality by creating cyclical nutrient flows, nitrogen fixation by legume forages and year-long soil cover that reduces erosion. A rainfall simulator as shown in Figure 2 demonstrates the physical value of permanent vegetation as offered by forages compared to other cropping systems. As a bonus, these improvements in land quality can improve the agroecological performance of the system, reducing dependence on fertilizers and herbicides, which may be of interest to some land owners as well.

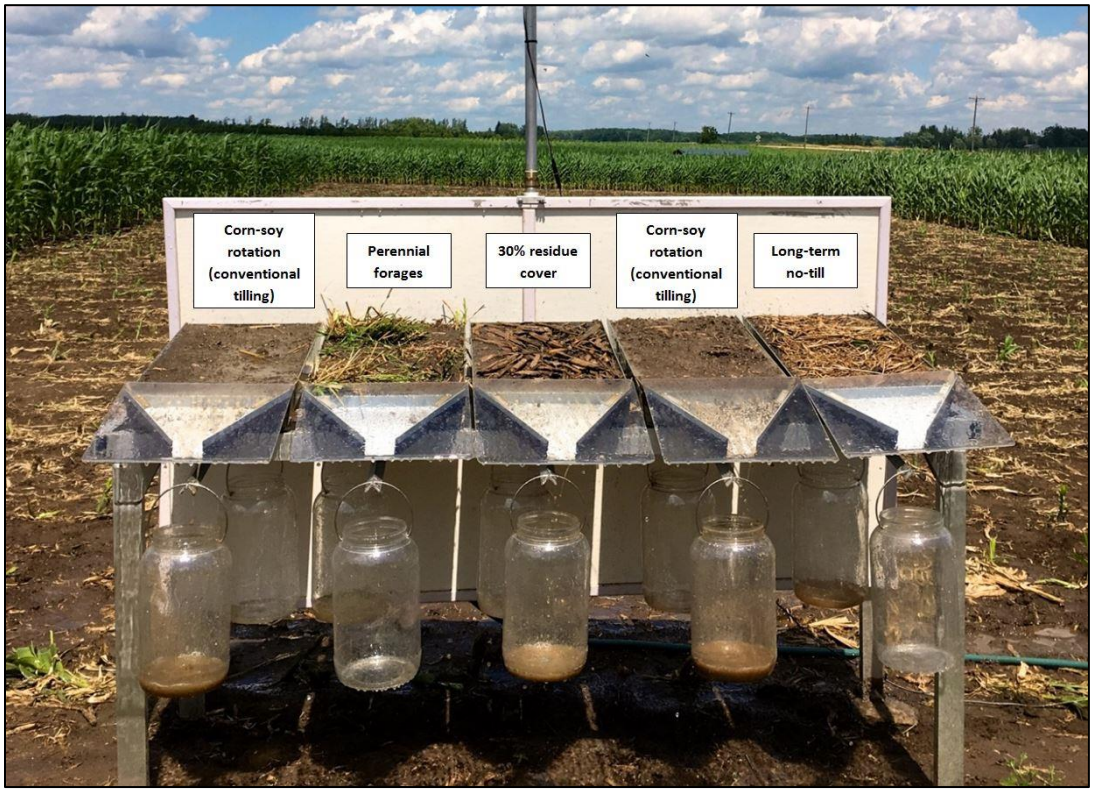

Figure 2: This rainfall simulator shows how soil management decisions affect water infiltration (vials in the background), overland runoff (vials in the foreground), and resulting soil erosion.

<u>Differing treatments as featured, from left to right:</u>

1. Conventionally-tilled field in a corn-soybean rotation: negligible infiltration, and a great deal of soil erosion and runoff associated with phosphorus loss.
2. Perennial forages: very high infiltration, and no runoff or erosion.
3. Field with 30% residue cover: increased infiltration and less runoff.
4. Conventionally-tilled field: clearly showing runoff and soil erosion.
5. Long-term no-till field: high level of infiltration which greatly reduces runoff and soil erosion.

Support Cultural Heritage and Biodiversity

Integrated forage and livestock production can help maintain characteristics of rural Ontario and a region's 'cultural heritage' or identity. Grazing cattle are an attractive and significant feature in the countryside and can support regional and property values for recreational and tourism purposes. No tourist or visitor travels Ontario's beautiful county roads just to get from point A to B!

Producing forages and grazed livestock increases local biodiversity by providing habitat for small mammals, grassland birds, pollinators and several species-at-risk. Well-maintained pastures and associated shelterbelts can provide wildlife with areas for nests, shelter and migration stops. Pastures are also important nectar sources for pollinators, another area of concern in Ontario. These attributes offer value in terms of hunting, fishing and other recreational use which the beef sector has featured in print, but now it is time to adopt them into the business case for land rental.

Figure 3. Beautiful scenes of pastures and grazing cattle in the rural landscape or 'cultural heritage' need to factored into the grazing and forage use as in the beef sector.

Good Leases

Collaboration between farmers and landowners can help ensure successful, long-term rental that encourage the production of forages and grazed livestock. Leases could stipulate that renting farmers will use specific practices (e.g., OMAFRA's BMPs) or host landowners for an annual on-farm meeting to demonstrate improvements to farmland, infrastructure, ecological health and the value of the property.

While many of the benefits of forages and grazed livestock are difficult to quantify, innovative long-term leases can set rental rates that consider improvements to the long-term agroecology, productivity, beauty, and capital value of rented farmland.

Parting Thoughts on Being a Preferred Tenant

Landowners can benefit from ensuring livestock are grazed on rented farmland. Beef producers need to adopt expressions like 'agroecology', 'habitat', 'soil health' and 'cultural heritage' into their vocabulary to express to potential landlords the value that the grazing of beef cattle brings to rural Ontario. Especially so if they are looking for preferred terms! Unfortunately, none of these attributes are typically measured in land rental payments, but the beauty of rural Ontario is largely the reason people return to the country and purchase farmland. Beef producers can do, and express, their part in keeping Ontario beautiful!

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Forage Insurance

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The forage insurance program proved its worth again in 2016. After 2012, the program underwent some significant enhancements, and this resulted in the highest payout to date in 2016. The insufficient rainfall program had 978 endorsements with 676 claims totalling $6.5 million. The insufficient rainfall program now allows the producer to choose multiple rainfall stations, select from 4 different coverage plans and if the rainfall amounts go below 85% then a payout is triggered. The excess rainfall program insures a 5 day 1st cut harvest window within a 10 day period that can fall between May 22 and July 10. Payment is triggered if there is no 5 day period with less than 5 mm or 7 mm of rain. 2016 saw 288 endorsements in the excess rainfall program and 56 claims, triggering a payment of $750,000. Payments are made close to the time of trigger and can provide much needed cashflow to offset the impacts of drought or excess moisture. The long term forage rainfall claim rates are comparable to that of corn and soybean plans: corn (3.9%), soybeans (5.2%), and forage (7.6%)
http://www.agricorp.com/en-ca/Programs/ProductionInsurance/ForageRainfall/Pages/Overview.aspx

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Buyer beware – Johne's and bull introduction

Ann Godkin's, Lead Veterinarian, Disease Prevention-Dairy & Beef Cattle, OMAFRA, Guelph

In a short time cow-calf herd owners will be adding bulls to their herds to breed their cows and heifers. The selection of a bull is an important decision to make, not only for performance but also for herd health.

Bulls can introduce Johne's into cow-calf herds. Introducing only one young bull from outside your own herd may seem low risk but this is not always true. Typically in Ontario bulls will join the cow herd when cows have new calves at their side. This means that during the breeding season bulls share pasture or housing with young calves that are highly susceptible to becoming newly infected with Johne's bacteria. Bulls shedding Johne's bacteria in their manure can contaminate bedding, pasture ground, forage and water sources. Manure with Johne's bacteria can contaminate cow udders and calf hair coats, leading to calves ingesting enough Johne's bacteria to cause infection.

Johne's is a long term, slowly progressive infection taking years to advance from calf-hood infection to disease signs. Calves are much easier to infect than older cattle. Most Johne's infections start when calves are nursing cows. The most common age for the signs of Johne's disease to occur, chronic diarrhea, is around 4 to 5 years of age. In some cow-calf herds, 4 to 5 years after a Johne's-infected cow or bull has contaminated the calf environment, a high proportion of cows exposed at that time can show up with signs of Johne's. Controlling Johne's in cow-calf herds once it takes hold is very difficult. Keeping Johne's out of the herd entirely to start with is the best strategy.

Just like any calf, bulls can become infected in two ways. The first is by ingestion of Johne's bacteria from the manure of infected cows. This route of infection is more likely when calving occurs indoors and newborn calves are in close contact with the manure from a number of cows. The calf's own dam does not have to be the source of the bacteria under these circumstances. The second way calves become infected with Johne's is by acquiring the infection prior to birth from their own infected mother. A calf is more likely to be born infected when born to a cow at a more advanced stage of the disease. Generally this will be an older cow and not a heifer dam. A Johne's-infected cow does not need appear sick to infect her unborn calf.

Herd owners need to be aware of the risks of introducing Johne's when bringing any cattle into their herd. Bulls may pose exceptional risk because they could come from herds where a lot of animal movement and exposure has occurred and

because they will be in contact with most of the year's calf crop. Owners need to do the best they can to protect their herd from exposure to Johne's-infected bulls. Buying bulls from owners who have participated in Johne's testing and who readily share their herd's test results is one option for reducing risk. Unfortunately routine whole herd testing for Johne's is done by a minority of herds, however demand for such performance records could increase participation in Johne's monitoring and prevention programs by seedstock herd owners.

Bulls entering a herd, even young ones, should be blood tested prior to exposure to other members of the herd. Young cattle truly infected with Johne's can have negative test results because they are still in the early stages of the disease, however, some infected bulls, especially those infected before birth, will have positive tests. Given the low cost of the test (less than $15 laboratory fee) it is reasonable to test potential herd additions, with the understanding that a negative test in a young animal does not mean it is uninfected. When young bulls have a positive test, a follow-up with additional testing will need to be done to verify the outcome. It is worthwhile to know as much as possible about a bull's disease status prior to introduction to your herd. Then you can do the best you can to avoid bringing these potentially infected bulls into your herd. Talk to your herd veterinarian about a plan for bull introduction…Johne's is just one of several diseases that can come into your herd via introduction of new animals.

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Keep Your Livestock Safe from Rabies

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In December of 2015, the first case of raccoon-strain rabies in Ontario in over a decade was detected in the Hamilton area. Over the last year, more than 250 more cases of raccoon strain rabies have been found. In addition, three cases of fox-strain rabies were found in Perth County (2) and Huron County (1). Bat-strain rabies also remains a risk throughout Ontario. It is important for producers, pet owners and members of the public alike to be aware of the risk of rabies in their area and know what precautions to take to avoid exposure to this deadly virus, including avoiding contact with wildlife and vaccination of domestic animals.

For a map of raccoon-strain and fox-strain rabies cases in Ontario for 2016, visit
http://www.omafra.gov.on.ca/english/food/inspection/ahw/rabieszone.htm

What is rabies?
Rabies is caused by a virus that can infect any mammal, including humans. Birds, reptiles, amphibians and fish do not get rabies. In infected mammals, the virus is found in saliva and can be spread through three main ways:

- bites that break the skin
- getting infected saliva in an open cut, sore, or other wound
- getting infected saliva in the mouth, nose, or eyes

The animals that most often transmit rabies in Ontario are bats, foxes, skunks and raccoons. Once signs of rabies appear, in any animal, the disease is virtually always fatal. A series of vaccinations and treatment with rabies antibodies can prevent infection in humans in most cases if administered soon after exposure.

Signs of rabies in animals
Signs of rabies in animals are generally seen in one of two forms: dumb rabies or furious rabies.

Dumb (paralytic) rabies

- Animals may become depressed and retreat to isolated places.
- Signs of paralysis or paresis (i.e., partial paralysis) may be seen.

- Head and neck paralysis may result in abnormal facial expressions, drooling, drooping head, sagging jaw, or strange vocal sounds. Cattle in particular may exhibit unusual bellowing.
- Body paralysis usually begins in the hind limbs and spreads to the rest of the body. In acute cases in cattle the animal may present as a downer.

Furious rabies

- Animals may display extreme excitement, aggression, or be hyper-reactive to stimulation.
- An animal may gnaw and bite its own limbs or body.
- Animals may attack objects or other animals (or people) for no apparent reason.
  - Bouts of furious behaviour usually alternate with periods of depression.

Exposure of a person

If you are bitten by an animal or if infectious material (such as saliva) from an animal gets into your eyes, nose, mouth, or broken skin, wash the area immediately and thoroughly with lots of soap and water. Washing immediately can greatly reduce the risk of infection.

Contact your doctor or your local public health unit immediately, as they can help determine your risk of exposure to rabies. If the risk is significant, rabies antibodies can be administered followed by a series of rabies vaccinations over 2 weeks. This treatment is very effective for preventing rabies in people if done promptly.

Exposure of a domestic animal

If one of your animals (dog, cat, cattle or other) may have been bitten or otherwise exposed to the saliva of a potentially rabid animal, or if your animal is behaving abnormally and you think it could have rabies, contact your veterinarian right away. Your veterinarian will assess the risk of rabies, and if needed will contact OMAFRA for additional assistance.

If the animal that did the biting (or the suspected rabid animal) is dead, then testing can be performed to determine the risk to other animals or people. Testing in the case of human exposures is arranged through the local public health unit. Testing in the case of domestic animal exposures is arranged through your veterinarian, with assistance from OMAFRA.

Preventing rabies

The best way to prevent rabies is to avoid contact with potentially rabid animals, or wildlife that are more likely to be carrying the virus (foxes, skunks, raccoons and bats). Dogs and cats are required to be vaccinated for rabies every 1-3 years in most parts of Ontario. There are also rabies vaccines available for livestock – if your animals are in a high-risk area where there have been recent cases of rabies, or if you have particularly valuable animals or animals that may have a lot of contact with people (e.g., show animals) talk to your veterinarian about vaccinating them for rabies.

For more information see Rabies in Ontario.

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Beef Calving Season Preparation

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Calving season, it's the most wonderful time in the world. Being ready for it can help make life a lot easier in this hectic time. Depending on when you calve, different tools and decisions may enter into your preparation time. Regardless of time of year, being ready, as the boy scouts declare, is the key to a successful calving season.

Genetic Selection:
One of the earliest factors in determining calving season success occurs nine months before the season starts. Getting your genetics right is the baseline for your herd. Select strong maternal cows with adequate milk and maternal traits. Milk can be an expensive attribute, so making sure you have enough without too high a milk epd (expected progeny difference) is advisable. Typically within 5% of breed average can be a good goal for your cow herd. As well, a new born calf has an easier time latching on to smaller teats on medium sized udders.

The other side of the genetic equation is the bull that the female is bred to. Being cognizant of the calving ease of the sire will let you match him with the proper females. Calving ease and birth weight epds will provide you with the information to pick bulls that should provide calves suited to the size of the cows. While actual birth weight on your sire and his offspring are helpful, using epds can provide more accuracy in mating selection. Some cows can handle larger calves at birth, but heifers and smaller framed cows may benefit from bulls with easier calving traits. The first rule of beef calving is that live calves make more money than dead calves.

Figure 1. Be prepared for calving season.

For more information on bull selection refer to:
http://www.omafra.gov.on.ca/english/livestock/beef/news/vbn1016a2.htm

Body Condition Scoring:
Body condition scoring is the art of categorizing the condition of your cows. Using a scale of 1 to 5 you can rate the cow from thin to fat. A rating of 3 would be average or good condition. After scoring your cows in the fall, sort into groups to provide better feed to those cows which are a little thinner, and maybe use lower quality feed on cows that are a little on the plump side. It is easier to condition cows prior to calving than to try to adjust condition on a milking cow. Christoph Wand, OMAFRA Sustainability Specialist states: “The nutrition of the cow in the last 1.5 months of gestation is critical. If at no other time in pregnancy an effort is made to elevate the plane of nutrition it must happen here!” Calves from a cow in low nutrition have lower vigour, health and performance.
Younger and thinner cows grouped together and away from bigger and more dominant cows can often do better just from freer access to feed without being bullied.

Figure 2. Nutrition of the beef cow is critical to provide healthy calves.

For more information on the benefits of managing nutrition for cows prior to calving refer to:
http://www.omafra.gov.on.ca/english/livestock/beef/news/vbn0209a6.htm

Health:
Every beef farm in Ontario needs a Veterinary Client Relationship in order to be able to purchase medications from their veterinarian. This means that your veterinarian must visit the farm to discuss management, plus health regime required including appropriate vaccines. This call is not supposed to be a 2 a.m. visit during calving season to assist with a calving emergency. It is to be a management team meeting between professionals, the farmer and the veterinarian. After understanding your livestock management, your veterinarian can provide solid vaccination protocol advice.

Some standard calving season vaccination strategies might include:
Precalving scour vaccinations help reduce the incidence of scours after calving. Giving respiratory vaccines at the same time can reduce one handling, provided this works for your vaccine schedule.

Treating cows for lice if there is excessive rubbing or hair loss can also assist with body condition and overall wellbeing of the cow.

Cleanliness:
Keeping cows clean also helps reduce potential disease load. Make sure that the cows have clean dry straw to rest on. Not only will this reduce manure build up on the cow udder and legs, but it will keep cows more comfortable. Cows require shelter from wind, and excessive mud. Cold is not as much an issue as wet or windy conditions.

Feeding time:
Reduce the number of cows calving during the night period by manipulating the feeding time. Admittedly, this is a challenge if the cows are on a constant supply of forage. However, studies consistently show that by feeding cows later in the day, fewer cows will calve at night, with more waiting until early morning.

Figure 2.
Facilities:
I have already mentioned that cows need wind breaks. However, it is nice to have a pen area to put mother and calf together to bond, especially with a heifer, who may not understand why this little animal is trying to eat from her. Having a head gate or some method of restraining the cow can also be beneficial if you have to help the calf to nurse. Another facility requirement would be some pen area where calves can get to that the mature animals cannot. Use a board or gating system to restrict access to cows, but which lets calves enter their own area. The calves will quickly learn to sleep in this area to avoid overcrowding or being stepped on by cows.

Equipment:
Some basic tools to have ready for calving:

- veterinarian phone number
- calf jack puller
- obstetrics kit including chains and handles
- lubricant / disinfectant for when you check cows for problems calving
- halter
- needles and syringes
- vitamin a and D and Vitamin E injectables for new born calves
- Iodine for dipping navels
- herd identification tags, marker for writing herd numbers and any other identifiers on the tag (cow number, sire)
- castration rings and castrator or knife
- stomach tuber
- artificial colostrum

Neonatal care:
Be calm, but careful around pregnant and new born mothers. Do not get trapped in a pen with them.

Check cows if not making progress calving after a period of time.

Know how to use calving chains properly: This video shows clearly the proper method of using them:
https://www.youtube.com/watch?v=vJRDvhb8QUQ

After birth, ensure calf is breathing. Then make sure the calf receives colostrum within 2 hours. Ensure udder is clean, teats are unclogged, and calf can suck on his/her own. If they can't, use a stomach tuber to place colostrum into the calf

(at least 2 litres if possible). Milk the cow and place colostrum in stomach tuber. If the cow can't be milked, use artificial colostrum.

Dip the navel in iodine if health care protocol calls for this.

Make sure calf is dry (mother licks it off), and that mother is receptive to the calf.

If health care protocol calls for this, provide new born calf with appropriate vitamins and minerals.

Calving season is a most exciting time as we look forward to the new calf crop being born. Being prepared helps alleviate stress, making for a most wonderful time.

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