

## 2023 Senior NALJA Quiz Bowl Study Guide

What is the term used to describe calving difficulty?

***Dystocia***

What is the average gestation length of beef cow?

***283 days (accept 280-285 days)***

Name the first Limousin bull imported to North America.

***Prince Pompadour***

Bov Import imported two “D” named bulls in 1969 following the success of Prince Pompadour, what were their names?

***Dandy and Diplomat***

Who is the current NALF President?

***Bruce Lawrance***

The term for an animal that has two different alleles for a single trait is what?

***Heterozygous***

What does the acronym SNP stand for in regards to DNA?

***Single Nucleotide Polymorphism***

A characteristic of an animal that can be measured or observed, such as color or weight, is called what?

***Phenotype***

What are the two components of a phenotype?

***Genetics and Environment***

What is the recommended Calcium to Phosphorus ratio in a balanced bovine diet?

***2:1***

What is the name of the fungus that causes fescue toxicity in beef cattle?

***Endophyte***

What is the average dressing percentage on a beef carcass?

A. 56%, B. 75%, C. **62%**, D. 45%

Meat is composed of 4 main elements. Which is found in the largest quantity?

A. Protein, B. Fat, C. **Moisture**, D. Ash (Minerals),

What is the weaning weight ratio of an individual whose weaning weight is the same as the group's average?

***100***

If a calf has a weaning weight ratio of 115, then how much is his adjusted weaning weight above the average as a percentage?

***15%***

A fertilized female gamete is called what?

***Zygote***

Where in the female reproductive tract does fertilization occur in cattle?

***ampullary-isthmus junction (AIJ)***

What is the chemical name for milk sugar?

***Lactose***

What crucial product used to treat diabetes has no synthetic source, but is made from cattle by-products? ***Insulin***

What three shows make up the Triple Crown?

***Cattleman's Congress, American Royal and NAILE***

In the first year of the Triple Crown there were two winners from one ranch, what was the name of the

ranch?

***Spitz Ranch, Norman, Oklahoma***

Who was the first executive vice president of NALF?

***Richard "Dick" Goff***

Name three other NALF executives.

***Mark Anderson, Dr. Robert "Bob" Hough, Dr. Kent Andersen, Dr. John Edwards, Dr. Wayne Vanderwert, Jerry Fitzgerald, Greg L. Martin, Robert "Bob" Vantrease, Dale F Runnion***

Where is fat thickness measured when yield grading a beef carcass?

***The ribeye muscle between the 12<sup>th</sup> and 13<sup>th</sup> rib***

What is the common term for intermuscular fat?

***Seam fat***

What is the name of the first Limousin bull imported permanently into the United States? ***Kansas Colonel***

Who was the first founder member of NALF and served as the NALF President for its first three years? ***Robert "Bob" Purdy***

What disease causes abortions in livestock and can be transmitted to humans?

***Brucellosis***

What is the common name for Brucellosis?

***Bangs disease***

True or False. The calving ease code C indicates a caesarean section.

***False - C indicates mechanical assistance and D indicates a caesarean section***

What is the primary hormone responsible for lactation?

***Oxytocin***

What hormone is produced by the corpus luteum and maintains pregnancy?

***Progesterone***

Scours is the common name for what disease?

***Cattle diarrhea***

Ringworm is caused by what?

***Fungi or molds***

In embryo transfer technology, what do you call the production of a greater-than-normal number of eggs? ***superovulation***

What hormone is used to stimulate superovulation?

***FSH***

What is the common name for bovine infectious keratoconjunctivitis?

***Pinkeye***

What mineral deficiency leads to symptoms known as goiter?

***Iodine***

What organization do the initials BIF refer to?

***Beef Improvement Federation***

What does the term EPD stand for?

***Expected Progeny Difference***

Name the ovarian structure that is responsible for the production of progesterone and has the initials CL. ***Corpus luteum***

In regards to the ovary, what do the initials FSH stand for?

***Follicle Stimulating Hormone***

BSEs are recommended to help identify fertile bulls. What does BSE stand

for? ***Breeding Soundness Exam***

In regards to the prion disease commonly known as mad cow disease, what does BSE stand

for? ***Bovine Spongiform Encephalopathy***

The FSIS is operated by the USDA. What do the letters FSIS stand for?

***Food Safety and Inspection Service***

When calculating yield grades on beef carcasses, KPH is a measurement of internal fat. What does KPH stand for?

***Kidney Pelvic and Heart***

DFD beef is common characteristic of dark cutters. What do the letters DFD stand

for? ***Dark, Firm and Dry***

What do the letters DNA stand for?

***Deoxyribose Nucleic Acid***

Important to the development of bones, what does the chemical symbol Ca stand

for? ***Calcium***

When dealing with cholesterol in the bloodstream, what do the letters HDL and LDL stand

for? ***High Density Lipids, Low Density Lipids***

When discussing cattle performance, what does ADG stand for?

***Average daily gain***

In regards to feed efficiency, what does RFI stand for?

***Residual feed intake***

When dealing with feeds and nutrition, what do the letters TDN stand for?

***Total digestible nutrients***

In reference to nutrition, what does VFA stand for?

***Volatile Fatty Acid***

In regards to animal health, what does PI3 stand for?

***Parainfluenza 3***

What does BVD stand for?

***Bovine viral diarrhea***

What is the approximate maximum live age for carcasses to qualify for A maturity?

***30 months***

What is the maximum age that for cattle to qualify for export to Japan?

***20 months***

What is the basic classification for non-humped cattle?

***Bos taurus***

This breed of cattle originated in the Tuscany province of Italy. It originally was gray with a black muzzle and switch and has been used as both a draft and meat animal.

***Chianina***

What do seminiferous tubules produce?

***Sperm***

What organ of the bull's reproductive system is responsible for concentration, storage, maturation and transportation of sperm cells?

***Epididymus***

What is the external portion of the female bovine reproductive tract?

***Vulva***

In a cow's reproductive tract at the end of each oviduct is a thin cup-like membrane. The purpose of this membrane is to catch ovum or eggs after ovulation. What is the name of this thin cup-like membrane?

***Infundibulum***

What vitamin is generally considered to be adequately provided for as long as cattle are exposed to sunlight?

***Vitamin D***

Vitamin D is one of four fat soluble vitamins. Name the other three.

***Vitamins A, E and K***

Name the two possible active ingredients in stocker cattle growth implants used in addition to those that may be found in calf growth implants.

***Estradiol, trenbolone acetate (testosterone is also acceptable)***

How many cattle did the North American Limousin Foundation register last fiscal year?

***14,740 (accept 14,000 – 15,000)***

When was the first French Limousin Herdbook established?

***November 1886***

In females, what disease can cause endometritis (infection of inner lining of the uterus), resulting in failure to conceive and death of the embryo.

***Vibriosis***

What disease is caused by protozoan organism which results in a venereal disease, occasional abortions and pyometra?

***Trichomoniasis***

What supplies the digestive enzymes necessary for the breakdown of plant cellulose and hemicellulose in cattle?

***Rumen microbes***

Name the four measured ribeyes used to formulate yield grades.

***Fat thickness, Ribeye area, Carcass Weight, and KPH - kidney, Pelvic, Heart fat***

Bacteria, Viruses, and Fungi are all categories of microorganisms which pose potential health threats to cattle. To which of these categories can we attribute Foot Rot in cattle?

***Bacteria***

What disease causes repeat breeders, low grade uterine infectious, abortions, mastitis, and occasionally systemic infection in cattle?

***Leptospirosis***

What is the instrument utilized to castrate bull calves in a bloodless method that crushes the blood and nerve supply?

***Burdizzo***

At about 38 days into gestation the placental membranes begin to attach to the uterine wall. These raised areas of attachment located on the uterine wall are called what?

***Caruncles***

What is the approximate age range of a carcass with a maturity level of C?

***42-72 months***

If a homozygous polled bull is mated to heterozygous polled cows, what percentage of the offspring should be polled?

***100%***

Which trait has the highest heritability - ribeye area, calving ease or weaning weight? **Ribeye area**

Name the compartments of a ruminant stomach.

**Rumen, reticulum, omasum and abomasum**

Which compartment is the most similar to a human stomach?

**abomasum**

Where is subcutaneous fat located?

**Under the skin**

What is another term for intramuscular fat?

**Marbling**

What is the primary method of semen collection for use in breeding soundness examinations? **electroejaculation**

In the male reproductive system, what is the name of the transportation tubes that connect the epididymis to the urethra?

**Vas deferens**

In a cow's reproductive tract, what separates the uterus and vagina?

**Cervix**

What hormone regresses the corpus luteum triggering the onset of estrus?

**prostaglandin**

What is the common name for the deleterious genetic defect arthrogyrosis multiplex? **Curly calf syndrome**

What is the common name for contractural arachnodactyly?

**Fawn calf**

Genetic muscular hypertrophy is the scientific name for what condition?

**Double muscling**

What protein is associated with the F94L gene in Limousin cattle

**Myostatin**

What term denotes the rupture of a follicle?

**Ovulation**

On average, how long after cessation of estrus does ovulation occur?

**30 hours (accept 24-36 hours)**

What is a cryptorchid?

**An animal with one or both testicles retained in the body**

What is the term for a heifer born twin to a bull?

**Freemartin**

What is the minimum level of marbling required to qualify for the Choice quality grade? **Small**

Name the two major types of connective tissue found in beef muscle.

**Collagen and elastin**

What is true about a dominant gene in Limousin cattle?

- It is always expressed
- It always occurs in homozygous pairs
- It only occurs in heterozygous pairs
- It is always more dominant in bulls

**a. It is always expressed**

When does a cow typically have the highest energy requirement?

***2 months after calving***

What is the best term to use when referring to a calf's female parent?

***Dam***

In what units is scrotal circumference measured?

***Centimeters***

What are the building blocks for proteins?

***Amino Acids***

What is the name of the protective covering of thick skin covered with hair, which surrounds the testes? ***Scrotum***

What is the name of the official publication of NALF?

***Limousin 365***

What condition can usually be cured by dropping a magnet into the ruminant stomach? ***Hardware disease***

How many compartments are in the ruminant stomach?

***4***

Male cattle that have been castrated are called what?

***Steers***

What hormone is produced by the testes?

***Testosterone***

Who is the current President of NALJA and where are they from?

***Shelby Hubbard, Oklahoma***

What is the letter prefix used in 2021?

***J***

Small horns that are not attached to the skull, but by the skin only are referred to as? ***Scurs***

In a beef cow, which compartment of the stomach has the greatest volume?

***Rumen***

What is the term used to describe a specific animal's ancestry or lineage?

***Pedigree***

Which grain is higher in protein, wheat or corn?

***Wheat***

What state is the North American Limousin Foundation located in?

***Colorado***

Warts are caused by what type of organism?

***Virus***

Muscle and fat are the two of three major tissues in an animal's carcass. Name the third. ***Bone***

What is the name of the first milk that a cow gives after calving?

***Colostrum***

What is the name of young female cattle that have not calved yet?

***Heifer***

Weaning weights are adjusted to how many days of age?

***205***

Among Angus, Hereford and Limousin, which would you expect to have the highest incidence of cancer

eye?

***Hereford***

To prevent infections, a newborn calf should have its navel dipped in what solution? ***Iodine***

Name three methods of cow identification.

***Ear tags, hot brands, freeze brands, tattoos, neck chains, brisket tags***

What do the initials USDA stand for?

***United States Department of Agriculture***

What chemical substance is semen stored in?

***Liquid Nitrogen***

In common terminology, hip heights adjusted for age are used to calculate what? ***Frame score***

What sex chromosomes will a male calf have?

***XY***

What do the letters MOE stand for?

***Medal of Excellence***

Bloat can be detected visually on which side of an animal's body?

***Left***

What is another name for a surrogate mother in an embryo transfer program?

***Recipient cow***

What quality grade has the highest degree of marbling?

***Prime***

What do broad, flat, white ribs on a carcass indicate?

***Old maturity***

What does MARC stand for?

***Meat Animal Research Center***

Age of puberty of a female is related to what measurement taken on her sire?

***Scrotal Circumference***

What is the primary sense a cow uses to recognize her calf?

***Smell***

What is the scientific name for the afterbirth expelled post calving?

***Placenta***

What is the practice of feeding a calf a grain ration while it is still nursing?

***Creep feeding***

Which is dominant, the gene for horned or the gene for polled?

***Polled is dominant***

What livestock disease is abbreviated using the letters FMD?

***Foot and Mouth Disease***

If a heterozygous black bull is mated to heterozygous black cows, what percentage of the calves are expected to be red?

***25%***

What is the common name for feeds that are high in energy and low in fiber?

***Concentrates***

Name two of the four factors that determine USDA Yield Grades.

***Carcass Weight, Fat Thickness, Ribeye Area, % KPH Fat***

In carcass terms, what do the letters REA stand for?

***Ribeye Area***

Name two carcass traits commonly measured using ultrasound scanning.

***Ribeye Area, Fat Thickness, Percent Intramuscular Fat, Rump Fat***

A group of cattle of the same sex and within the same percentage Limousin group that were born within a 90-day period, managed alike and weighed on the same date is called what?

***Contemporary group***

In NALF's genetic evaluation program, what do the letters ACC represent?

***Accuracy***

What do you call a Limousin animal that can be traced entirely back to Limousin parentage and has 100% for its actual Limousin percentage?

***Fullblood***

What is an animal sired by a Fullblood Limousin bull out of a registered Angus cow designated as? ***50% Lim-Flex (accept Lim-Flex)***

Who is the current Executive Director of NALF?

***Mark Anderson***

True or False. A bull that is horned, but has 2 polled parents, likely carries the polled gene even though he is horned.

***False. He is homozygous horned.***

In cattle, in what trimester does the fetus gain the majority of its weight?

***Last***

True or False. An Angus bull with a + 100 Yearling Weight EPD is equivalent to a Limousin bull with a +100 Yearling Weight EPD.

***False***

How many directors are on the NALJA Board?

***10***

What does colostrum contain that regular milk does not?

***Anti-bodies***

What is another name for heterosis?

***Hybrid vigor***

If the cattle market is bullish, prices are expected to increase, decrease or stay steady? ***Increase***

What three pieces of information can be obtained from a registered Limousin tattoo? ***Herd prefix, animal ID number, year of birth***

True or False. Calves are born with a functional rumen.

***False***

In terms of birthing, what is the name of the condition that occurs when a calf is presented tail first? ***Breech birth***

If a cow is bred A.I. on January 1<sup>st</sup>, in what month is she due?

***October***

True or False. Performance information reported on Limousin cattle which are eligible for registration but not actually registered contributes to calculations of EPDs.

***True***

In what country did Limousin cattle originate?

***France***



When was NALJA formed?

**1973**

What do the letters NCBA stand for?

**National Cattlemen's Beef Association**

Of the 4 compartments of a ruminant's stomach, which is also known as the honeycomb? **Reticulum**

What year were Limousin first imported into North America?

**1968**

What is the normal pulse rate for cattle?

**60-70 beats per minute**

What are the grades of beef for young market animals?

**Prime, Choice, Select, Standard**

What is the name for the lip-curling reflex exhibited by bulls when they smell a cow in heat? **Flehming response**

How many months after calving will a beef cow normally come into heat?

**1½ to 2 months**

What are cattle that naturally lack horns called?

**Polled**

What basic nutrient is found in the largest quantities in an animal's body?

**Water**

The estrous cycle of a beef cow lasts how long?

**18-23 days**

What is the proper approximate rectal temperature in cattle?

**101-102 degrees Fahrenheit**

What type of injection goes directly into the muscle?

**Intramuscular**

What is the recommended age a heifer should first calve?

**2 years old**

True or false fiber is hard to digest?

**True**

What do you call high energy source feeds?

**Carbohydrates**

What is another name for yield grade?

**Cutability**

A pelvis in a cow can grow up to how many years?

**5 years**

A combination of one dominant and one recessive gene is termed what?

**Heterozygous**

What is the recommended Calcium to Phosphorus ratio in a balanced bovine diet?

**2:1**

Porterhouse steak comes from what beef wholesale cut?

**Loin or short loin**

What are two factors which may influence body temperature in a healthy animal? **Weather, exercise, disease, excitement, time of day**

What four factors can be used to determine an animal's EPDS

**Its own data, Parents Data, Offspring data, Genetic makers**

What causes dark cutting beef?

***Long term stress period prior to slaughter***

A cow with a body condition score of 1 would be considered what?

***Extremely thin, the answer "thin" will not be taken as correct***

What score would be assigned to a cow that is Extremely Fat.

***9***

Name the most common breed of bos Taurus cattle in the United States.

***Angus***

What three pieces of information do you need to know to determine an animal's frame score? ***Hip Height, Age, Sex***

Is a mature cow that has the same frame score as a mature bull the same hip height as the bull? ***No***

A steer is defined as being what?

***A castrated male***

At what point does a heifer become a cow?

***When she has her first calf***

What are the five USDA Yield grades given to beef cattle?

***YG 1,2,3,4,5***

Quality Grades are given based on the animals maturity and what other factor?

***Marbling***

Intravenous injections are given where?

***In the vein***

According to BQA Guidelines where should intramuscular injections be given? ***In the muscle in the neck***

If a breeder would like to produce a LimFlex that is 50% Limousin NALJF % and they own a Purebred female' what are their two breed options for sires?

***Angus and Red Angus***

Name the fungus that gets into the hide & develops a rough skin condition where the hair drops out in round patches.

***Ringworm***

Subcutaneous injections are given where?

***Under the skin***

What is the term for the period of time between when a cow is bred and when she calves? ***Gestation***

If a homozygous polled bull is turned out with a herd of horned cows what percentage of the calf crop will have horns?

***0%***

What do the letters ET stand for?

***Embryo Transfer***

What do the letters AI stand for?

***Artificial Insemination***

About how long after a heifer is in standing heat should she be bred?

***12 hours***

What is the three letter word that describes a bolus of regurgitated food common to ruminants?

***Cud***

What is the common name for cattle diarrhea?

***Scours***

Parturition is the formal name for what process?

***Calving***

Dystocia is also known as what?

***Abnormal or difficult labor***

The continental breeds of cattle were developed on what continent?

***Europe***

Name two continental breeds of cattle.

***Limousin, Gelbvieh, Charolais, Chianina, Maine-Anjou, Saler, Simmental, Tarentiase***

The target body condition score for a cow prior to calving is what?

***5 to 6***

What is the number scale associated with Body condition scoring.

***1 to 9***

What is the male sex hormone called?

***Testosterone***

What word refers to one-third of a cow's gestation period?

***Trimester***

Define Dressing Percentage.

***Hot carcass weight divided by live weight***

What is the name given to meat from cattle that are less than nine months of age at the time of harvest? ***Veal***

Why are beef carcasses aged?

***To improve tenderness***

What is the term used to describe a genetic combination where both genes are the same? ***Homozygous***

What is another word for hybrid vigor?

***Heterosis***

What is the most important nutrient in an animal's diet?

***Water***

What nutrient, when fed to cattle, will increase their water consumption?

***Salt***

What is BQA?

***Beef Quality Assurance***

What does IVF stand for?

***In Vitro Fertilization***

Is sexed semen stored in 1/2 cc straw or 1/4 cc straw?

***1/4 cc***