

Unit Ten

Managing The Beef Herd Sire

Roll Call

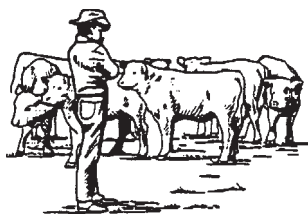
Tell one thing you must remember when looking after your beef bull(s).

Selecting the Bull

An important part of beef herd management is selecting a bull for your herd. A good bull is one which will have a positive effect on your herd today and in the future.

When evaluating potential herd sires, there are three areas you need to consider

- Genetic Potential
- Physical Condition
- Breeding Ability



Genetic Potential

Cattle are different from one another in their size, their rate of growth, feed efficiency, colour and carcass characteristics. Some of these differences are determined by genes. Genes are inherited from the mother and father.

Some characteristics, such as fast growth rates, are desirable to the cattle producer. When you select a bull, you must look for one which has good genetic potential. That means that he has the potential to transfer beneficial characteristics to his offspring.

Genetic potential can be determined from

- the bull’s performance (growth rate and feed efficiency)
- the performance of his offspring or progeny.

Physical Condition

When selecting your prospective herd sire, judge him as you would any other beef animal. Look at these characteristics.

Skeleton	<ul style="list-style-type: none"> • height and body length • look for long body, strong topline, lots of width and depth
Muscling	<ul style="list-style-type: none"> • above average muscling • trim brisket and underline
Legs	<ul style="list-style-type: none"> • structurally correct, strong and sound
Feet	<ul style="list-style-type: none"> • free from injury and disease

When buying or leasing a bull, select him from a reputable disease-free herd. It is a good idea to have your veterinarian inspect your bull before you bring him into contact with the rest of your herd.

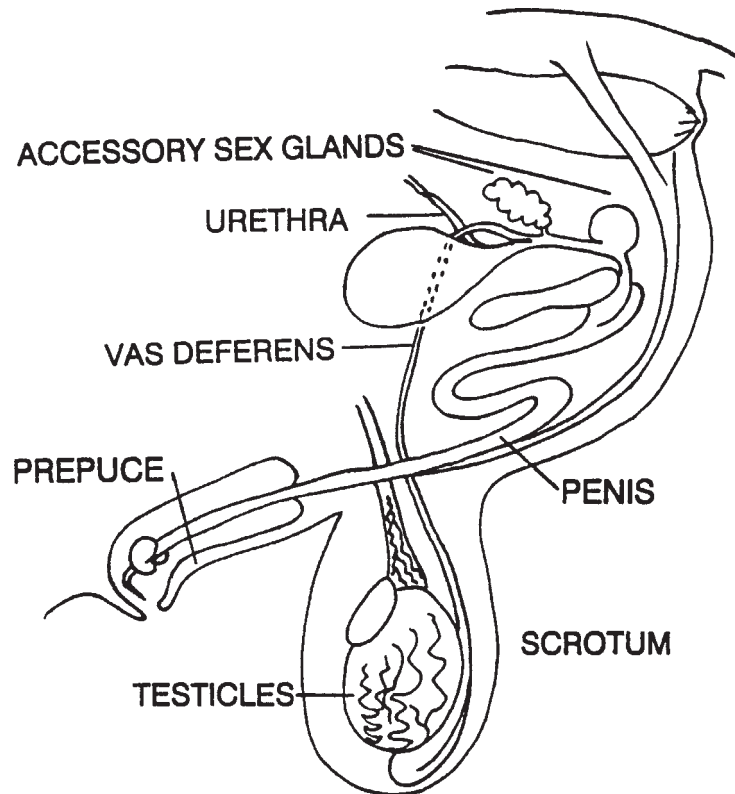
Breeding Ability

Beef bulls are often selected on the basis of performance, progeny tests, frame score and show ring results. Unfortunately, breeding ability and fertility, the most important aspects of a successful herd sire, are often forgotten.

At least eight weeks before the beginning of the breeding season, examine all bulls for breeding soundness. Bulls which have unsatisfactory results can then be culled and replaced before your breeding season starts. Examining now will improve your chances of having an early, short calving season, resulting in more calves weaned at heavier weights.

An examination for breeding soundness should include examinations of

- scrotal size
- semen quality
- libido and serving capacity.



Reproductive Organs of the Bull

Scrotal Size, as measured by the circumference of the scrotum, indicates the size of the testicles and is closely related to the sperm production. Research shows that bulls with larger testicles are usually more fertile than bulls with smaller testicles.

Measuring Scrotal Circumference

- Use a commercially available flexible cloth or metal tape.
- Restrain the bull securely in a headgate.
- Gently grasp the testicles at the neck of the scrotum.
- Encircle the neck of the scrotum between your thumb and forefinger, then pull the testicles firmly down into the base of the scrotum.
- Loop the tape over the scrotum and pull it snugly around the fullest part of the scrotum.
- Read the measurement on the tape.

Breeders, breed associations, veterinarians and researchers have established minimums which bulls must meet for breeding soundness evaluations. Scrotal circumference should be 32-33 cm or greater. This does not guarantee fertility, but is a guideline only. Yearlings and young bulls with scrotal circumferences of less than 30 cm are likely to be poor breeders and should be culled. Scrotal circumferences for breeds commonly found in Western Canada are listed in the following chart.

Scrotal Circumference of Yearling Bulls

Breed	Average Scrotal Circumference (cm)
Aberdeen Angus	35.9
Blonde D'Aquitane	33.9
Charolais	34.7
Hereford	34.8
Limousin	32.1
Maine Anjou	35.8
Shorthorn	34.5
Simmental	38.2

Source - Coulter, 1980

Until the bull matures, his weight and age will determine the development of his testicles. From six to 14 months of age, the growth of the testicles is very rapid. Feeding good levels of nutrition during this time will ensure proper testicle growth.

Semen quality should be considered in your breeding soundness evaluation. The firmness of the testicles provides a good indication of the quality of semen produced. Manually palpate the testicles to determine their firmness. Firm testicles generally produce good quality semen. If the testicles are very hard or soft you should conduct a semen evaluation to determine the fertility.

To complete an accurate evaluation, a semen sample must be obtained. Semen samples can be collected by a qualified veterinarian or technician using an electro-ejaculator or artificial vagina. The sample is evaluated for colour, volume, sperm concentration, sperm movement (motility) and overall quality. Injury or sickness can cause temporary infertility, so do not immediately cull the bull. Re-evaluate the bull in six to eight weeks.

Libido or desire to mate affects the breeding success of your bull(s). Having normal testicles and good quality semen is of little value to a bull unless he has the desire to seek out cows in heat and has the ability to mate successfully.

Libido is not related to the breeding ability characteristics of semen quality or scrotal circumference. Bulls that grow the fastest or are the most masculine do not necessarily have the greatest libido. Libido is the willingness or eagerness to mount and impregnate cattle.

Serving capacity is the number of services a bull can complete under natural mating conditions over one oestrus cycle of 21 days.

Generally, a bull distributes his services equally among the cows in heat. The more times a bull can service, the greater will be the number of cows in calf.

To test a bull's serving capacity, expose a bull to a number of restrained cows or heifers for about 40 minutes. The number served in this time will give a good indication of the bull's serving capacity. This test will also give you an opportunity to detect those bulls with high or low libido as well as those with injuries or abnormalities which interfere with breeding.



Activity:

Let's Review

Select a bull and use him as an example to complete this evaluation.

Genetic Potential

Look at the bull's pedigree and note the important information.

Tell about the bull's parents. If the bull has any offspring, tell about them.

Physical Condition

Each year, before the start of the breeding season, it is important to evaluate your herd sire(s). Work through the following chart, completing this evaluation. Check “yes” or “no” for each question.

		Yes	No
Appearance	<ul style="list-style-type: none"> • Is the bull too fat? • Is the bull too thin? • Evidence of parasites? • Is the coat shiny and healthy? • Does he stand comfortably? • Does he move well? 		
Eyes	<ul style="list-style-type: none"> • Are they bright, clear and alert? 		
Feet and Legs	<ul style="list-style-type: none"> • Are they structurally correct? • Any signs of injury or disease? • Do they need trimming? 		
Testicles	<ul style="list-style-type: none"> • Is size normal? • Is shape normal? • Any signs of swelling or injury? 		
Penis	<ul style="list-style-type: none"> • Any signs of infection? • Any signs of abnormalities? 		

Breeding Ability

An examination for breeding soundness should include examination of three areas. These areas and important information about them are

Unit Eleven

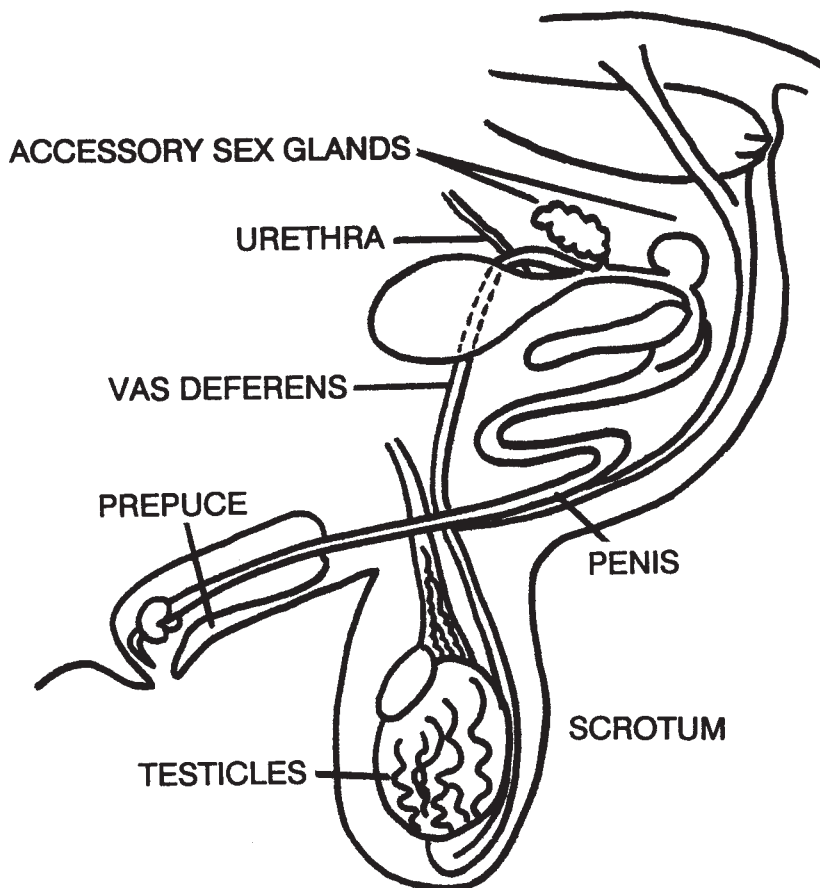
Beef Breeding**Roll Call**

Tell one thing you know about breeding beef cattle.

The Male Reproductive System

The male reproductive system is made up of two bean shaped **testicles**, the **accessory sex glands** and the **penis**. The diagram below shows all of the reproductive organs of the bull.

The Male Reproductive System



The **scrotum** holds the two **testicles**. These testicles produce the **sperm** or spermatozoa which fertilizes the egg in the female. The testicles also produce the male hormone, **testosterone**. This hormone gives the bull his masculine characteristics and appearance.

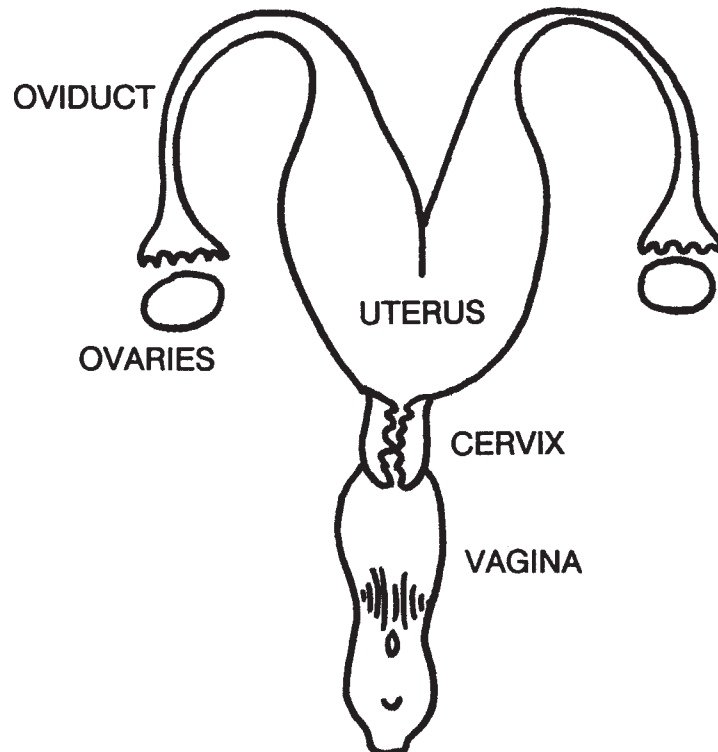
The scrotum helps to keep the testicles at an even temperature. For normal sperm production to occur, the testicles must be kept at a temperature several degrees cooler than body temperature. If they are too warm, or too cold, sperm fertility levels will be lower.

Each testicle is connected to the urethra by the **vas deferens**. The **semen**, containing the sperm, is produced in the testicles, passes up the vas deferens and into the **urethra**. The urethra contains the **accessory sex glands**. These glands secrete fluids which add volume to the sperm, provide nutrition to the sperm and clean and lubricate the reproductive tract. This fluid or semen moves out of the body through the **penis**.

The Female Reproductive System

The following diagram shows the reproductive organs of the mature female.

The Female Reproductive System



The mature female has two almond shaped organs called **ovaries**. The ovaries produce eggs and the female hormones. These hormones control the female reproductive cycle.

The ovaries are suspended by a coiled tube called the **oviduct**. Fertilization, or the joining of the egg from the female and the sperm from the male, occurs in the oviduct.

The oviduct leads from the ovary to the **uterus** or womb. Once an egg is fertilized, it enters the uterus, implants in the wall of the uterus and begins to grow.

The lower opening from the uterus is the **cervix**. The cervix has many folds and interlocking rings. Its main function is to prevent intruders from entering the uterus. The cervix remains tightly closed except during oestrus when it relaxes, allowing the sperm to enter. During pregnancy, the cervix remains tightly closed. It relaxes just before calving to allow the calf to exit the female's body.

The **vagina** is the tube which connects the cervix to the outer opening of the body. The bull deposits his semen in the vagina during mating. The vagina is the passage through which the calf exits during calving.

Is Your Cow Pregnant?

At the end of the breeding season, it is important for you to know if your cows and heifers are pregnant.

One way to find out if your females are pregnant is to pregnancy check them. Non-pregnant females can then be culled from the herd so they do not continue to cost you money. If you choose to keep and rebreed them, be aware that you will have an extended calving season.

What are some of the advantages of detecting pregnancy early?

The method of pregnancy detection most commonly used is palpation of the reproductive tract. To do this without harming the cow or the fetus and be correct in your detection, you must have a thorough understanding of the reproductive system and the changes which occur in the female body during pregnancy.

Wearing a lubricated protective rubber or plastic sleeve over the arm and hand, the palpator reaches into the rectum of the cow and feels the uterus. The cattle must be properly restrained in a chute to avoid injury to the palpator and the cow. With experience, a palpator can make pregnancy detections as early as 30 days after breeding. Most people prefer to do their pregnancy detection 45 days to three months after the end of breeding season because the signs of pregnancy are more obvious.

The Calving Interval

The calving interval is the length of time between the birth of one calf and the birth of a calf in the following year. Breeders should attempt to have calving intervals of twelve months.

The gestation period for a cow is about 283 days. This means that there are only about 80 days left in the year to rebreed that cow so she can keep her calving interval at twelve months.

This does not allow very much time for the cow to recover from pregnancy and calving. Her reproductive tract must return to its normal size and shape. It takes from 30 to 45 days for the cow's reproductive tract to recover from calving. If it was a difficult pregnancy and calving, it will take even longer.

Most cows will not show signs of oestrus until about 60 days after calving. The time from calving to first oestrus varies greatly from one animal to the next. Factors which can affect how long it takes for the cow to return to oestrus after calving include

- **Age** - Older cows return to oestrus faster than heifers.
- **Nutrition** - Cows which are deficient in a nutrient can have poorer reproductive performance. A low level of nutrition before calving will increase the amount of time it takes a cow to return to heat.
- **Calving problems** - If a cow has a difficult calving, it will take her longer to recover and return to oestrus.
- **Weight and body condition** - Cows in good condition before calving will return to oestrus sooner than cows which were in thin or fat condition.

What is the calving interval (or predicted calving interval) for each of these cows?
Would you want this cow in your herd?

_____ Betsy calved on February 15th last year and on March 1st this year.

Calving Interval _____

_____ Louise calved on January 20th last year and January 30th this year.

Calving Interval _____

_____ Joellen calved January 31st last year and March 29th this year. She is your best cow, is seven years old and this is the first time her calving interval has been more than 12.5 months.

Calving Interval _____

_____ Marylou calved on January 15th last year. You bred her artificially on April 15th and she was confirmed pregnant on June 30th.

Calving Interval _____

_____ Lola calved on January 30th last year and March 25th this year. On May 30th, you found out she was not pregnant.

Calving Interval _____



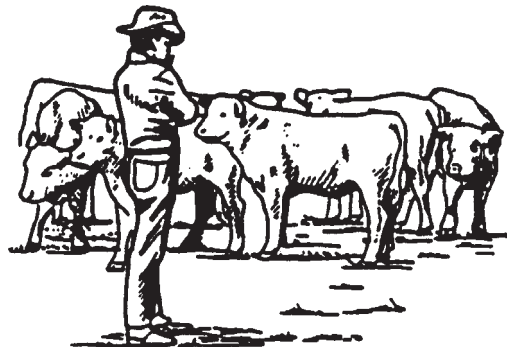
Activity:

Repro Summary

When you finish this match-em-up activity, you will have a summary of the information covered in this unit.

Go ahead - draw a line from the word or phrase on the left to the corresponding explanation on the right.

gestation	*	*	approximately 283 days
palpation	*	*	ideal calving interval
oestrus	*	*	hormone which gives the bull his masculine appearance
testicles	*	*	where the fetus or baby calf grows and develops during pregnancy
testosterone	*	*	semen is placed in the female reproductive tract using artificial techniques
12 months	*	*	occurs about every 21 days
calving interval	*	*	almond shaped
uterus	*	*	produce the sperm
AI	*	*	pregnancy test
ovaries	*	*	length of time between the birth of one calf and the next



Unit Twelve**Calving****Roll Call**

How can you tell your cow will soon calve?

Dystocia

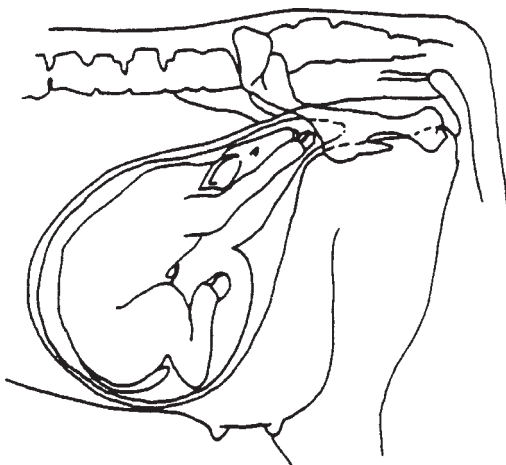
Dystocia, or difficulty in calving may occur at any stage of the calving. There are many possible causes for dystocia

- incorrect position of the calf
- small or immature cow or heifer
- abnormalities of the pelvis in the cow
- distortion of the uterus in the cow
- very large calf
- more than one calf (twins or triplets).

Correcting the Position of the Calf

Dystocia is often caused by incorrect position of the calf. It is possible to return the calf to the normal position to allow birthing.

Remember that the normal birthing position of the calf is with the head and front feet toward the opening of the birth canal.

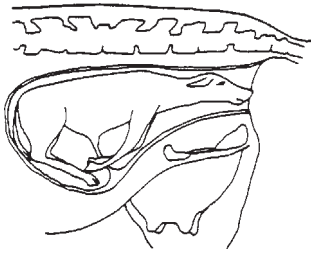
**The Position of the Calf in a Normal Birth**

Your goal in helping with delivery is to correct the position of the calf so it can be successfully delivered. It is possible to deliver a calf when it is not in the normal position. If the calf is backwards, do not try to turn it around, but deliver it as quickly as possible.

When you try to correct the position of the calf before birth, follow these practices

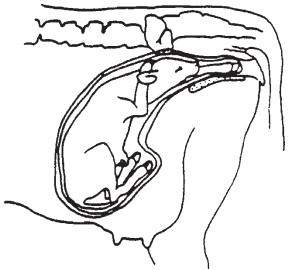
- remove all your jewellery and restricting clothing.
- wash yourself and the cow's vaginal area with a mixture of soap, warm water and mild disinfectant.
- take care not to puncture the cow's uterus with your fingers or the calf's hooves.
- when moving the legs, place the calf's hooves in the cup of your hand
- do the repositioning between contractions to avoid injury to yourself, the calf and the cow.

Let's look at some of the incorrect calf positions you may find. Beside each is the recommended way to correct it.



◆ Head first with one or both legs bent back.

- push calf back into the uterus.
- pull the calf's hoof upward and toward the birth canal or grasp the cannon bone of the leg near the pastern if you can't reach the hoof.
- move the front legs to the birth canal beside the head.



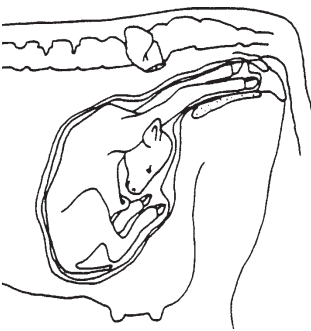
◆ Head and one leg first with other leg crossed over the neck.

- push calf back into the uterus.
- grasp the leg which is over the neck at the cannon bone near the pastern.
- raise the leg over the head and pull it into the birth canal.



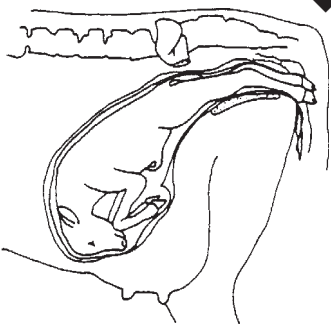
◆ Front feet first with the head twisted backwards. (you will be able to feel the head along one side of the calf)

- push calf back into the uterus and grasp calf's nose.
- pull head downwards to the side and then toward birth canal.
- be very careful not to break the neck of the calf.



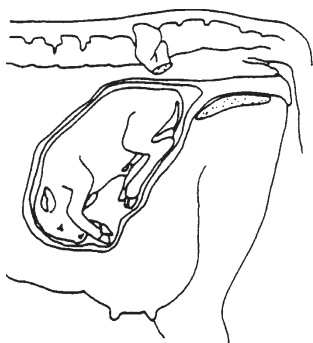
◆ Front feet first with the head bent down between the legs.

- attach the calving chains to the front legs so you will be able to pull them back into the birth canal after correcting the position of the head.
- push calf back into the uterus.
- raise one leg to make room to move the head.
- grasp head of calf at the muzzle, pull upward toward birth canal.
- return leg to correct position.

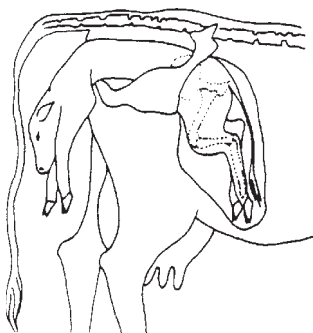


◆ Breech calf - backwards with hind feet first.

- you will feel the hind feet and the tail first.
- you can tell these are hind feet - the front leg has one joint, the knee between the foot and elbow; hind leg has no joint between the foot and hock.
- it is important to get labour moving quickly - the calf will suffocate in this position; the umbilical cord may rupture before the calf's nose is out of the reproductive tract and the calf will be able to breathe.



- ◆ Breech calf - backwards with rear legs tucked under its body.
 - push calf back into the uterus.
 - if you can reach the hooves, grasp them; if not, grasp the legs at the cannon bones just below the hock.
 - pull upward and toward the birth canal.
 - remember to grasp the hooves so the pastern bends and the hooves stay in your hand so they don't puncture or tear the uterus.
 - make sure the tail does not turn back over the thighs.



- ◆ Hiplock - calf sticks at the hips.
 - lubricate the calf by rubbing grease (lard) around the hips.
 - rotate the calf so it is on its side.
 - have your helper press gently up and down on the calf's middle.
 - if you cannot deliver the calf easily, call your veterinarian.



Multiple Births

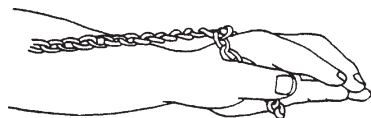
Occasionally, twins or triplets cause difficult calving. If you are assisting in the delivery, make sure the two front feet you are pulling belong to the same calf.

Assisting the Delivery

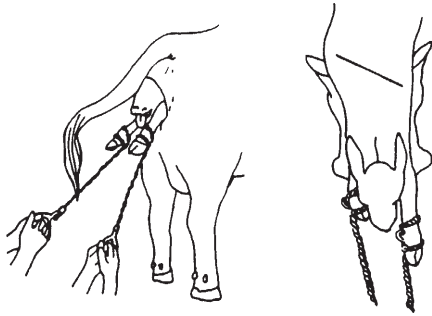
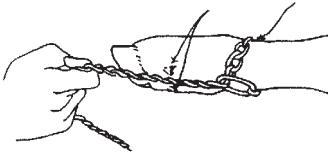
Once you have placed the calf in the correct position, you will often have to help remove it from the cow. Follow these steps for using **calving chains**.



- Soak the chains and handles in disinfectant.
- Make a loop in the calving chain by passing one end through the large ring at the end of the chain.



- Slip the loop over your lubricated hand. Form a cone with your fingers and thumb to make it easier and safer to enter the cow. Slip the loop over the leg of the calf and slide it up past the dew claws. Put slight pressure on the chain to make sure it does not slip off.

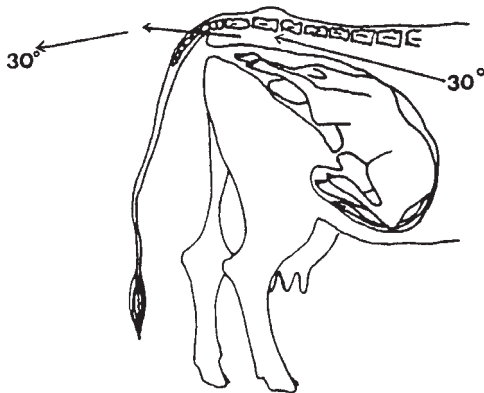


- Make sure the chains come up from the underside of the leg (the dew claw side) so you can pull the legs straight.
- Make a half hitch in the chain between the dew claws and the hoof head. This will help to distribute the stress on the bones when the calf is pulled, reducing the possibility of breakage. Repeat this on the other leg. Attach the handles to the chains.
- Pull first on one leg and then on the other. By pulling alternately, the calf will pass through the pelvis more easily because the shoulders and the hips will be on a slight angle.

- To avoid damage to the reproductive tract, the calf should be pulled at the same angles which occur during natural birth.

In a normal birth, the calf moves upward at an angle 30 degrees up from horizontal, horizontally through the birth canal then downward at an angle 30 degrees down from horizontal when the calf is leaving the birth canal.

- Apply pressure. Work with the cow, pulling when she strains or pushes and relaxing slightly when she relaxes.
- If you cannot help the cow quickly and easily, check the position of the calf again. Correct it if you can. Call your veterinarian for assistance.



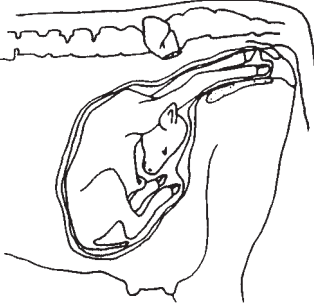


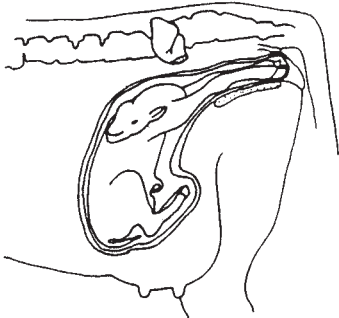
Activity:

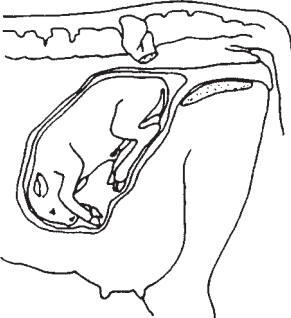
Identify the Problem

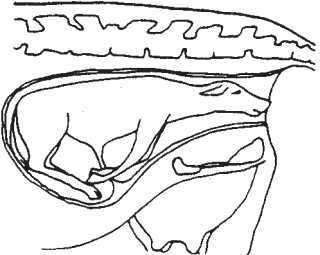
In the blanks below each of the following diagrams, write a short description of what the problem could be with the position of the calf.

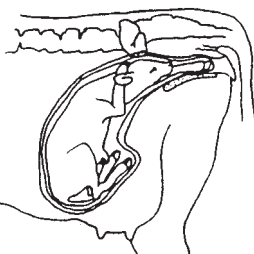
HINT: There may not be a problem with the way the calf is positioned.

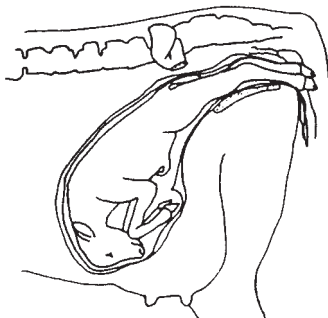
1. 

2. 

3. 

4. 

5. 

6. 

Helping a Cow Calve

When you are handling a cow with calving problems, there are six important rules to know.

1. **Know When To Help.**

If you start helping a heifer too early, the heifer may be harmed. If you wait too long, the calf will have a lower chance of survival. Use this rule of thumb - if a heifer has been actively pushing for an hour, or a cow has been pushing for half an hour, and has made no progress, she probably needs help.

2. **Be Clean.**

Use clean chains or calving straps which have been boiled and stored in a clean place such as a polyethylene bag. Wash the outside of the cow around the vagina with a mixture of soap, water and a gentle disinfectant. Wash your hands and arms. If at any time you or the cow become dirty, stop and wash again.

3. **Be Gentle.**

Force is sometimes needed to help deliver the calf. However, you must always understand that the calf must always adjust to the shape of the inside of the cow as it moves out of the birth canal. Combine your force or strength with gentleness to help the cow calve.

4. **Don't Pull Unless You Can See Three Things in the Birth Canal.**

If the calf is being delivered normally (head first) you must be able to see two feet and the calf's nose. If the calf is being delivered backwards, you must be able to see two hind feet and the calf's tail before you start to pull. If any one of these three things is missing, it is likely that the calf is not positioned correctly. By pulling, you will cause more problems.

5. **Know Your Limitations.**

As you become more experienced, you will know better when to call your veterinarian. Too soon is better than too late.

6. **Limit the Time You Work on an Animal.**

If you can see you have made no obvious progress in 10 or 20 minutes, call your veterinarian. Working unsuccessfully with the cow can lead to these problems

- loss of lubricating fluid needed to help the calf out of the birth canal
- swelling of the vagina
- exhaustion of the cow
- less chance of the calf surviving
- more difficulty in the eventual calving.

Unit Thirteen**The Newborn Calf****Roll Call**

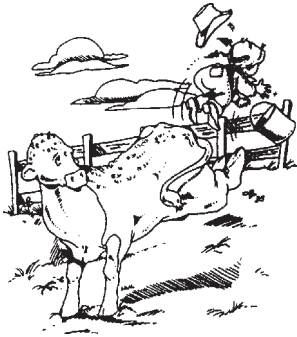
When was your project calf born?

Feeding The Newborn Calf

Lots of good quality colostrum is necessary for the good health of your calf. Remember that the newborn calf should get colostrum as soon as possible after birth. It will eat from 10 to 12% of its bodyweight in milk per day.

In some cases, the cow may be unable to nurse the calf or the calf is unable to nurse. This may happen if

- the cow is sick
- it was a difficult calving
- the cow is a poor mother
- the calf is sick or unable to get up.



In these cases, you will need to feed the calf colostrum. Using a bottle and nipple, feed the calf 5 to 6% of its bodyweight in milk in one feeding. If the calf will not or is unable to suck, use an oesophageal tube feeder to give it the needed colostrum.

**Activity:****Let's Review About Colostrum**

Using each of the words on the left only once, fill in the blanks to complete each of the statements below

absorb
antibodies
bodyweight
oesophageal
frozen
vitamin A
yellowish

1. Colostrum is important for newborn calves because it supplies disease fighters called _____.
2. A young calf should receive approximately 10 to 12% of its _____ in colostrum per day.
3. Colostrum can be _____ so you always have a supply available.
4. Colostrum is also high in _____, protein and contains a laxative.
5. The newborn calf can _____ the nutrients from the colostrum for only the first 12 to 24 hours after birth.
6. Colostrum is thick, rich and _____ in colour.
7. If the calf is unable to suckle, you can give it colostrum using an _____ tube.

Keeping the Newborn Calf 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 is the second leading cause of calf deaths. Calf scours usually occur during the first month of life. It is more likely to occur in calves born to first-calf heifers than to those born to cows because the colostrum from heifers contains fewer antibodies.

Signs that your calf has diarrhea include

- 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
- temperature is lower than normal
- calf is becoming weak
- if very serious, death.

There are two types of scours. **Nutritional** scours is usually caused by overfeeding. Other causes include poor quality milk replacer or dirty pails, coarse feed, rapid changes in feed and dirty or crowded pens.

Disease scours are usually caused by bacteria and death is more common. The calf is most susceptible to the bacteria when it is under stress.

The types of bacteria scours are:

Septicemia	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • bacteria produces poisons in intestine • calf's temperature drops • no diarrhea may be noticed • infected calves often die
Enteritis	<ul style="list-style-type: none"> • common in young calves • body rapidly loses water or dehydrates • temperature increases • calf becomes weak
Salmonellosis	<ul style="list-style-type: none"> • least common • usually affects older calves • symptoms are similar to enteritis

Scours can be treated by

- isolating sick calves and washing feed and water pails, boots and clothing to prevent spread of disease
- feeding the water mixed with minerals and salts (a mixture of electrolytes)
- calling your veterinarian if it becomes very serious.

You can help to prevent scours by

- providing good management
- making sure your cows get proper nutrition year round
- making sure the calf gets colostrum as soon as possible after birth
- seeing that your calf does not receive too much milk
- making sure that pails are always sanitized
- keeping your facilities clean and dry.

Pneumonia

Signs that your calf has pneumonia include

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

Pneumonia can cause death in three to four days. Pneumonia may be caused by

- a virus breathed out into the air by cows
- the calf not having developed antibodies to fight disease. 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
- keeping the calf warm and dry
- offering the calf colostrum or milk.

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



Activities: What's The Problem?

The two most serious sicknesses for young calves are scours and pneumonia. Identify what you think the problem might be for each of the following calves. In some cases, there may not be enough information to determine the problem. If your choice is scours, which type might it be? Put the appropriate symbol(s) in each blank. Then tell what you would do to treat this calf(s).

P - Pneumonia

S1 - Scours
(septicemia)

S2 - Scours
(enterotoxemia)

S3 - Scours (enteritis)

S4 - Scours
(salmonellosis)

N - not enough
information to make
a decision

1. Three week old Charlie is breathing very fast and shallow. His temperature is higher than normal and he is not eating anything.

2. Two day old Lindy is very weak and dehydrated. You just took her temperature and it is 40.5 degrees Celsius.

3. One of your best cows had twins last week. She is still very weak and sick. You have been feeding the calves milk by pail. Today you notice that their manure is watery and very smelly. Neither calf is very active. They just hang their heads and stand still.

Keep Your 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 which completes this sentence

“As a beef producer, one of your goals is to produce strong, _____ calves.”

Unit Fourteen

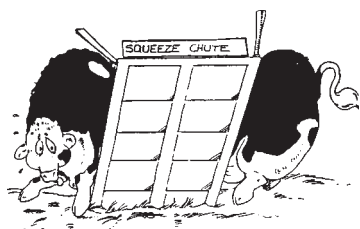
Beef Cattle Handling And Facilities**Roll Call**

What is one thing to remember when you are working with beef cattle?

Facilities for Handling Beef Cattle

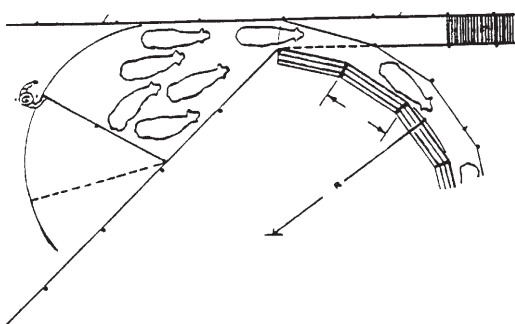
All beef farms need some type of cattle handling facilities. Good beef cattle handling facilities have these advantages

- They save the producer time and labour. The producer can handle more animals more easily and in less time with good facilities.
- They increase the safety of the beef producer and the beef animal. Good facilities, with slip resistant flooring, will reduce the level of stress and help to prevent injury.
- They give the producer the opportunity to use new technologies on their cattle - everything from tagging to implanting to embryo transfer.

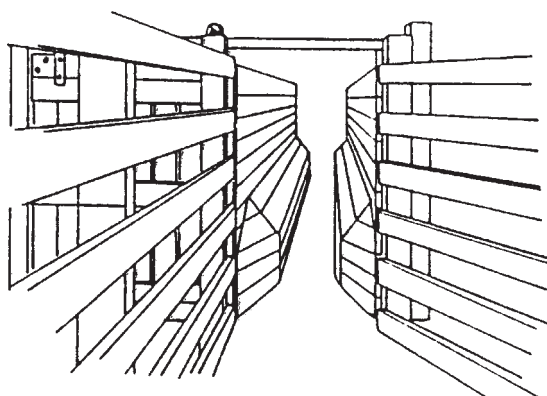


Good facilities for handling and housing beef cattle are simple, strong and durable.

There are three main parts to the beef cattle handling facilities.

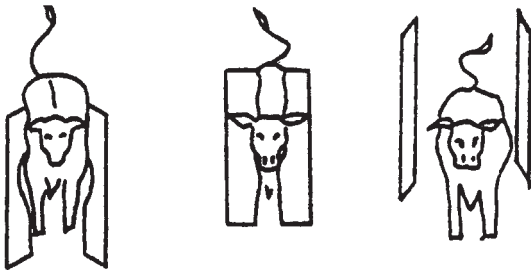
Crowding Pen

The circular or angular crowding pen funnels cattle in single file into the working chute. The crowd gate is used to force the animals toward the chute. Cattle will be less distracted with solid sides and crowd gates.

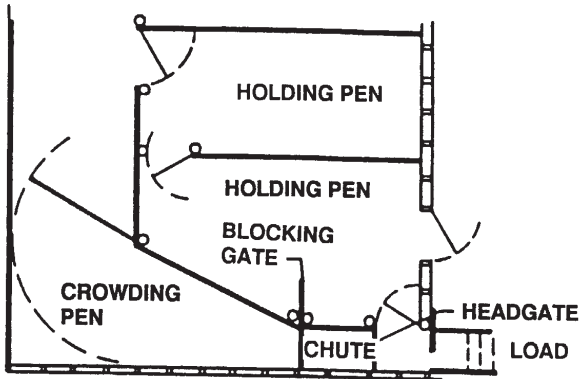
Working Chute

The working chute lines up and holds the cattle in single file ready to enter the headgate or squeeze. It should be long enough to line up and hold at least three animals, but narrow enough so they cannot turn around. Animals will move most easily through a curved chute.

Headgate

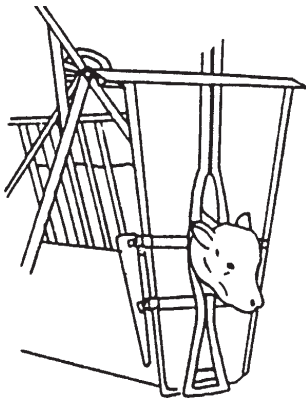


The headgate is used to safely and securely restrain animals during treatment. It must be quick and easy to operate, and adjustable for different sizes of cattle. There are four types of headgates: self-catcher, scissor stanchion, positive and full-opening stanchion.



There are many optional parts of beef cattle handling facilities.

Holding Pens are used to hold cattle before they enter the working area. They allow for faster sorting of cattle and prevent mixing of worked groups with non worked groups.



The **squeeze** holds the animal by its sides, giving you greater control. The animal struggles less and is under less stress. The squeeze is often fastened to the end of the chute and followed by the headgate.

Cutting Gates are useful to allow an animal out of the group or to work with a downed animal.

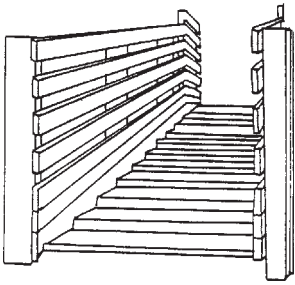
Blocking Gates can be used along the working chute to prevent an animal from moving forward or back. They can slide across the chute on a track or drop down with a rope and pulley similar to a guillotine.

Back Stops work similarly to blocking gates except they only prevent animals from backing up.

Kick Bars prevent the animal from kicking the worker. The kick bar holes should be 30 to 35 cm above the floor of the squeeze and spaced 1.4, 1.5 and 1.7 metres back from the headgate.

Scales, for weighing your animals, can be located in the main chute or close by where cattle can be easily diverted into them.

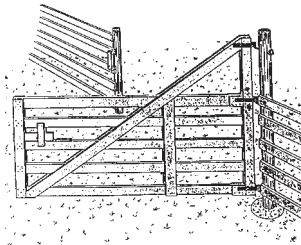
Man Gates and Passes are safety and convenience features. A man gate behind the squeeze allows you to block off upcoming cattle, gives you room to work and allows you in behind the animal without having to crawl over the chute every time. Man passes should be 28 to 35 cm wide and placed in the crowd pen, along the chute or any place you could become trapped and need an escape route.



Loading Chutes and Ramps can be located coming off the working chute or out of the crowding or holding pens. Cattle don't like climbing, so a ramp should not be steeper than 30 degrees (20 degrees is ideal). It should have five cm cleats spaced 20 cm apart. Cattle will move much more easily up a stair step ramp with a 30 cm run and 10 cm rise for the steps. Loading is also much easier if the cattle are in single file and there is a flat platform at the top of the ramp for them to step on or off the truck. The chute should have solid sides, be wide enough to accommodate the largest animals in your herd and should not face into the sun.

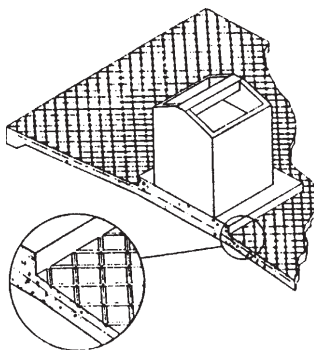
Cattle Guards or Texas Gates are useful in cattle yards into which you must drive. These gates have pipes or bars laid horizontally over a shallow pit. Vehicles and people can pass over them, but the cattle cannot because their feet will slip between the bars.

A Must For All Beef Cattle Facilities



Strong Fences and Gates are necessary on all beef farms. Posts should be treated so they remain strong and do not decay. They should be placed no more than 2.5 metres apart.

Non-Slip Concrete Floors help to reduce animal injury and increase traction. They are most important around waterers, feeders and other areas which often become wet. Concrete floors can be grooved to give animals traction. Grooves are most effective when they are diagonal to the direction of animal traffic. If the grooves are perpendicular, the floor will be harder to scrape. Diamond shaped grooves work well in wet areas.



Beef cattle handling facilities should be located

- in a well drained area
- close to the feedlot, pasture or barnyard containing the cattle
- close to good roads with turning room for vehicles
- in keeping with plans for future expansion.

The facilities you need depend on

- design of current and future facilities
- size, weight and number of cattle
- the type of work
- the labour you have available.



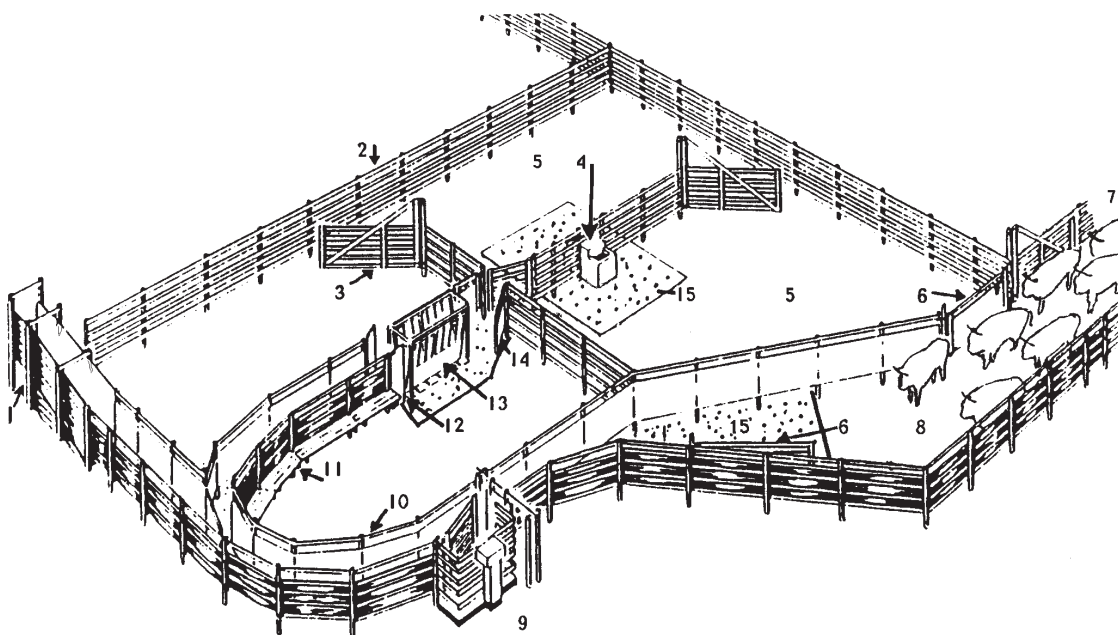
Activities: Looking at Beef Facilities

Draw a line from the facility on the left to what you would use it for on the right. As you match each, think of where you have recently seen one of these.

headgate	*	*	used to move cattle in single file into the working chute
loading chute	*	*	lines up and holds the cattle in single file ready to enter the headgate or squeeze
squeeze	*	*	safely and securely restrains cattle
crowding pen	*	*	allows you to separate an animal from the group
cutting gate	*	*	prevents an animal from moving forward or back
back stop	*	*	prevents an animal from backing up
cattle guard	*	*	prevents an animal from kicking the worker
man gate	*	*	holds the animal by its sides, giving you greater control
scale	*	*	used for weighing the animal
kick bars	*	*	holds cattle before they enter the working area
working chute	*	*	for the safety and convenience of the worker
holding pen	*	*	used to move cattle up, usually onto a truck
blocking gate	*	*	allows you and a vehicle, but not the cattle, to enter a pen or yard

The Large Working Corral

Name each of the parts of this large working corral.



1. _____ 2. _____ 3. _____

4. _____ 5. _____ 6. _____

7. _____ 8. _____ 9. _____

10. _____ 11. _____ 12. _____

13. _____ 14. _____ 15. _____

What Do You Think?

Tell what you think about each of these beef cattle handling facilities.

1. "I don't understand. I built my loading chute next to the south pasture, you know, the one beside the swamp. But, the cattle are always slipping on the chute."

2. "I thought I could get my work done faster if I built chutes that let three cattle pass through at once. I hope I treated all of them when they came through."

3. "I don't have any fancy facilities on my farm. I'm just going to tie the calves to the fence when it's time to dehorn them."

4. "When we load cattle at night, they don't want to go up the ramp into the truck. We have no trouble during the day. We even put a bright floodlight at the top of the ramp, pointing down the ramp, so the cattle could see where they were going."

2. Why do you support animal agriculture?