

# **2019 ND STATE 4-H LIVESTOCK QUIZ BOWL**



**PRACTICE BOOKLET**

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This serves as a reference for the 4-H participants, coaches, and parents who are currently involved or looking to get involved in the North Dakota State 4-H Livestock Quiz Bowl Contest.

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# What is Livestock Quiz Bowl?

The North Dakota 4-H Livestock Quiz Bowl provides an opportunity for youth enrolled in 4-H livestock projects to demonstrate their knowledge of animal science related subject matter in a competitive setting where attitudes of friendliness and fairness prevail. This contest provides an educational experience for both participants and spectators. Youth are tested on all food animal livestock species including beef, dairy, swine, goat (dairy and meat), sheep, poultry and rabbit. Additional questions regarding Youth for the Quality and Care of Animals (YQCA) may also be asked. Competition in quiz bowl encourages 4-H members to develop a more complete knowledge of animals and related subjects and is an excellent way to develop self-confidence and excellent teamwork skills. This contest provides an educational program for all project members, including those who may not own a project animal.

For more information on the North Dakota 4-H Livestock Quiz Bowl, visit [https://www.ndsu.edu/4h/programs\\_events/state\\_4\\_h\\_contests/livestock\\_judging/](https://www.ndsu.edu/4h/programs_events/state_4_h_contests/livestock_judging/) and click on “Livestock Quiz Bowl Rules”.

## Getting Started Resources

To start preparing for the Livestock Quiz Bowl, you will want to start studying from the following resources and web links. Click on the resources to visit the website.

- [4H 117R Beef Resource Handbook for Market & Breeding Projects](#)
- [4H 127R Dairy Resource Handbook](#)
- [4H 135R Goat Resource Handbook for Marketing & Breeding Projects](#)
- [4H 228R Rabbit Resource Handbook](#)
- [4H 194R Sheep Resource Handbook for Market & Breeding Projects](#)
- [4H 134R Swine Resource Handbook for Market & Breeding Projects](#)
- Poultry Web Links:
  - [https://wayne.osu.edu/sites/wayne/files/imce/Program\\_Pages/4H/Project\\_pages/2015/broilers.pdf](https://wayne.osu.edu/sites/wayne/files/imce/Program_Pages/4H/Project_pages/2015/broilers.pdf)
  - <https://afs.ca.uky.edu/poultry>
  - <http://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1415&context=a4hhistory>
- [Youth For the Quality Care of Animals](#)
- [Excellence in Exhibition: Preventing Disease in Animals and People](#)

All of the questions for the quiz bowl are pulled from these resources, so take care in reading over them and making sure you understand the information. Additional questions may be pulled from the Additional Concepts section of this booklet. If you are interested in purchasing the books listed above, contact your local extension agent or Leigh Ann Skurupey for more information.

## How to Study

Start by reading through the glossary and familiarizing yourself with the terms that are associated with that species. You may want to make flashcards or use a website like [Quizlet](#) to create online flashcards that you can study anywhere and can share with your teammates.

After you have a good understanding of the terms, take some time to read through the resources. You may want to take notes of important topics so that you are able to study and review later on. One way to make sure you know the information is to quiz yourself on the material by writing your own practice questions. You could also do this with a partner or multiple people, so that you are writing questions for other and not answering your own.

## Ideas for Practices

Below is a list of ways you and your team can practice for the quiz bowl competition. If the suggestions are **green** and underlined it is hyperlinked to an additional resource.

- **Create a Jeopardy Game**: Modelled after the TV game show, playing jeopardy is a fun way to practice all the aspects of a quiz bowl competition! There are tons of free, easy to use templates online, so all you have to do is add in your questions!
- **Charades**: Use charades to act out terminology.
- **Kahoot**: In Kahoot, students use phones and/or computers to compete in a game. You can customize questions and students will need to answer correctly as quickly as possible.
- **Guest Speaker**: If students are struggling with a specific topic, invite a guest speaker to talk to them and answer questions that the students have.
- **Diagrams**: Use diagrams, pictures, or charts to help students visualize different concepts.
- **Interactive Activities**: Use activities where the youth are doing something (i.e. lining up the order of the digestive systems, creating models out of play-doh, candling, dissecting, or cooking eggs)
- **Animals**: Bring in different animals to study the difference between breeds, to identify animal body parts, and other activities.
- **Scavenger Hunt**: Bring students to a grocery store and ask them to try to identify the products that come from each species, and/or identify cuts of meat and where they come from.

## Practice Questions

Below are 30 practice questions (10 per age division) for youth to use to become more familiar with how questions will be asked in the quiz bowl competition. Answers are at the end of this packet.

### Junior Questions

1. Name TWO breeds of beef cattle.
2. Where is the milk kept on a dairy farm?
3. Classify these two feed ingredients: Whole Grain Oats and Dried Sugar Beet Pulp. Are they classified as concentrates, protein, or energy?
4. Describe what it means for an animal to be pigeon-toed or bowlegged.
5. What is an animal's flight zone?
6. Describe the characteristics of a LaMancha goat.
7. What is a pullet?
8. There are 4 types of fur in the recognized breeds of rabbit. Name 1 and describe it.
9. What is mutton?
10. Name two breeds of swine and their physical characteristic.

### Intermediate Questions

1. Name 4 of the wholesale beef cuts.
2. What is a replacement heifer?
3. What process has silage gone through before being fed?
4. What is docking?
5. What is the difference between a monogastric digestive system and ruminant digestive system?
6. What is the name of the meat that comes from goats?

7. The term “poultry” includes more than just chickens, turkeys, and ducks. Name 3 other fowl that fall under the term “poultry”.
8. There are 5 conformations in rabbits. Name 3 and name one breed per conformation type
9. In terms of sheep, what does “kemp” mean?
10. In the Universal Ear Notching System, what is the right ear used for?

## Senior Questions

1. What is the health concern for a steer that is receiving a diet high in grain, with little to no roughage?
2. What is the rate of decline in milk production after peak milking in a dairy cow called?
3. Name FOUR Feed tag components.
4. Which hormone is the one responsible for the ejection of milk?
5. When thinking about Quality Assurance in swine and the injection reference chart, what is the injection called that deposits the drug under the skin?
6. Unlike Dairy cattle, whose udders are divided into quarters, goats’ udders are divided into \_\_\_\_\_.
7. What are the components that make up an egg?
8. What is an open coat in rabbits?
9. What breeds were involved in the development of the Polypay breed of sheep?
10. How many pounds of milk does a lactating sow produce in a day?

## Additional Terms



### Break Joints versus Spool Joints

When grading lamb carcasses, one of the factors that determines if the meat is considered lamb or mutton is the joint located on the front cannon bones. As a lamb ages, this joint has cartilage that will **ossify** (harden in to bone). Break joints (Left in **Figure 1**) are present in carcasses of younger sheep, and spool joints (Right in **Figure 1**) are present in the carcasses of older sheep. If the sheep has two break joints, its

*Figure 1: Break joint (left), Spool joint (right)*

meat is labelled “Lamb”. If the sheep has one break joint and one spool joint, the meat is labelled “Yearling Mutton”. If the sheep has two spool joints, the meat is labelled “Mutton”. These labels are important to producers because mutton is in less high of a demand and is worth less money than lamb.

### ***Bos indicus* versus *Bos Taurus***

*Bos indicus* cattle originated from India and have some interesting characteristics which developed from centuries of inadequate food supplies, insect pests, parasites, diseases, and extreme weather. *Bos indicus* cattle have a distinctive hump over the top of their shoulders and neck. They have horns that curve upwards and are often tilted to the rear. They have long, droopy ears and excessive skin, especially around their necks and dewlap. Finally, they have highly developed sweat glands, which allows them to sweat more easily and they produce an oily substance that is able to repel insects. Recognizable *Bos indicus* breeds include the Brahman and the Brangus, which is an Angus and Brahman cross. *Bos indicus* cattle are often know as Zebu cattle.



Figure 2: *Bos indicus*



Figure 3: *Bos taurus*

*Bos taurus* cattle originate from Europe. These cattle have thick, tight hides, small ears, and lack the hump that the *Bos indicus* cattle have. Some recognizable *Bos taurus* breeds include Hereford, Angus, Shorthorn, or Limousin. These cattle are more efficient meat animals because they have better feed efficiency, yield grades, and dressing percentages. They produce tender, more marbled meat.

## Answers to Practice Questions

### **Junior Answers**

1. Brangus, Charolais, Gelbvieh, Hereford, Angus, Simmental, Red Angus, Maine-anjou, Beefmaster Belgian Blue, Brahman, Texas Longhorn, Murray Grey, Limousine, Piedmontese, Pinzgauer, Shorthorn, etc.
2. Bulk Tank
3. Energy
4. When an animals knees are set too far out, causing the toes of the animal to turn in.
5. The distinctive, comfortable space around an animal

6. The only dairy goat developed in the United States, medium sized, and can be any color. Short and fine hair, very small ears with a maximum length of two inches.
7. A female chicken under a year old.
8. Angora/wool: long, thick hair; Rex: short dense fur that is soft to the touch; Satin: very shiny coat that has a sheen; Normal: most common type of fur, may be called rollback, flyback, or standing.
9. Meat from sheep older than 12 months of age
10. Berkshire- black with white feet, tail and usually white splash on the face, Chester white- large and pure white, good mothers, Duroc- solid red, light to dark shades, Hampshire- white belt, which covers forelegs and may have white on hind legs, Hereford- white face, 2/3 body red, Poland china- black with 6 white points, droopy ears, Tamworth- all red, ears erect, Spot- droopy ears, black with white spots, Yorkshire- white hogs, erect ears, Landrace- large floppy ears, white in color, Pietrain- black hair coat, varying white spots

## Intermediate Answers

1. Chuck, Rib, Short Loin, Round, Flank, Plate, Brisket, Shank
2. A heifer that is being kept to enter the herd
3. Fermentation
4. Removal of the tail
5. Monogastrics have one compartment in their stomach, ruminants have 4 compartments that make up their stomach.
6. Chevon
7. Emu, goose, guinea fowl, ostrich, partridge, peafowl, pheasants, pigeons, quail, rhea
8. Semi arch- English Lop\*, Full arch- English Spot\*, Compact- Dutch\*, Commercial- Champagne d'Argent\*, Cylindrical-Himalayan\*  
*\*Other breeds would be accept, these answers are just an example!*
9. Abnormal, coarse, hairy, white fibers in some fleeces.
10. Marking the litter that the pig came from

## Senior Answers

1. Acidosis
2. Persistency
3. Brand/Product name, Intended Species, Production Phase, medication Statement, Active Ingredient, Guaranteed Analysis, Ingredients, Feeding and/or Mixing Directions, Warning or Caution Statement, Manufacturer's Name and Address, Net Weight
4. Oxytocin
5. Subcutaneous
6. Halves
7. Shell, Yolk, Albumen, Chalazae, Vitelline Membrane, Air cell, Inner and outer membranes.
8. Fur that lacks the ability to return to its natural position when stroked toward the head.
9. Targee, Dorset, Rambouillet and Finnsheep
10. 15-25lb