

Beef Quiz Bowl Study Guide

BEEF 1 – Bite into Beef

BEEF DESCRIPTIONS

Page 6

1. Solid black polled breed that originated in Scotland. They are the most numerous cattle in the US and are noted for high quality carcasses. – ANGUS
2. White faced, red cattle have horned blood lines and polled bloodlines. They are known for their mothering and foraging ability plus their very docile disposition. Horned and polled bloodlines are under one breed association. They are the second most numerous breed in the US. – HEREFORD
3. Originally called Durhams, this British breed can be red, white or roan in color. They were used for milk production. – SHORTHORN
4. Large framed, red and white in color from France. This is the largest French breed of cattle. Originated from breeders in Maine and Anjou river valleys. – MAINTENANCE ANJOU
5. Large muscled, red to gold breed from the French regions of Limousin and Marche. – LIMOUSIN
6. Large frame, solid white breed from France. They are known for their fast growth rates. – CHAROLAIS
7. White faced, red or yellow breed from the Simme Valley in Switzerland. Noted for good milk production. American versions are black or red with a blazed face. – SIMMENTAL
8. Developed at the King Ranch in Texas. A cross of Shorthorn and Brahman breeds. Dark red, slicked haired and loose hide – SANTA GERTRUDAS
9. Cherry red in color from Salers Valley in south central France – SALERS
10. Developed in the wild in dry, harsh conditions they constantly worry about predators. Most important traits are calving ease, hardiness, good feet and legs and speed – TEXAS LONGHORN
11. Developed as a draft animal, the most important traits are extreme size and strength. They are the largest cattle in the world. The American version is usually black with lots of style. – PIEDMONTESE
12. Developed in a cold, rocky, harsh environment this breed's most important traits are small frame size, calving ease and cold weather tolerance. – SCOTCH HIGHLAND
13. Developed as a pure meat animal to produce the largest possible cuts of meat. – CHIANINA
14. Developed as a draft and milk breed this breed is known for its strong feet and legs, large capacity and milking ability. – FLECKVIEH
15. Developed in a hot environment this breed's important traits are disease resistance, heat tolerance and hardiness. – BRAHMAN

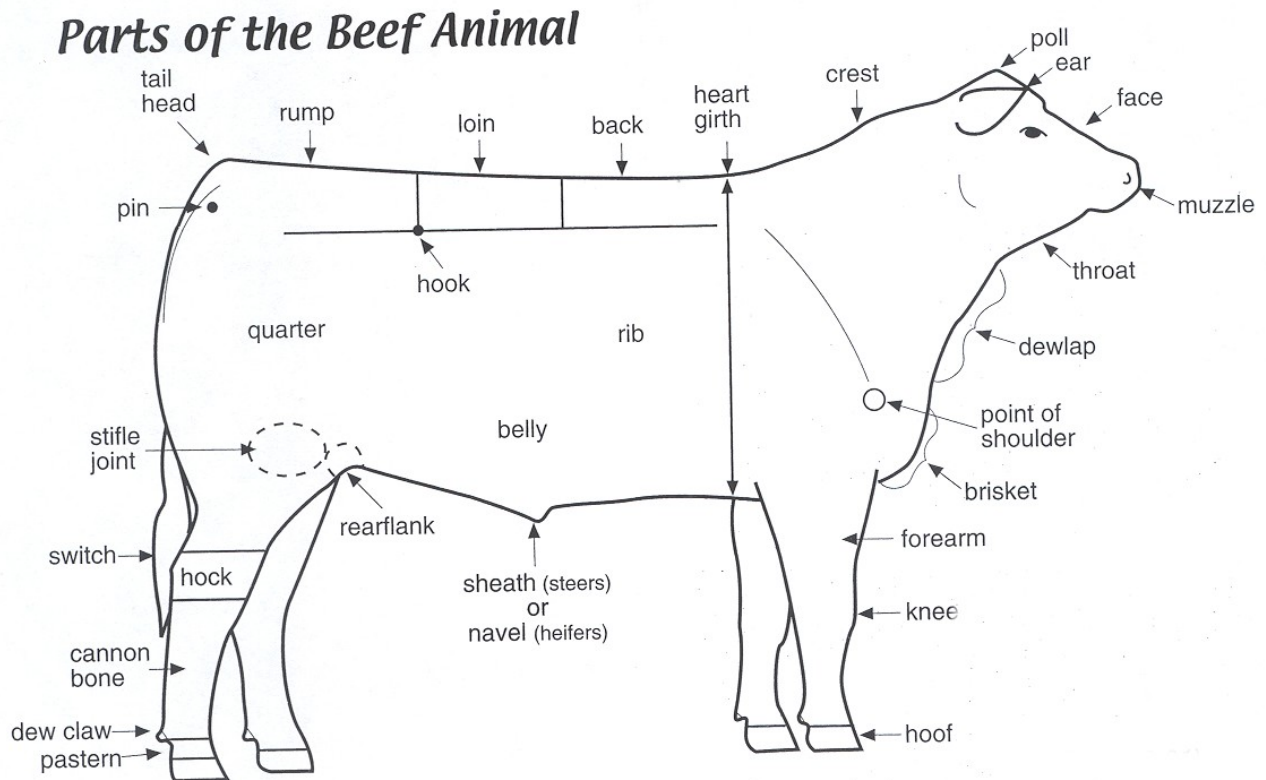
BREED WEIGHTS - Page 7

Breed	Bull	Cow
Angus	1,600-2,000	1,000-1,400
Blonde d' Aquitaine	2,500-3,000	1,600-1,800
Chianina	3,500-4,000	2,000-2,400
Gelbvieh	2,000-2,900	1,200-1,400
Hereford	2,000-2,400	1,100-1,500
Charolais	2,000-2,500	1,250-2,000
Pinzgauer	2,400-2,700	1,400-1,600
Salers	2,400-2,600	1,400-1,600
Simmental	2,300-2,400	1,600-1,700
Limousin	2,000-2,200	1,200-1,400

BREED ORIGINS

Angus	Scotland
Beefalo	US, California
Belgian Blue	Belgium
Charolais	France
Chianina	Italy
Gelbvieh	Austria
Genepol	Virgin Islands
Hereford	England
Limousin	France
Murray Grey	Australia
Pinzgauer	Germany
Polled Hereford	England
Santa Gertrudis	US, Texas
Scotch Highland	Scotland
Simmental	Switzerland
Zubu	India

PARTS OF THE BEEF ANIMAL



HALTER BREAKING – Page 12

1. Calves need to be broke to lead **several months before the show when they are still calves.**
2. The first step to halter breaking a calf is **letting the calf drag a halter for a week before tying it up.**
3. The second step is **tying the calf up for short periods of time while watching it constantly.**
4. The third step is **leading your calf to fee and water everyday.**
5. Calves are trained to lead by using a **patient, calm person.**
6. When things go wrong **keep working until things go right.**
7. To help a calf get used to strange noises at the fair you should **play a radio in the barn.**
8. To help the calf get used to new environments you should **take them to some open shows and walk them in the yard and barn lot with supervision.**
9. Calves need to wear halters **Only long enough to break them to lead and then just when you are working with them.**
10. Calves need to be tied **a few hours a day but only when you are around to watch them.**

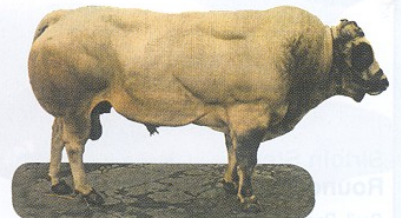
Beef Breeds



1. Angus



2. Hereford



3. Piedmontese



4. Brahman



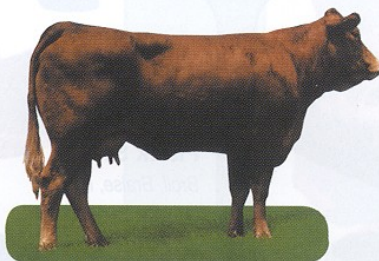
5. Highland



6. Salers



7. Charolais



8. Limousin



9. Sante Gertrudas



10. Chianina



11. Longhorn



12. Shorthorn



13. Fleckvieh



14. Maine-Anjou



15. Simmental

HALTER BREAKING [continued] Page 13

Types of Halters Some people prefer halters with chains, others rop halters. A halter with a padded nose band is recommended to prevent serious injury and scarring to the nose. After selecting the type of halter to use, place the halter on the calf and adjust the halter so that it fits correctly. The halter needs to apply pressure over the nose, not behind the ears. For proper fit, the nose piece should be up on the nose just under the eyes.

Halter Breaking by Dragging the Halter After haltering the animal, pull on the lead rope a couple of time and then let go. Let the animal drag the lead rope on the ground. As the calf walks it will step on the lead rope and pull its head around. This will teach the calf to respond to pressure. Have the animal wear the halter and drag the lead rope for several days.

Halter Breaking by Tying A calf may be tied to a post to halter break. As the calf pulls back the halter tightens and as the calf comes forward, the pressure is released. The calf learns to stop the pressure on his head by coming forward. For several days a calf may be tied in its stall between feedings, watering and exercise periods. The length of the rope should be long enough for the calf to eat and live down but not so long as to get tangles up. Do not leave an unbroken calf tied and unattended.

Training to Lead When you teach a calf to walk with you, you are training it to lead. When teaching to lead, pull on the lead rope and then give slack so the animal comes forward. Do not apply continual pressure. Always pull and then release the pressure as the calf responds. When the animal learns that the rope loosens when it walks, it will lead. Ask someone to walk behind the calf to make it move when it stops instead of pulling on its head constantly. Reward the calf with a handful of hay or feed.

Training for the Show Ring As soon as the calf begins to lead, begin daily exercise and practice proper show ring procedures. Daily exercise is important to condition the animal and have it respond to handler. Daily exercise should include feet placement.. This will prepare your animal for the show ring.

FITTING A STEER

SHOW BOX SUPPLIES

Adhesive – Used to hold the calf’s hair in place

Scotch comb – used to style the calf’s hair

Flathead clippers – Used for clipping where a shaved look is desired.

Sheep head clippers – Used for blocking and most show day clipping.

Show halter – Dressier appearing halter for the showing.

Show stick – Used for setting the calf’s feet and calming the animal in the showing.

Spray bottle – Used for applying any liquid hair prep.

Stall fork (bark Rake) – Used to pick manure out of the stall if a mulch bedding is used.

MANAGEMENT & HEALTH PRACTICES – pages 19, 20, 23

BASIC HEALTH TOOLS – Page 20

1. **Syringe** – Administer medicine or vaccines, IM, IV, or subQ
2. **Ear Tag** – Identify calf
3. **Bander** – Castrates calves
4. **Dehorner** – Nip off horns
5. **Ear tagger** – Pierce ears for insetting plastic tags
6. **Tattoo set** – Put permanent numbers & letters in the ear
7. **Vet Wrap** – Protect injured joints or hooves
8. **Thermometer** – Take temperature
9. **Iodine sprayer** – Treat navels on newborn calves
10. **Calf feeder bag** – Administer colostrums or fluids to a newborn calf

SIGNS & TEMPERATURE Page 21

Signs of a Sick Calf

- ★ Poor appetite
- ★ Temperature higher than normal 102.5 degrees F
- ★ Droopy ears
- ★ Rapid, noisy breathing
- ★ Dry, crusty or runny nose
- ★ Gaunt gut
- ★ Limping
- ★ Patchy haircoat
- ★ Diarrhea
- ★ Swelled, tight left side.

How to Take a Calf's Temperature

- ★ Restrain the animal in a head gate or working chute.
- ★ Gently lift the tail and inset the thermometer into the rectum about two inches.
- ★ Hold the thermometer in place for about one minute – or by counting 1001, 1002, 1003, etc.
- ★ Remove the thermometer and wipe with a clean cloth.
- ★ Read the temperature.

REQUIRED NUTRIENTS - Page 23

All feeds include five basic nutrients: protein, energy (carbohydrates and fats), minerals, vitamins and water. Protein supplies the materials to make body tissues like muscle, internal organs, bones, blood and skin. Energy from carbohydrates and fats enhance movement and produce heat to keep the body warm. Excess energy feeds are stored as fat. Minerals help build bones and teeth. Vitamins are required for healthy eyes, nasal passage, lungs, blood and strong bones. Water is the most important nutrient. It is necessary for digestion, carrying food nutrients and waste products, cooling the body and lubrication the joints. This is how much water calves will drink at different weights:

500 pound calf	5-12 gallons
750 pound calf	7-18 gallons
1,000 pound calf	10-24 gallons

Feed ingredients are sometimes easier to remember when you think about them in groups.

Animal Protein Products, Forage Products, Grain Products, Plant Protein Products, Processed Grain By-products, Roughage Products, Molasses Products.

BEEF PRODUCTS – Page 24

Primal or Wholesale Cuts

1. Round
2. Short Loin and Sirloin
3. Fore Shank and Brisket
4. Chuck
5. Rib
6. Flank
7. Short Plate

Retail Cuts

- a. Round Steak
- b. Rib Eye Roast
- c. Arm Pot Roast
- d. T-bone Steak
- e. Skirt Steak
- f. Brisket
- g. Sirloin Steak
- h. Short Ribs
- i. Back Ribs
- j. Chuck Eye Roast

COOKING BEEF – Page 27

Tender cuts, like the rib, short loin and sirloin are best cooked by dry heat methods such as pan broiling, pan frying, grilling/broiling, stir-frying and roasting.

Less Tender Cuts, like the chuck, round, flank and brisket, are best cooked by moist heat methods such as braising and cooking in liquid as in a slow electric cooker. The longer cooking time at lower temperatures with moisture helps soften some of the connective tissue.

CARCASS QUALITY GRADES - Page 29

USDA Prime – Abundant marbling

USDA Choice – Small, modest or moderate amount of marbling

USDA Select – Slight amount of marbling

USDA Standard – Trace amount of marbling

USDA Utility – Practically devoid of marbling

BEEF 2 – Here’s the Beef

FEEDING, MANAGEMENT AND HEALTH PRACTICES

DIGESTIVE SYSTEM – Page 11

Functions

- ★ **Food intake**
- ★ **Storage**
- ★ **Digestion**
- ★ **Absorption**
- ★ **Elimination of waste**

As the food moves through the digestive tract all feedstuffs are broken into smaller and smaller units so they can be used or eliminated. Much of this “breakdown” is done by the microbial population (bugs) in the ruminant’s stomach. Normally, about four days are required for feed to pass through the digestive tract of ruminants. Here are the four compartments of the ruminant’s stomach and what they each do.

Rumen – Functions as a storage area for food. Aids in the breakdown of coarse particles through bacterial action

Reticulum (honeycomb) – Honeycomb-like walls retain foreign materials that could injure the digestive system. Also called the hardware stomach. Functions are similar to the rumen.

Omasum – Liquid is removed from the feed by muscle contractions. Breaks up coarse particles in feed.

Abomasum (true stomach) – Digestive juices that are needed to break down food are secreted. These include: hydrochloric acid, pepsin, rennin and lipase.

THE FLIGHT ZONE – Page 15

The flight zone is an animal's own space in which it doesn't want any people or foreign objects. The size of the zone is controlled by the animal's wildness or tameness. A wild animal has a large zone and will turn away when a person comes near. Project animals are often so tame that a person can approach and actually touch them. These cattle no longer have a flight zone.

Point of Balance

Point of balance is at the animal's shoulder. If a handler stands behind the shoulder, the animal walks forward. If the handler moves in front of the point of balance, the cattle will stop and try to back up.

IDENTIFYING CATTLE PARASITES – Page 18 & 19

All animals, beginning at a very young age, are exposed to and infected with parasites and other organisms. A parasite usually causes its host some degree of harm. There are times they can be economically devastating.

Grubs – Part of the life cycle of the heel fly.

Worms – Its eggs are usually found in manure.

Lice – an insect that attaches itself to the skin and sucks blood from its host.

Coccidiosis – A common preventative treatment for this Rumensin.

Black Flies – Called buffalo gnats

Horn Fly – A fly that stays with the animal at all times.

Mosquito – Female requires blood before egg laying.

Horse flies & deer flies – Their bit causes a considerable flow of blood.

Mange mites – This insect produces a contagious disease in domestic animals.

BEEF PRODUCTS

Yield Grade – Page 29

Yield grade identifies cattle for differences in yields of boneless, closely trimmed retail cuts from the round, loin, rib and chuck. Yield grade is often used synonymously with cutability. Cutability is usually expressed as a percentage of carcass weight (i.e. 51.0%, etc.). However, the percentage figure is converted to a yield grade designation between 1.0 and 5.9. A yield grade of 1.0 is equivalent to 54.6%, whereas a 5.9 yield grad is equivalent to 43.3% boneless, closely trimmed, retail cuts from the round, loin, rib and chuck. A yield grade of 1 means the highest cutability (yield of boneless, closely trimmed retail cuts from the round, loin, rib and chuck), and a yield grade of 5.9 means the lowest cutability. Thus, a carcass with a yield grade of 5.9 has considerable fat and a relatively small ribeye area.

Factors used to determine Yield Grade

- ★ Fat thickness at the 12th rib which is adjusted up or down depending upon the estimated distribution of fat over the external surface of the animal
- ★ Ribeye area
- ★ Hot carcass weight
- ★ Percentage kidney, pelvic, and heart fat (KPH)

Figuring Yield Grade

A yield grade of 3.5 is used as the base yield grade. The 3.5 yield grade is equivalent to a 600 lb. carcass with .6 inch of fat (12th rib), an 11.0 inch ribeye area and 3.5% KPH. Since most cattle differ from these base values, the yield grade of each cattle is determined by adjusting the base yield grade.

1. **Fat thickness at the 12th rib** – For each .1 inch of fat thickness over .6 inch, add .25 of a yield grade; and for each .1 inch under .6 inch, subtract .25 of a yield grade from the base of 3.5. This adjustment determines the preliminary yield grade (PYG). PYG is then adjusted for ribeye area, hot carcass weight and percentage of kidney, pelvic and heart fat as describe below in 2, 3 and 4.
2. **Ribeye Area** – For each square inch of ribeye area in excess of 11.0 inches, subtract .3 of yield grade; and for each square inche less than 11.0 inch, add .2 of a yield grade.
3. **Hot carcass weight** – For each 25 lb. of hot carcass weight in excess of 600 lb., add .1 of a yield grade and for each 25 lb. of hot carcass weight less than 600 lb., subtract .1 of yield grade. How carcass weight is estimated by multiplying the live weight by the estimated dressing % = chilled carcass weight X 1.015 (101.5% = hot carcass weight.
4. **% KPH** – is estimated from the estimate of the 12th rib fat thickness. Obtain the estimated % kidney, pelvic, and heart fat for rib thickness in the table below. Compare this figure to 3.5% base figure., For each .5% KPH in excess of 3.5%, add 0.1 of yield grade; and for each 0.5% KPH less than 3.5%, subtract 0.1 of a yield grade

Estimated 12" Rib Fat Thickness Inches	Estimated % Kidney, Pelvic and Heart Fat
.1	1.0 – 2.0%
.2	1.0 – 2.0%
.3	2.0 – 3.5%
.4	2.0 – 3.5%
.5	2.0 – 3.5%
.6	2.5 – 4.5%
.7	2.5 – 4.5%
.8	2.5 – 4.5%
.9	Equal or greater than 4.5%
1.0	
1.1	
1.2	

QUALITY GRADES – Page 31

Quality grades are intended to relate market desirability to cooked palatability and consumer acceptance. There are eight USDA Quality grades: Prime, Choice, Select, Standard, Commercial, Utility, Cutter and Canner. Quality grading of beef carcasses is determined by subjectively scoring maturity or physiological age of the carcass and marbling or the amount of visible flecks of fat within the lean of the ribeye muscle.

There are five levels of maturity, designated as A, B, C, D and E. Maturity A and B are the young cattle designation eligible for the grades of Prime, Choice, Select and Standard. Maturity levels C, D and E are eligible for the grades Commercial, Utility, Cutter and Canner.

There are nine degrees of marbling that correspond to the USDA Quality grades that range from very abundant to traces. Maturity and marbling are evaluated and combined to determine the final quality grade.

BEEF 3 – LEADING THE CHARGE

SELECTION AND JUDGING

Expected Progeny Differences [EPD's] Traits - Page 11

- ★ **Birth weight** – Predicts the difference in average birth weight of a bull's calves in comparison to the calves of all other bulls evaluated in the summary.
- ★ **Weaning weight** – Predicts the difference in average 205 day weight of a bull's calves in comparison to the calves of all other bulls evaluated in the summary.
- ★ **Yearling weight** – predicts the difference in average 365-day weight of a bull's calves.
- ★ **Maternal milk** – Estimates the milking ability of a bull's daughters and is measured by the difference in weights due to milk production of the bull's daughter's calves at 205 days
- ★ **Marbling** – Predicts which sire will produce progeny with more marbling at a specific fat level and age. A bull with high EPD for marbling will sire calves with a larger amount of marbling in the lean.

Name 3 EPD's that are posted on a SIRE SUMMARY or SIRE EVALUATION?

Birth weight, weaning weight, yearling weight, maternal milk, marbling, etc.

FEEDS, FEEDING AND CAREERS

Hay quality – page 13

Several things can affect the quality of hay:

- ★ Kind of hay [alfalfa vs. prairie hay]
- ★ Fertilizers
- ★ Age or stage of maturity
- ★ How well it dried after being cut
- ★ Storage and handling







Storing Hay

Store baled hay inside a shed, or on dry, level, well-drained sites. Stack the bales to avoid wasted space and permit easy handling. Even large round bales must be set on a well-drained site. Crushed rock makes a good base for those bales. The bales will act like a sponge and soak up moisture from wet soil. More spoilage can occur on the bottom side of the bale than the top.

CRUDE PROTEIN AND STAGE OF GROWTH		
CROP	STAGE OF GROWTH	PERCENT CRUDE PROTEIN
Alfalfa	Early Bloom	18
	Full Bloom	14
Wheat	Boot	18
	Full Bloom	8.5
Sudan	Early Boot	17
	Full Bloom	8
Brome	Late Boot	17
	Full Bloom	12.5
Prairie Grass	Early Boot	13
	Mature	6

Feed Label Information – Page 17

A commercial law requires each bag or bulk load to be accompanied by a label showing several key items.

-  Net weight
-  Product name and brand name
-  Drug additives
-  Guaranteed analysis of feed – Crude protein, crude fat and crude fiber must be guaranteed on all feeds except straight mineral or vitamin supplements, molasses or drug compounds.
-  Minimum percentage of crude protein, percentage of equivalent protein from non-protein nitrogen, if any. The amount of crude or total protein in a feed is guaranteed. Crude protein is determined by multiplying the nitrogen content of a feed by the factor 6.25
-  When no protein nitrogen [NPN] is added to feedstuffs, a statement “for ruminants only” must appear underneath the name of feed. Additionally, it must also have a guarantee for crude protein which has been supplied from non-protein nitrogen.

- ☞ Minimum crude fat content – Fat has an energy value approximately 2,25 time the value of carbohydrate feedstuffs.
- ☞ Maximum crude fiber content – crude fiber is a measure of the indigestible, or non-useful portion of a feed. Feeds having low fiber values tend to be higher in digestible energy or total digestible nutrients than those feeds having high fiber values.
- ☞ Minerals – feeds containing 6.5 percent or more minerals must show a guarantee of:
 - Calcium – minimum and maximum
 - Phosphorus – minimum
 - Salt – minimum and maximum
 - Vitamins, only if guaranteed
 - Common and usual name of each ingredient or the collective term for each group of feed ingredients.
 - Directions for use and cautionary statements
 - Name and principal mailing address of the manufacturer

What are 4 key items that must be on a feed label?

Net weight, product name & brand name, drug additives, guaranteed analysis of the feed, directions for use, and cautionary statements.

HEALTH AND REPRODUCTION

Common Disease of Beef Animals – Page 21

- **Bloat** – A swelling on the left side of the animal will occur. The excess gas is built up in the rumen. The gas bubbles that form expand the rumen contents and interfere with nerves that control the opening to the esophagus.
- **Ringworm** – A contagious skin disease of cattle that are 1 to 2 inches in diameter where hair is lost and a slightly raised crustiness appears.
- **Foot Rot** – Caused by a bacteria. This disease normally occurs when cattle have access to stagnant water holes. There is a break in the skin and the organism infects the wound.
- **Acidosis** – This is a diet-related disease caused by a sudden increase in consumption of concentrated feeds. The feed contains a large amount of fermentable carbohydrates.
- **Warts** – An infectious viral disease sometimes seen in young cattle.
- **Laminitis** – This is a lameness in cattle where the lamina hoof wall and sole become very sore. Overgrown and malformed hooves often result.

Beef Reproductive Systems – Page 23

Female Reproductive Parts

- **Broad ligament** – A rough band of fibrous tissue that holds the uterus in place.
- **Cervix** – Barrier that protects the uterus from infection and foreign debris.
- **Ovary** – The eggs develop here.
- **Oviduct** Fertilization takes place here. Fertilized egg travels down the oviduct to the uterus to develop.
- **Uterus** – The fetus-the baby calf-develops during pregnancy.
- **Vagina** – Tube that connects the vulva with the uterus where the bull deposits the semen, serves as the birth canal.
- **Vulva** – External opening to the reproductive tract.

Male Reproductive Parts

- **Epididymis** – Tube that stores sperm; transports it from the testicles to the penis.
- **Penis** – Part of the tract that the bull uses to breed the cow.
- **Retractor penis muscle** – Pulls the penis back into the bull's body after mating.
- **Scrotum** – Covers and protects the testicles.
- **Sheath** – Provides protection for the penis.
- **Sigmoid flexure** – Muscle that keeps the penis inside the bull's body and allows it to be extended during mating.
- **Testicles** – Produce the male hormone testosterone. Where the sperm is made.

The Cow's Estrous Cycle and Fertilization – Page 25

Estrous Cycle

A cow's normal estrous cycle is 21 days. The estrous cycle is characterized by heat period [that time when the cow accepts the bull] at regular 21-day intervals. The heat period itself lasts for about 14 hours [range six to fourteen hours]. This is the only time within the 21-day cycle that the cow allows the bull to mate. She will be back in heat again 21 days later. This 21-day cycle's activity continues until she finally conceives. Heat periods stop when she does conceive, and she will not mate again until 40 to 60 days after the calf is born.

Heat Detection Symptoms

- Cows/heifers tend to group together
- Cow/heifers ride each other
- Cows/heifers exhibit standing head to indicate that they are ready to mate with the bull
- Cow/heifers heat cycle with last 12 to 18 hours
- Clear mucous will be discharged from the vagina

Estrous Synchronization and Artificial Insemination [A.I.]

Estrous synchronization manipulates reproductive processes so that a group of heifers and/or cows come into heat and ovulate in predicted time range. Herds can be bred during a short, predefined interval with a high number of pregnancies resulting. Estrous synchronization has the greatest benefit when used with artificial insemination [A.I.]. However, it may be used with natural service [when cows are bred by bulls] with the advantage of getting more cows bred early in the breeding season and having older [and therefore heavier] calves at weaning time.

The Normal Calving Process – Page 29

Stage 1

The uterine muscles begin to contract every 15 minutes which starts the birth process and also dilates the cervix. The calf is usually right side up, forelegs in the birth canal, with its head resting between its legs.

Stage 2

The appearance of the feet or water sac in the vulva marks the beginning of stage two and ordinarily birth will occur within 30 minutes to four hours later. The calf's head moves into the birth canal. Each uterine contraction forces the head into the cervix and will complete the dilation of the cervix. After the head appears, the rest of the calf's body is generally passed quickly without much effort. Within an hour, the calf should be standing, licked dry by the cow and receiving colostrums.

Stage 3

In this stage the fetal membranes are passed. This usually occurs within one-half hour to 12 hours after birth.

1. What are the 3 stages of parturition?

Stage 1: Uterine muscle contracts, cervix dilates

Stage 2: Begins with the emergence of the feet or the water sac and eventually the calf moves from the uterus, through the cervix and through the birth canal.

Stage 3: The fetal membranes are passed.

2. Describe 3 presentations that are difficult to deliver when a cow is calving:

Head back, one leg back, upside down, or crosswise, both front legs back, backwards

3. What is the safest way to remove a calf that is too large?

Cesarean Section

MEATS AND MARKETING

Cutability – Page 31

Cutability is a term used quite often when evaluating carcasses, whether it is beef, lamb, or pork. Cutability refers to the proportion of the carcass that is saleable as trimmed [boned or partially boned] retail cuts.

The cutability of beef carcasses is predicted by the USDA Yield Grades as described in "Yielding the Grade" in level 2 – page 28 or page 10 of this handout.

GLOSSARY

A

Accuracy (Acc.) – The amount of reliability that can be placed on a trait that is being evaluated. Accuracy is expressed as a figure between 0.0 and 1.0 – a figure close to 1.0 means a higher reliability.

Adhesive – A product used to groom cattle hair that is located on the legs, tailhead. A product that is used to groom hard to manage hair.

Adjusted 365-day yearling weight – The yearling weight of an animal adjusted to 365 days and for the age of the dam.

Adjusted 205-day weight – The weaning weight of a calf adjusted to 205 day of age and for the age of the dam.

Afterbirth (placenta) – The membrane in which the calf develops and through which it receives nourishment. After calving, the placenta is expelled by the cow.

Animal unit month (AUM) – Amount of feed or forage required to maintain one animal unit (e.g. a 1,000 bl. Cow and calf for one month).

Antibiotics – Substances made from organisms that can kill bacteria. They are used to fight diseases caused by bacteria.

Artificial Insemination (AI) – Placing the semen from a bull into a cow's reproductive tract using an artificial method.

Average daily gain – Pounds gained from a starting point to an ending point divided by the number of days.

B

Backfat – Amount of fat over the animal's back usually measured at the twelfth to thirteenth rib.

Backgrounding – A practice of grazing cattle up to about 800 pounds before placing them on a high-concentrate finishing diet in a feedlot. Cattle are fed only to gain approximately 1 to 1.5 pounds a day during the backgrounding phase.

Balanced Ration – A ration that provides an animal with the proper amounts of all the required nutrients.

Birth weight (BW or B.Wt.) – Weight of the calf measure with 24 hours of its birth.

Bloat – Abnormal condition in ruminants due to accumulation of gasses; usually seen on the animal's upper left side.

Bloom – Desirable condition of skin and hair.

Bovine – Refers to a general family grouping of cattle.

Brand – 1) Permanent identification of cattle, usually made on the hide with hot-iron or freeze branding. 2) Process of branding.

Breeding season – The period of time when the females are bred by the herd bull or through an artificial method.

Breeding Value – The value of an animal as a parent, indicating the ability of bulls and cows to pass on desirable traits to their calves.

Breeds – Groups of cattle with similar traits such as coat color, horns, or body and head shape that are passed from generation to generation (from parent to calves).

British Breed – A breed of cattle which originated in the British Isles. Such as Angus, Hereford, and Shorthorn

Brood Cow – Female kept to produce calves.

Brucellosis – Contagious bacterial disease that results in abortion; also called Bang's disease.

Buck Kneed – When the calf is “over at the knees” or buck kneed, full extension of the knee cannot occur when observed from the side.. This is usually seen in cattle that are also too straight in the shoulder.

Bull – An intact (non-castrated) male

Bullock – Young bull, typically less than 20 months of age.

By-Product – Product made by further processing of leftovers after the primary product has been made.

C

Calf – A young bee animal less than one year of age.

Calf crop – The percentage of calves produced in a herd in a year relative to the number of females that were bred at the beginning of the breeding year.

Calf Kneed – This is the opposite of extreme of buck kneed where the calf stands “back at the knees” when viewed from the side.

Calving Ease – Refers to the lack of difficulty in giving birth. Opposite of dystocia, which describes calving difficulty.

Carbohydrates – Nutrient group which includes starch, sugar, and cellulose.

Carcass Traits – Characteristics of cattle such as muscling and leanness, which can be estimated on live animals, but accurately measured only on beef carcasses.

Carcass – The muscle, bone and fat associated with the slaughter of an animal; left after removal of the head, hide and internal organs.

Castrate – To remove the testes from a bull so that it cannot reproduce.

Cervix The neck of the uterus. The cervix serves as a passageway for the sperm at breeding time and for the calf as it is being born.

Chromosome – Molecules where genes are located. Cattle have 30 pairs of chromosomes.

Close breeding – Linebreeding or inbreeding, mating of related animals.

Club Calf – A special type of feeder calf which is thought to have excellent

Colostrum milk – The first milk produced by the dam after she calves. Colostrum is high in antibodies that give the calf protection against diseases. It is also higher in protein and vitamins than regular milk from the dam.

Commercial cross bred cattle – An unregistered beef animal that has parents from at least two different breeds.

Complete mixed ration – A feed where all ingredients are blended together with the exception of water.

Concentrate – Feed that is high in energy, low in fiber and highly digestible.

C

Condition – Level of an animal's fatness which can be controlled by type and amount of feed.

Conformation The shape and design of an animal.

Conception – The time when the male sperm fertilizes the female egg.

Conformation – The general shape or structure of a beef animal's build.

Contagious – Referring to diseases that can be readily transmitted from one animal to another.

Contemporary group – group of cattle of the same breed and sex that have been raised in the same management group [same location on the same feed and pasture].

Cool out Reducing energy level of ration, usually after show season; using oats and bran to lighten the feed.

Cow Hocked – When viewing the rear legs from the rear, the hocks are turned in or placed too close together.

Creep feeding – Supplementing calves with feed while they are still nursing their dams.

Crossbreeding – The mating of animals of different breeds. Crossbreeding takes advantage of heterosis.

Crude fiber – A percentage measure of the complex carbohydrate in feedstuffs for cattle.

Crude protein – The content of nitrogen in a feed or animal tissue or excreta multiplied by a factor of 6.25 since most protein is 16 percent nitrogen, to provide an estimate of protein content.

Cryptorchids = Male cattle with un-descended testes.

Cud – The bolus [ball] of feed that cattle regurgitate from the rumen and chew. This process helps to digest the feed.

Cull – To remove an animal from a herd due to poor production, poor type or illness.

Custom feeding – Cattle producers that maintain ownership of their feeder cattle but place them on feed at another operator's feedlot until they are ready for slaughter.

Cutability – The percentage of boneless, closely trimmed, retail cuts from the round, loin, rib, and chuck of the carcass.

Cwt. – Abbreviation for hundredweight (100 lb.)

D

Dam – The mother of a calf.

Dark Cutter – Condition in which the lean meat of a beef carcass has a darker than normal color. This condition results from cattle being subjected to stressed conditions just prior to processing. Carcasses that are classified as dark cutters tend to have a higher pH. A higher pH can lead to a metallic [less desirable] flavor and a shorter shelf life [because the increased pH allows for more bacterial growth].

Dehorn – To remove the horns.

Deworm – Administering a product to an animal to prevent or destroy any worms it may have inside.

Diet – Nutritionally balanced mixture of feed ingredients.

Digestible – The ability of an animal to obtain nutrients from a feedstuff.

Digestibility – The amount of a nutrient absorbed or used; the difference between amount of nutrient fed and amount found in feces.

Disposition – The temperament of an animal.

Dominant gene – A gene(s) that determines the way an animal looks [the characteristics of an individual]. They are present in a homozygous or heterozygous form.

Dressing Percentage – The proportion of carcass weight relative to live weight of an animal carcass weight divided by live weight. The average dressing percentage of beef cattle is 62%.

Dry cow – Refers to a non-lactating female.

Dry matter – The portion or percentage of a feed that is not water.

Dual-Purpose Breed – A breed which can be raised for beef as well as milk.

E

Ear tag – Method of identification by which a numbered, lettered and/or colored tag

Embryo – A term for the fertilized egg during the early part of pregnancy. This term is used until the development of body parts.

Embryo transfer – Surgically removing fertilized eggs from a donor cow and placing them in recipient cow.

Embryo transplant – Removing a developing embryo from one female and transferring it to the uterus of another, usually in an attempt to increase the number of offspring.

Epididymis – Tube that stores sperm, transports it from the testicles to the penis.

Estrogen A hormone that brings a female into heat and prepares her for breeding.

Estrous cycle – The reproductive cycle of the female that prepares an egg for fertilization. In the cow, the average length of a cycle is 21 days.

Estrus (heat) – The part of the estrous cycle when a female may be successfully bred. It occurs just before the ripened egg is released from the ovary, and is ready to be fertilized by the sperm cell.

Estrus synchronization (heat synchronization) – A technique using hormones to bring a group of females in heat at the same time, to breed all of them within a short period of time.

Exotic Breed – A breed of cattle which originated on the continent of Europe.

Expected Progeny Difference (EPD) – The estimate of how future offspring of a sire are expected to perform in various traits. EPD's are expressed in pounds and they are not comparable between different traits.

External parasites – Parasites that live on the outside of beef cattle. Examples of external parasites are flies and lice. See “internal parasites” and “Parasites” below.

F

F1 – offspring that results from mating a purebred (straightbred) bull to a purebred (straightbred) female of another breed.

F2 – Crossbred resulting from the mating of two F1's of the same type.

Fat Thickness – The typical linear measurement of fat taken over the rib eye between the 12th and 13th rib.

F

Feed concentrate – Grain mixtures such as corn, oats, and soybean meal fed in a ration.

Feed efficiency – The amount of feed it takes to gain one pound of weight. In beef it is about six to seven pounds of feed to one pound of gain.

Feeder Calf – A young calf, 5 to 9 months of age that is weaned and started on a feeding program. The calf may be fed to slaughter weight or used as a replacement heifer.

Feeder Cattle – Cattle that need further feeding for that period from weaning to finishing prior to slaughter.

Feedlot – A cattle facility which feeds immature beef cattle to the point of harvest (processing/slaughter).

Feedyard – Cattle-feeding facility. Also called feedlot.

Fertility – The description of how productive a breeding animal will be in terms of reproductive abilities.

Fertilization – When the egg from the female and the sperm from the bull join and begin to form a calf embryo.

Finish – Amount of fat cover on an animal

Fitted – Describing an animal conditioned, trained and groomed for show or sale.

Flight zone – Is the animal's safety zone. The size of an animal's flight zone varies depending upon its degree wildness or tameness.

Forages – Plants used as feed for livestock.

Founder – Nutritional ailment due to overeating; foundered animals become lame with sore front feet and excessive hoof growth.

Frame score – A way of estimating what weight cattle will be when they have reached slaughter condition. It is based on the hip height of the animal at different ages.

Free Choice – Allowing cattle to have access to a feed at all times.

Freemartin – The female calf born as a twin to a bull calf. Approximately 90% of all freemartins are infertile [will not be able to conceive]

Futures market – Electronic market through which buyers and sellers trade contracts on commodities or raw materials. Futures contracts are available for several delivery months. However, delivery of actual products seldom occurs. Futures markets are used as a risk management tool or as a speculative venture.

G

Gene – The basic unit of heredity found in pairs on chromosomes. Genes are transmitted singly (one of the genes at random of each pair) from each parent to their offspring.

Genetics – The passing on of genetic or physical traits of parents to offspring.

Genotype – Listing of genes that an animal has.

Gestation (heredity) – The period of time from when the cow is bred (conceives) until she calves. This pregnancy period lasts about 283 days, depending on the breed.

Get – Calves sired by the same bull.

Grade and yield – Marketing transaction whereby payment is made on the basis of carcass weight and quality grade.

Grade animals – Beef animals that have one or both parents that are not registered and recorded.

Grass tetany – Magnesium deficiency of grazing cattle.

Guaranteed analysis – The chemical listing of a feed that insures the contents of key nutrients like crude protein.

H

Heat (estrus) – The part of the estrous cycle when a female may be successfully bred. It occurs immediately before the ripened egg is released from the ovary and is ready to be fertilized by the sperm cell.

Heat synchronization (estrus synchronization)– A technique using hormones to bring a group of females in heat at the same time to breed all of them within the short period of time.

Hedge – Risk management strategy that allows a producer to lock in a price for a given commodity at a specified time.

Heifer – A young female beef animal that has not calved.

Herd – Group of cattle (usually cows) that are in a similar management program.

Herd bull battery – The number of bulls in service in particular herds.

Herd sire – Principle breeding bull in a herd.

Heredity (genetics) – The passing on of genetic or physical traits of parents to offspring.

Heritability – The amount of differences among cattle, measured or observed, that is transmitted to the offspring. The higher the heritability of a trait, the more accurately does individual performance predict breeding value and the more rapid should be the responses due to selection for that trait.

Heterosis (hybrid vigor) – The amount by which crossbred animals exceed the average for the two purebreds that are crossed to produce the crossbreds.

Heterozygous – Carrying unlike genes for the same trait.

High Priced Cuts – Loin, Rib

Hindquarter – The rear half of a carcass, divided from the front quarter between the 12th and 13th rib, contains the loin and round wholesale cuts.

Hip Height – Measurement taken at a point level with the center of the back opposite the hook (or hipbone) to the ground.

Homozygous – Carrying identical genes for the same trait.

Hormones – A body-regulating chemical secreted by a gland into the blood stream.

Hybrid vigor (heterosis) – The amount by which crossbred animals exceed the average of the two purebreds that are crossed to produce the crossbreds.

I

Immunity – When the body builds up a resistance (protection) from a disease organism.

Inbreeding – Production of offspring from parents more closely related than the average of a population. Inbreeding increases the proportion of homozygous genes. Also, inbreeding

increases prepotency (the ability of a parent to pass on its characteristics so offspring resemble the parents more than usual) and uncovers recessive genes (desirable and undesirable).

Infundibulum – Cup-like structure that captures the egg after it is released from the follicle.

Internal Parasite – Parasites that live inside the body of beef cattle. Examples of internal parasites are worms.

Intermuscular fat – Fat located between muscle systems. Also called seam fat.

Intramuscular fat – Fat within the muscle or marbling.

K

Knock kneed – Condition when the front knees are too close together. (opposite of bowlegged).

Kosher meat – Meat from ruminant animals (with split hooves) that have been slaughtered according to Jewish law.

KPH Fat Percentage – The amount of fat contained in the regions of the kidney, pelvis, and heart relative to the carcass weight.

L

Legume – A non-grass plant that produces nitrogen in its roots. Because of this nitrogen production, a legume is a plant that is higher in protein and minerals.

Line breeding – A form of inbreeding in which an attempt is made to concentrate the inheritance of an outstanding ancestor in a herd.

Low Priced Cuts – Brisket, Flank, Plate, Shank

M

Marbling – Flecks of intramuscular fat distributed in muscle tissue. Marbling is usually evaluated in the rib eye between the twelfth and thirteenth ribs.

Marbling EPD – Predicts which sire will produce progeny with more marbling at a specific fat level and age. A bull with a high EPD for marbling will sire calves with a larger amount of marbling in the lean.

Market Price – Price paid the packer for cattle.

Market Steer – Finished cattle that are ready for marketing.

Maternal Breed – Breed or breeds primarily used for brood cows in a cow/calf herd.

Maternal milk EPD – Estimates the milking ability of a bull's daughters and is measured by the difference in weights due to milk production of the bull's daughter's calves at 205 days.

Maternal weaning weight EPD – An EPD which accounts for an individual's genetic value for milk production and growth.

Maverick – Unbranded animal usually on the range.

Meat – Tissues of the animal body that are used for food.

Medicated – A feed that contains a medicine.

Medium Priced Cuts – Chuck, Round

M

Melengestrol Acetate (MGA) – Synthetic progesterone that has been traditionally fed to feedlot heifers to keep them from coming into estrous.

Microorganisms – Bacteria, protozoa and other tiny organisms that need a microscope to be seen.

Middle Meats – Rib and Loin of a beef carcass. These primals generally yield the highest-priced beef cuts.

Milking ability – Amount of milk produced.

Minerals Elements required by cattle to build bones and teeth and to support other life processes.

Motility – Activeness of bull's semen as seen through a microscope.

Most Probable Producing Ability (MPPA) – An estimate of a cow's future productivity for a trait, such as her future calves' weaning weight, based on her past productivity.

N

Net energy – The total amount of energy received from digesting a feedstuff.

Nick – The production of genetically outstanding calves.

Nose Print – An ink print of an animal's nose used for identification.

Nutrient density – Amount of essential nutrients relative to the number of calories in a given amount of food.

Nutrients (Ingredients that make up a ration) – Chemical substances found in feed materials that are used for maintenance, production and health of animals. The major classes of essential nutrients include carbohydrates, fats, proteins, minerals, vitamins and water.

Nutrition – The result of taking in food to nourish the body and promote growth and body processes.

O

Omasum – The third compartment of the ruminant stomach located between the reticulum and the abomasums. Often called the many piles, it grinds feedstuffs into smaller particles and absorbs water.

Open cow or heifer A cow or heifer that is not pregnant.

Out crossing – the mating of individuals that are less closely related than the average of the breed. It is used primarily by purebred breeders as a way to introduce new, unrelated sires to the herd.

Ovary – Female reproductive gland which produces eggs and hormones for reproduction. A comparable structure in the male is the testicle.

Oviduct – Long, slender tube on the reproductive tract where fertilization occurs. Acts as a transport for the embryo from the site of fertilization to the uterus.

Ovulation – The process of releasing eggs or ova from the ovarian follicles.

Ovum – The female gamete or reproductive cell. Usually referred to as the egg.

P

Palatability – The degree to which a feed is liked or accepted by an animal.

Parasites – Organisms that live off another organism

Parturition – Birth.

Pasture bred – Referring to cows serviced by bull in pasture.

Pedigree – An ancestral record, a genealogical tree.

Penis – Part of the reproductive tract that the bull uses to breed the cow.

Phenotype – An animal's appearance or one of its traits; the way it looks or behaves as determined by its genotype and environment.

Pigeon Toes – When viewed from the front or rear, the toes turn inward toward each other. More cattle become unsound because of being pigeon toes than splay footed.

Placenta (afterbirth) – The membrane in which the calf develops and through which it receives nourishment. After calving, the placenta is expelled by the cow.

Planned mating – A mating when the bull and cow are specifically selected to mate.

Polled Breed – Cattle that do not grow horns.

Postlegged – The hock has too little angle or set. The calf is too straight through the joint, resulting in a very stiff, constricted movement because of the lack of flexibility. More cattle become unsound because of being postlegged than sickle hocked.

Preconditioning – Preparing young cattle at or shortly after weaning prior to shipment to a feedlot.

Prepotency – Ability to transmit individual's trait to its offspring.

Price discovery – Process that shows how the specific price for a given quantity and quality of beef is determined.

Progeny – The offspring of animals.

Progeny test – Evaluation of the offspring of sires to determine a sire's ability to transmit heritable traits such as gainability, meatiness, conformation and congenital abnormalities.

Progesterone – A female hormone that maintains pregnancy in the female.

Prostaglandin – Naturally occurring compounds (they also can be produced artificially) that cause the breakdown of the corpus luteum.

Protein – A dietary nutrient that supplies amino acids to the calf.

Purebred – An animal whose parents are from the same breed.

Q

Quality grades – Grades such as Prime, Choice and Select that group slaughter cattle and carcasses into value and palatability-based categories. Grades are determined primarily by marbling and age of animal.

R

Ratio – An indication of how well or how poorly cattle compare in a certain trait to others in the group.

R

Ration – A daily mixture of feed ingredients given to cattle. A balanced ration provides all the proper nutrients in the proper amount.

Reactor – Animal that shows a positive reaction to the test for Bang's disease or Tuberculosis.

Recessive gene – A gene that can be modified or covered up by a dominant gene on the other chromosome pair.

Registration number – Number assigned to each animal when registered.

Replacement heifer A female that is being kept for use in the breeding herd.

Reproductive tract – The part of the beef animal where the reproductive organs are located.

Residue – A residue is the amount of a substance that remains in an animal's body tissue after exposure to a substance. The substance can enter the animal's body when it is used as a feed or water additive, as an injectable or external treatment or by accident.

Retail cut – Further subdivided wholesale cuts. These cuts are bought by consumers.

Retained ownership – The practice of a feeder cattle producer that keeps or retains his cattle until they are ready for slaughter.

Reticulum (honeycomb) – Honeycomb-like walls retain foreign materials that could injure the digestive system. Also called the hardware stomach. Functions are similar to rumen.

Retractor penis muscle – Pulls the penis back into the bull's body after mating.

Rib eye area – A measurement in square inches of a cross section of the loin muscle taken at the twelfth rib.

Rotational crossing – The systematic rotation of heifer replacements from one breeding unit to a succeeding unit for two or more rotations and utilization of purebred bulls of a different breed in each unit.

Roughage – A type of feed ingredient consisting of the leaves and stems of plants that is high in fiber content.

Rumen – The fermentation vat. The largest of the four stomachs. A compartment of the ruminant stomach that is similar to a large fermentation pouch where bacteria and protozoa break down fibrous plant material swallowed by the animal.

Ruminant – An animal that has four stomach compartments (rumen, reticulum, Omasum and abomasums).

S

Safe-in-calf – Pregnant beyond doubt; usually reported after vet's examination.

Scotch comb – A metal comb used for grooming beef cattle.

Scours – Persistent diarrhea.

Scrotum – Covers and protects the testicles.

Second cross – Second-generation cross of two or more breeds.

Seedstock – Registered animals for establishing a breeding herd.

Semen – Sperm mixed with the fluids from the accessory glands of the male.

Service – The mating of a female by a male.

S

Settled – Indicating that an animal has become pregnant.

Sex chromosomes – A pair of chromosomes in animals that determines gender; one sex usually has two of the same kind of sex chromosome in its cells while the other has two kinds. In mammals, the female is XX and the male is XY.

Sheath – Provides protection for the penis.

Short yearling – Animal is over one year of age but under 18 months of age.

Show halter – Usually a leather halter that has a chain that goes under the chin for animal control and a leather lead strap. This halter is only used in the showing.

Show stick – A wooden or metal stick with a hook on the end to set the feet of a beef animal.

Sickle hocked – When the rear leg has too much curve at the hock joint.

Sigmoid flexure – Muscle that keeps the penis inside the bull's body and allows it to be extended during mating.

Silage – Forage, corn fodder or sorghum preserved by fermentation that produces acids similar to the acids used to make pickled foods for people.

Sire – Male parent. The father of a calf (bull).

Sire evaluation – Publication by a breed association that contains genetic trait information.

Sire summary – An estimate of the genetic transmitting ability of a bull.

Slip knot – A method to tie a halter in which pulling on the free end will untie the knot.

Social order – The tendency of animals to behave in an order of social dominance.

Sperm – The male sex cell. Combines with the egg from the female to form a new individual.

Splay footed – When the front toes point out.

Springer – Heifer or cow showing signs of advanced pregnancy; near to calving.

Standing heat – The window of time during estrus (heat) when a female is receptive to mating.

Steer – Bovine male castrated prior to puberty.

Stocker – Weaned cattle that are fed high-roughage diets (including grazing) before going into the feedlot.

Straightbred – Animal with breeding of only one breed.

Stringhalt – Tightening of tendons in the rear legs.

Structural soundness – The condition of the skeleton, especially the feet and legs, of cattle.

Substance – Desirable combination of bone, frame and muscling.

Super-ovulation – A process of treating a cow with hormones to cause her to release several eggs from any ovary at one time. The eggs are then fertilized and later removed and placed into recipient cows (called embryo transfer).

Supplement – A feed or feed additive given to animals to provide nutrients such as protein, energy, minerals or vitamins that were lacking in the basic ration.

Synchro-Mate B (SMB) – Artificially produced prostaglandin that consists of an implant placed subcutaneously in the ear and intramuscular injection that is designed to prevent the female from exhibiting estrus.

T

T.D.N. – Total digestible nutrients. What is easily digestible by the beef cow.

Tattoo – Numbers and/or letters that are formed by puncturing and rubbing ink into the skin in the ear or ears. Tattoos permanently identify the animals and indicate year of birth.

Terminal Sire – A bull used in a commercial beef herd where all calves are sold

Testicles – Produce the male hormone testosterone. Where the sperm is made.

Testis – The primary sex organ of the male; the source of the male gametes and the male sex hormone.

Testosterone – A hormone produced by the cells of the testis that stimulates male sex drive, masculine characteristics. Development of the male reproductive tract and spermatogenesis.

Traits – Characteristics of an animal that people use to evaluate.

Twists – Point between hind legs where thighs come together. Often an indicator sight for fat deposits.

Two-breed rotation- Systematic crossing of heifers produced in a two-breed cross to a bull of one of the parent breeds.

U

Udder – Encased group of mammary glands of the female.

Ultrasound – Using high-frequency sound waves to show visual outline of internal body structures (e.g. fat thickness, rib eye area and pregnancy can be predicted). The machine sends sound waves into the animal and records these waves as they bounce off the tissues. Different wavelengths are recorded for fat and lean.

Uterus – Where the fetus, the baby calf, develop during pregnancy.

V

Vagina – Tube that connects the vulva with the uterus, where the bull deposits the semen, serves as the birth canal.

Value-based marketing – Marketing system based on paying for individual animal differences rather than using average prices.

Variety meats – Liver, brain, heart, kidney

Veal – Meat from calves (under 3 months of age). Veal typically comes from dairy bull calves.

Viscera – The internal organs and cavities of an animal.

Vulva – The external opening to the female's reproductive system

W

Weaning (wean) – Separating young animals from their dams so that the offspring can no longer suckle.

Weight per day of age – Calculated weight of a calf for each day of its life.

Weaning weight – Calf weight when taken away from the cow. (Normally 205 days of age.)

Weaning weight EPD – Predicts the difference in average 205-day weight of a bull's calves in comparison to the calves of all other bulls evaluated in the summary.

Wholesale (primal) cut – Refers to a part of the animal where meat comes from. The chuck, rib, loin, and round are wholesale cuts for beef cattle.

Withdrawal Time – In the case of meat animals, it is the period of time that must elapse between the last treatment and the harvest (slaughter) of the animal. For milking producing animals and egg-laying poultry, it is the time that must elapse between the last treatment and the point where the milk and eggs can again be collected for use as human food. This time period allows the medication to be eliminated from the animals' body so that meat, milk, and eggs harvested after that time do not contain unsafe residues.

Y

Yearling Weigh – Weight at 365 days.

Yearling Weigh EPD – Predicts the difference in average 365-day weight of a bull's calves.

Yield grade – A numeral value assigned to a carcass that signifies the amount of muscle the carcass contains in comparison to the amount of fat. The value ranges between one and five.

Z

Zoonotic Diseases – Diseases that can be transmitted from animals to humans.