

# INTERMEDIATE

## 2019 National Junior Limousin Show & Congress

### Quiz Bowl Study Guide

#### Limousin Information

##### *History*

- Country Limousin cattle originated from
  - France
- First Limousin bull imported to North America and when
  - *Prince Pompadour, 1968*
- Know the names of the two bulls Bov Import imported in 1969
  - *Dandy and Diplomate*
- First Limousin bull imported permanently into the United States
  - *Kansas Colonel*
    - Person who imported
      - *Bob Haag, Topeka KS*
        - When?
          - *1971*
- First French Limousin Herdbook established
  - *November 1886*
- First registered Limousin cow
  - *NXF1 Miss Pompadour 1<sup>st</sup>*

##### *North American Limousin Foundation*

- Year of Establishment
  - *1968*
- Headquarters location
  - *Aurora, CO*
- Board of Directors- who is on it and who the officers are
  - <https://nalf.org/about-nalf/board-of-directors/>

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- MOE Shows- know what MOE stands for, name of all 5 Level I MOE shows and locations
  - National Western Stock Show (Denver), North American International Livestock Exposition (Louisville), American Royal (Kansas City), Fort Worth Stock Show and Rodeo (Fort Worth), All American Limousin Futurity (Travels with Junior Nationals)
- Official Publication
  - *Limousin Today*
    - Editor
      - *Mallory Blunier*
- Triple Crown- what shows make up Triple Crown
  - All American Limousin Futurity, NAILE, National Western Stock Show
    - Past winners
      - Spitz Navajo (1<sup>st</sup> Bull)
      - Spitz Special Effort (1<sup>st</sup> and only heifer to win)
- First Executive Vice-President of NALF
  - *Richard “Dick” Goff*
- Know past and current 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*
- Founder Memberships- first founder member
  - *Robert Purdy*
    - How many sold, how much
      - Check <http://afs.okstate.edu/breeds/cattle/limousin/>
- How many cattle NALF registered in 2018
  - 19966
- Know Membership types and cost
  - <https://nalf.org/about-nalf/membership-application/>

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## ***North American Limousin Junior Association***

- Year of establishment
  - 1973
- Board of Directors- know how many directors there are, who is on the board, what position they hold, what state they're from, who is running for the board in 2017
  - Check: <https://nalf.org/juniors/about/>
- Newsletter
  - *NALJA News*
- Know membership fees
  - <https://nalf.org/juniors/about/>

## ***Limi Boosters***

- Know original name and what year it was founded
  - *Limouselles, 1974*
- Know officers, what position they hold
  - Check: <https://nalf.org/limi-boosters/about/>

## **Animal Science**

### ***General***

- Unites States Secretary of Agriculture
  - *George "Sonny" Perdue*
- NCBA
  - *National Cattlemen's Beef Association*
- USDA
  - *United States Department of Agriculture*
- BIF
  - *Beef Improvement Federation*
- HACCP
  - *Hazard Analysis Critical Control Points*
- MARC

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- *Meat Animal Research Center*
- NBAF
  - *National Bio and Agro-Defense Facility*
    - Current location
      - *New York*
        - New location
          - *Manhattan, KS*
- What country has the largest number of beef cattle?
  - *India*
- Know your other British, Continental, and American Breeds
  - *British: Angus, Shorthorn, Hereford*
  - *Continental: Limousin, Charolais, Simmental, Gelbvieh, etc.*
  - *American: Santa Gertrudis, Brangus, Braford, Beefmaster, etc.*
- What invention in 1873 had a large impact on beef cattle production?
  - *Barbed Wire*
- Flight Zone- what is it? (just have a basic understanding)
  - Check out: <http://grandin.com/behaviour/principles/flight.zone.html>
- Chicago Mercantile Exchange-
  - *where most livestock futures are traded*
- Know maximum age cattle can be exported to Japan
  - *20 Months*
- Current International Letter Prefix
  - *G*
- Know the safe minimum internal temperature of ground beef
  - *160°F*

### **Genetics**

- EPDs
  - *Expected Progeny Differences*

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- Know four factors used to determine an animal's EPDs
  - *its own data, parent's data, offspring data, genetic markers*
- Polled vs. Horned- know which is dominant and which is recessive
  - *Polled-Dominant*
  - *Horned-Recessive*
    - Definitions of both
      - *Polled-Naturally lacking horns*
      - *Horned- Has horns*
- Homozygous vs. Heterozygous genes
  - *Homozygous: Having identical alleles*
  - *Heterozygous: Having differing alleles*
- Double Muscling- what is it?
  - *muscular hypertrophy*
- Know what percentages make a
  - *Purebred*
    - *87% Limousin or greater*
  - *Fullblood*
    - *100% Limousin*
  - *Lim-Flex*
    - *25-75% Limousin crossed with Angus or Red Angus*
      - *Can't have more than 12.5% of "other" breed*
- Know what SNP stands for in regards to DNA
  - *Single Nucleotide Polymorphism*
- Know genotype vs. phenotype
  - *Genotype: The genetic components of an animal that are not measured/ observed*
  - *Phenotype: characteristic of an animal that can be measured or observed*
- Know what DNA stands for
  - *Deoxyribose Nucleic Acid*
- Know what protein is associated with the F94L gene in Limousin cattle

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- *Myostatin*

## **Health**

- Normal body temperature and normal pulse rate of a beef animal
  - *Temperature: 101.5 degrees F*
  - *Pulse: 40-70 bpm*
- Scours- know what it is
  - *Common name for cattle diarrhea*
- Bloat- what it is
  - *An increase in gas pressure in the rumen that cannot be belched up*
  - how it can be detected
    - *Swelling on left side of the abdomen*
- Parasites- know major internal and external ones
  - *Example: Most common external-Lice and Flies*
- Tetanus- how it is caused
  - *A bacteria commonly found in the soil enters the body through a cut*
    - What is the common name for it?
      - *Lockjaw*
- Hardware Disease- how it is caused and treated
  - *Ingestion of a metal foreign body*
  - *Treatment: Magnet dropped into the stomach*
- BSE (*Bovine Spongiform Encephalopathy*)
  - *Neurologic disease that attacks the central nervous system*
  - *Know common name: Mad Cow Disease*
- Brucellosis-
  - *A disease in cattle that causes abortion of hairless calves and can be transmitted to humans in the form of Undulant Fever*
- Zoonotic Diseases-
  - *Disease that can be passed between humans and animals*

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- IBR
  - (*Infectious Bovine Rhinotracheitis*) also known as Red Nose
- Fescue Toxicity-
  - *Caused by endophyte on the fescue*
- Scientific name for bovine pinkeye
  - *bovine infectious keratoconjunctivitis*
- What PI3, BVD stands for
  - *PI3- Parainfluenza 3*
  - *BVD: Bovine Viral Diarrhea*
- Know the following genetic defects- curly calf syndrome, fawn calf, water head
- Know the difference between bacteria, viruses, and fungi

### *Classifications*

- Scientific name for a cow
  - *Bovine*
- Know both species of beef cattle and what makes them different
  - *Bos Taurus and Bos Indicus (humped cattle)*
- Term for a non-lactating cow
  - *Dry*
- Offspring of a cow
  - *Progeny or calf*
- Heifer that is born twin to a bull
  - *Free Martin*
- Calves on grass after weaning but before going to feedlot
  - *Stockers*
- Male parent
  - *Sire*
- Female parent
  - *Dam*

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- Cattle used for milk and beef production
  - *Dual purpose breed*

### *Nutrition*

- The stomach
  - *Rumen*
  - *Reticulum*
  - *Omasum*
  - *Abomasum*
- What is the most important nutrient for cattle?
  - *Water*
- Know your common forages and feeds
- Know the 5 essential nutrients for cattle
  - *Water*
  - *Protein*
  - *Carbohydrates*
  - *Lipids (Fats)*
  - *Vitamins and Minerals*
- What is the most abundant mineral in any animal's body?
  - *Calcium*
- Vitamins
  - *water soluble B's and C*
  - *fat soluble- ADEK*
- Calorie-
  - measure energy value in feed stuffs
- Know recommended Calcium to Phosphorus ratio in a balanced bovine diet
  - *2:1*
- Two possible active ingredients in stocker cattle growth implants other than what is used in calf growth implants



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- *Estradiol, trenbolone acetate (testosterone)*
- Rumen Microbes- know what they are and what they do
  - *Digestive enzymes necessary for the breakdown of plant cellulose and hemicellulose in cattle*
- A cow's highest energy requirement
  - *2 months after calving*

### ***Carcass***

- USDA Quality Grades
  - *Prime, Choice, Select, Standard, Commercial, Utility*
- USDA Yield Grades
  - (1-5)
    - know how they are calculated
      - USDA yield grades are calculated using an equation that incorporates adjusted fat thickness, percent of kidney, pelvic, and heart fat, hot carcass weight, and ribeye area
- Veal- know definition
  - *Meat from cattle less than 6 months old*
- Marbling- what it is and why it is important
  - *Intramuscular fat- Major indicator of flavor, tenderness, and juiciness*
- Know your cuts of beef
- Average dressing percentage
  - 62%
- Maturity grades- know what ages go with each grade
  - *A maturity: 9-30 Months*
  - *B maturity: 30-42 Months*
  - *C maturity: 42-72 Months*
  - *D maturity: 72-92 Months*
  - *E maturity 92+ Months*
- Know what the following stands for and what they are-

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- *KPH-Kidney, Pelvic, and heart fat*
- *DFD-Dark Firm Dry*
- *REA- Ribeye Area*
- Meat is composed of 4 main elements- know which elements and quantities
  - *Protein*
  - *Fat*
  - *Moisture- Most*
  - *Ash-Least*
- Fat thickness is measured between the 12<sup>th</sup> and 13<sup>th</sup> rib
- Common term for intermuscular fat
  - *Seam Fat*
- Two major types of connective tissue found in beef muscle
  - *Collagen and Elastin*
- Ultrasound scanning measures what carcass traits
  - *Ribeye area, Rib fat, Rump Fat, and Percentage Intramuscular Fat*

### ***Management***

- Know the definition and process of
  - *Weaning- Separation of young from the dam and cessation of consuming milk*
  - *Dehorning- Removal of horns (Various Methods: Electric dehorner, Barnes dehorner, paste.)*
  - *castrating methods- Banding, Burdizzo, Cutting*
- Know the two permanent types of identification recognized by the AAA
  - *Tattooing and Branding*
- Know how many days of age weaning weights for calves are adjusted for
  - *205*
- When newborn calves should be weighed
  - *within 24 hours after birth*
- Be able to define creep feeding
  - *Feeding supplemental feed to young calves who are still nursing*

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- Body condition scores
  - *1(Very Emaciated)-9( Obese)*
- Contemporary Groups- what are they and how are they used?
  - *Group of animals around the same age in the same management system. They are used to compare performance data of individuals to a group.*
- Injections- know the types and where they are given
  - *Intramuscular- In Muscle*
  - *Intravenous- In the Vein*
  - *Subcutaneous- Under the skin*
- Know weaning weight ratios
- Know calving ease codes and what they represent (A, B, C, D, E)
  - *A-Unassisted (Unobserved)*
  - *B-Some Assistance (Easy Pull)*
  - *C-Mechanical Assistance (Hard Pull)*
  - *D-C-section*
  - *E-Abnormal Presentation*
- For parent verification NALF uses SNP Markers- what does SNP stand for
  - *Single Nucleotide Polymorphism*
- Different methods of cow identification
  - *ear tags, hot brands, freeze brands, tattoos, neck chains, brisket tags*
- Know horned vs polled vs scurs
  - *Horned- Has attached horns*
  - *Polled- Naturally Lacking horn*
  - *Scurs- Small horns, not attached to the skull*
- Know what the following stands for and what they measure-
  - *ADG -Average Daily Gain*
  - *ACC-Accuracy*
- Know how scrotal circumference is measured
  - *Centimeters, via a scrotal tape*
- How Frame Score is calculated

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- *Hip Height, Age, Sex*
- Know makes up a Limousin tattoo
  - *Herd Prefix, Animal ID Number, Year of Birth*
- Know the recommended linear feet of bunk space for a market beef animal
  - *2-3 feet*
    - *resting area- 25 square feet*

### ***Reproduction***

- Average length in days between heat cycles
  - *21 days*
- Average length of a cow's estrous cycle
  - *21 days*
- Average time span after calving before a cow comes into heat
  - *2 months*
- Average gestation length
  - *283 days*
- Sperm cell abnormalities
  - *Double heads, coiled tails, proximal droplets, distal droplet*
- Cow's first milk and what makes it different from regular milk
  - *Colostrum*
    - *Contains antibodies from the mother*
- A.I.
  - *Artificial Insemination*
- E.T.
  - *Embryo Transfer*
- Know the reproduction tracts in both cows and bulls
- Zygote-
  - *A fertilized ovum*
- Cryptorchid- what it is

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- *A bull with at least one testicle retained in the body*
- Surrogate mother in embryo program
  - *Recipient Cow*
- Dystocia- what is it?
  - *Calving difficulty*
- Clean up bull- what does he do?
  - *Breed cows that did not get bred during AI*
- Parturition- what does it refer to?
  - *Birth*
- Know all of your main hormones
  - *Testosterone*
  - *Estrogen*
  - *Progesterone*
  - *Oxytocin*
- Flehming Response- what is it
  - *the lip-curling reflex exhibited by bulls when they smell a cow in heat*
- Breeding soundness exams (BSE) - what is their purpose and how are they conducted?
  - *Purpose: Identify bulls that are not going to be satisfactory breeders*
  - *Motility and Morphology of sperm cells, sex gland palpation, testicular measurement and palpation, anatomy of penis (corkscrew, hair rings (remove), warts, etc). (Technically a vet does not have to do a penile exam but it should be done)*
- Time between the birth of a calf and when the cow rebreeds
  - *Post-Partum Interval*
- Time between when a cow is bred and when she calves
  - *Gestation*
- FSH (*Follicle Stimulating Hormone*)
  - *stimulate superovulation*
- Breech Birth- what is it
  - *The calf comes tail first*

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- Scientific name for afterbirth
  - *Placenta*
- Method is commonly used to determine pregnancy in cows
  - *Rectal palpation*

### *Helpful Websites*

- <https://nalf.org/management/library/>
- <http://afs.okstate.edu/breeds/cattle/limousin/>