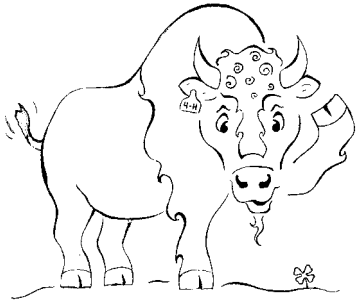


The New born Calf



Roll Call:

Use one new word to describe a newborn calf

The first few days

Always remember that the first couple of days are very important for the bison calf. Within minutes of being born the newborn bison will be struggling up onto it's feet, and shortly after that the baby should be looking for a their first meal. It is essential that the calf get a drink of colostrum within the first 4 - 12 hours of birth.

Can you unscramble these important ingredients contained in the colostrum. These ingredients will give the calf the important start it needs.

N R M I L E S A _____

X V T I A A E L S _____

S T O R E I N P _____

A S M V T N I I _____

B A N D I O S I E T _____



Colostrum contains a laxative that will help the calf to pass the dark sticky waste material that has collected in the intestine while the calf was in the mother. This fetal excrement is called the **meconium**, and it should be passed 4 - 12 hours after birth.

Keeping the baby healthy

Just like us, calves have to be protected more from sickness when they are young than when they are adults. This is especially true for newborn calves. Two of the most serious sicknesses for young calves are diarrhea (scours) and pneumonia.

Diarrhea (scours)

Diarrhea, or calf scours, usually occurs during the first month of life.

Signs are often difficult to detect in a bison calf, and therefore by the time you see visual signs it may be too late. Prevention is really the best answer; however here are a number of signs that a calf with diarrhea may indicate:

- thin, watery, smelly manure or scours
- calf's hindquarters are stained with manure
- calf is inactive
- the calf's body is losing water or becoming dehydrated
- the calf may appear hunched due to a lower than normal temperature
- calf is becoming weak
- if very serious, death.

Calf scours, also referred to as neonatal diarrhea, is now becoming more of an issue with bison. It may be caused by several different **pathogens**.

These harmful little microorganisms can remain alive in the environment for several weeks or even months in the right conditions! Their favourite place to live is in crowded pens or pasture where manure begins to build up.

When the calf ingests the pathogens, they will gather in the intestine of the calf and begin to multiply, and prevent the intestine from functioning properly. If you recall the intestines absorb what is left of the fluid from the food material. Diarrhea occurs when the intestines are unable to absorb the excess fluid. This excess is then passed out of the body without benefit.

Dehydration occurs as a result of the diarrhea, and the calf will need to be treated with oral fluids and electrolytes in order to replenish the body.

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The types of bacteria scours common in cattle and believed to also affect bison are

Septicemia	bacteria enters bloodstream causing infection most often found in calves less than ten days old that didn't receive enough colostrum chills, fever and weakness infected calves die suddenly
Enterotoxemia	bacteria produces poisons in intestine calf's temperature drops no diarrhea may be noticed infected calves often die
Enteritis	common in young calves body rapidly loses water or dehydrates temperature increases calf becomes weak
Salmonellosis	least common usually affects older calves symptoms are similar to enteritis

Scours can be treated by

- orally replacing the lost fluids and electrolytes that the calf loses to diarrhea
- intravenous fluids and electrolytes for more severe cases
- an injection or oral antibiotic given to fight any secondary infections
- calling your veterinarian if it becomes very serious

As you can see these little pathogens can create quite a big problem!! This is why prevention becomes the best defense against them.

The bison are very smart. Remember how the wild bison use migration. How would migration help to combat the pathogens that cause scours in bison calves?

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You can help to prevent scours by

- providing a clean open space for calving
- reduce the stress on the cow herd by not disturbing or chasing them
- providing them with trees for shade, shelter and coverage for hiding (remember they are only semi-domesticated)
- making sure your cows get proper nutrition before and into calving season so they can raise a strong healthy calf
- making sure the calf gets colostrum as soon as possible after birth, but this must be done without disturbing the herd (sometimes a set of binoculars can be your best piece of calving equipment)
- vaccinating the cow herd several weeks before calving to boost the amount of antibody protection provided to the calf in the colostrum

Pneumonia

Signs that a calf may have pneumonia include:

- panting
- coughing, runny nose and eyes
- not eating
- poor growth
- depressed
- temperature is higher than normal

Pneumonia is a very serious illness and can cause death in three to four days.

Pneumonia may be caused by a virus the cow breaths out, and if the calf has not developed antibodies to fight disease they will become ill. Development of antibodies occurs at about three to four months of age. Before that, the calf is susceptible to the pneumonia virus.

Pneumonia can be treated by:

- antibiotics on the advice of your veterinarian

You can help to prevent pneumonia by keeping your entire herd healthy and free from disease.



Activity: What's the Problem?

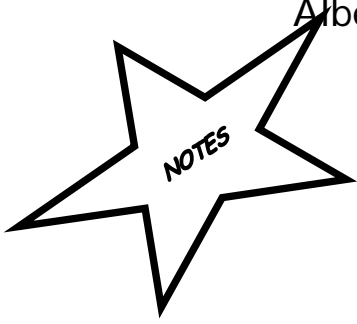
Keep the newborn calves healthy. In the puzzle below, find as many of these words as you can about the things you need to keep your calves healthy. Each of the words is in a straight line – horizontal, vertical diagonal, backwards or forwards.

- ANTIBODIES
- APPETITE
- CLEAN
- COLOSTRUM
- DRY
- ENERGY
- GROWTH
- MINERAL
- MOTHER
- PROTEIN
- TEMPERATURE
- VITAMINS
- WATER

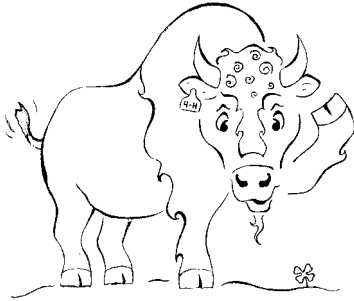
T	Y	N	A	E	L	C	*
E	V	E	R	G	H	O	S
M	I	N	E	R	A	L	E
P	T	E	H	O	T	O	I
E	A	R	T	W	N	S	D
R	M	G	O	T	I	T	O
A	I	Y	M	H	E	R	B
T	N	D	R	Y	T	U	I
U	S	L	A	E	O	M	T
R	W	A	T	E	R	H	N
E	T	I	T	E	P	P	A

The remaining letters spell the word that completes this sentence "As a bison producer, the main objective is to raise strong, _____ calves."





Bison Handling



Roll Call:

List one thing you must remember when working with bison.

Bison behaviour

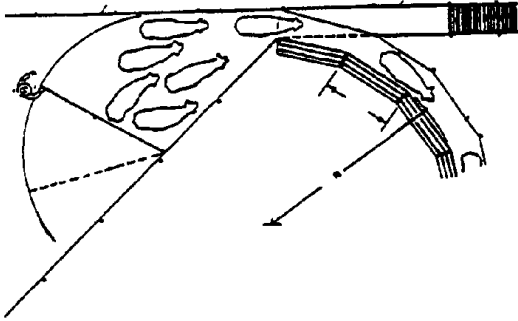
Bison are good swimmers and are capable of running as fast as 62 km/hr. They also have very keen senses and are cognitive of the things surrounding them. Bison are able to distinguish large objects from a distance of one kilometer, and moving objects as far as two kilometers away!! These senses have been highly developed out of necessity and need. Understanding the nature of the bison will allow you to work them with less danger to you and them.

Facilities for handling bison

All bison operations need some type of handling facilities. A well designed bison handling facilities have these advantages:

- They save the producer time and labour. The producer can handle a larger number of animals, with greater ease, in less time with the right facilities.
- They increase the safety of the bison producer and the bison. Good facilities, with slip resistant flooring, will reduce the level of stress and help to prevent injury.
- They give the producer the opportunity to maximize their management.

Good facilities for handling and housing bison are simple, strong and durable. Bison must be directed or “led”, with feed or salt, toward the holding pen. Once the animals are within the system, then they can be forced through. There are three main parts to the bison handling facilities.

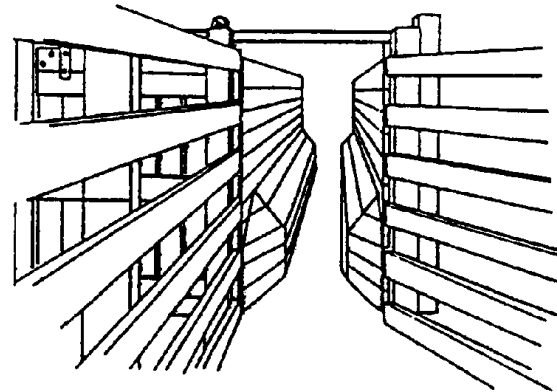


Crowding pen

The circular or angular crowding pen funnels the bison into the working chute. The crowd gate is used to force the animals toward the chute. Bison must have solid sides and crowding gates.

Working chute

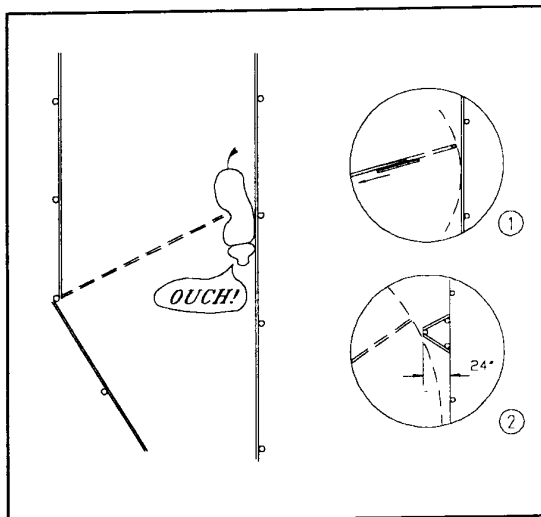
The working chute lines up and holds the bison in single file ready to enter the squeeze. It should be solid walls and narrow enough so they cannot turn around. Animals will move most easily through a curved chute.



It is very important that bison facilities be designed so that handlers can operate gates without being among the animals.

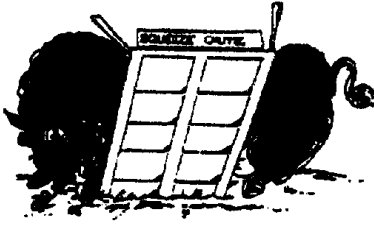
Bison will remain calmer the animals are held together in the crowding tub and then brought individually to the squeeze chute from the crowding pen. If bison are held standing in a single file chute, the bison should be held in a separate compartment between solid sliding gates.

The highest risk of injury occurs at the cutting and crowding gates. Bison are quick and will charge past the gate if given the opportunity. Serious injuries can occur if animals are crushed between the gate and the fence.



On the left are two modifications that can be made to help reduce the incidence of injury. 1) Install a small sliding gate at the latch end of the main gate and 2) make a triangular cut-off wedge at the critical "pinch point" on the corral wall.

Headgate



Bison are extremely fast, when coupled with the fact their head is often larger than the body, it makes catching them in a standard cattle squeeze quite challenging. For this reason, bison squeezes are usually modified to include a “crash cage”, which is steel bars about 40 cm ahead of the headgate.

After the animal leaves the squeeze or treatment facility they will need a place to go. Cattle are relatively easy to sort and move to the appropriate pens, however bison will need to be sorted right from the chute. Therefore a bit of planning will need to go into the design to see this problem is addressed. The most important component to working bison is “patience”.

At the back of this unit there are six different designs of handling facilities. Starting up a bison operation is a significant investment. In order to protect that investment the producer must consider their handling facility. Does it allow the handler to move the bison through in a stress free manner?

Transportation of bison

Canada has strict rules pertaining to the transporting of all livestock. These rules are enforced under the Health of Animals Act, and are in place to protect the animals from injury, sickness and death. Following are some criteria that must be followed:

Animals of different species, or substantially different sizes and ages, or of different genders shall be segregated.

- Animals must have sufficient headroom to stand in a normally comfortable position.
- It must have drainage and absorption of urine.
- Floor of the transport unit must be either sufficiently sanded or have footholds in addition to adequate bedding.
- Must ensure that all animals unloaded for water, feed and rest remain in one location for no less than 5 hours.
- Ensure that transported calves too young to exist on hay and grain are provided with suitable food and water at intervals of not more than 18 hours.
- Completed manifest and record of movement of bison.
- All records must be kept for a minimum of two years and be provided to an inspector on demand.

The following are things that you **must not** do when transporting livestock in Canada:

- Transport a sick or injured animal where undue suffering may result, or when the animal is liable to give birth during the journey.
- Continue to transport an animal that is injured, becomes ill, or is otherwise unfit to travel beyond the nearest treatment location.
- Mishandle an animal during loading or unloading. Also loading and unloading in an area that may cause injury or suffering.
- Use prods on the face, anal, udder or genital area.
- Transport animals in a unit that does not protect from the elements, is of poor or unsound construction, or is unventilated.
- Use ramps or loading chutes that may cause injury or harm to the animals.
- Confine young calves in a vehicle for longer than 36 hours.
- Confine mature bison in a vehicle for longer than 48 hours unless they can reach their final destination in 52 hours where they will be fed, watered and rested.
- Any animal that is to be transported for more than 24 hours, must be rested for a minimum of five hours with food and water available.

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Space requirements for bison:

For bison that are dehorned or have horns but are under one year of age – allow one square foot for every 70 pounds. For example a 350 lb. calf needs five square feet. A 700 lb. yearling needs 10 square feet. And a 1000 lb. cow needs 14.3 square feet. A 7'x8' compartment would hold 3.9 cows that weigh 1000 pounds.

For horned bison that are over one year of age – allow one square foot for every 55 pounds. For example a horned cow that weighs 1000 lb. needs 18.2 square feet. A 7'x8' compartment would hold three horned cows.