



ANIMAL SCIENCE

Merit Badge Requirements

- 1) Name four breeds of livestock in each of the following classifications: horses, dairy cattle, beef cattle, sheep, hogs. Tell their principal uses and merits. Tell where the breeds originated.
- 2) List the principal diseases in your area that afflict the animals in each classification. Describe the symptoms and explain the proper treatment for the diseases you list.
- 3) Explain the major differences in digestive systems of ruminant and nonruminant animals. Explain the differences in feeds typically used for beef cattle and for dairy cows.
- 4) Tell how you would properly manage a cow, horse, sheep, goat, or hog, or a poultry flock, including adequate feeding. Tell what must be done to prevent illness, blemishes, defects, and disease arising from improper and unsanitary conditions.
- 5) Tell about three career opportunities in animal science.
- 6) Complete ONE of the following options:

Beef Cattle Option

- A) Visit a farm or ranch where beef cattle are produced under any of these systems:
 - 1) Feeding market cattle for harvest;
 - 2) Producing feeder cattle for sale to commercial cattle feeders;
 - 3) Producing purebred cattle for sale as breeding stock to other breeders.

Talk with the operator. Tell how the cattle were handled, fed, weighed, and shipped.

- B) Sketch a plan of a feedlot, forage and grain storage facilities, and loading chute for 30 or more fattening steers, or a corral plan with cutting and loading chutes for handling 50 or more beef cows and their calves at one time.
- C) Submit a sketch showing the principal wholesale and retail cuts of beef. Tell about the U.S. Department of Agriculture dual grading system of beef. Tell about the grades in each system.
- D) Define the following terms: bull, steer, bullock, cow, heifer, freemartin, heiferette, calf.

Dairying Option

- A) Tell how a cow or goat converts forage and grain into milk.
- B) Make a chart showing the ingredients in cows' milk or goats' milk. Chart the amount of each ingredient.
- C) Explain the requirements for producing Grade A milk. Tell how milk is pasteurized.
- D) Tell about the kinds of equipment and sanitation standards for dairy farms.
- E) Define the following terms: bull, cow, steer, heifer, springer, buck, doe, kid.
- F) Visit a dairy farm or milk processing plant. Tell about your visit.

Horse Option

- A) Make a sketch of a useful saddle horse barn and exercise yard.
- B) Tell the history of the horse and the benefits it has brought to people.
- C) Define the following terms: mare, stallion, gelding, foal, colt, filly; mustang, quarter horse, draft horse, pacer, trotter; pinto, calico, palomino, overo, tobiano.
- D) Visit a horse farm. Describe your visit.
- E) Outline the proper feeding of a horse doing light work. Explain why the amount and kind of feed will change according to the kind of horse and the work it does. Describe the symptoms of colic.

Sheep Option

- A) Make a sketch of a live lamb. Show the location of the various wholesale and retail cuts.
- B) Select two breeds that would be appropriate for the production of crossbred market lambs in your region. Identify which breed the rams should be.
- C) Choose three breeds and offer a crossbreeding plan that would use the best characteristics of each breed for maximum sheep production efficiency.
- D) Visit a farm or ranch where sheep are raised. Tell about your visit, including the feeding program used. If you cannot visit a sheep farm or ranch, view a video from a breed association, or research the Internet for information on sheep production. Tell about your findings.

- E) Describe some differences between the production of pure-bred and commercial lambs.
- F) Define the following terms: wether, ewe, ram, lamb.

Hog Option

- A) Visit a farm where hogs are produced, or visit a packing plant handling hogs. Describe your visit. If you cannot visit a hog production unit or packing plant, view a video from a packer or processor. Tell about the video.
- B) Outline in writing the proper feeding from the breeding of gilt or sow through the weaning of the litter. Discuss the growth and finishing periods.
- C) Make a sketch showing the principal wholesale and retail cuts of pork. Tell about the recommended USDA grades of pork. Tell the basis for each grade.
- D) Define the following terms: gilt, sow, barrow, boar.

Poultry Option

- A) Do ONE of the following:
 - 1) Manage an egg-producing flock for five months. Keep records of feed purchased, eggs sold, medication, vaccination, and mortality. Present records for review.
 - 2) Raise 20 chicks, poults, or ducklings. Keep records of feed intake, weight gains, medication, vaccination, and mortality. Present records for review. Kill and dress two birds.
 - 3) Visit a commercial layer or broiler chicken producer, or a turkey production unit. Tell about your visit. If you cannot visit a commercial poultry or egg farm, view a video from a poultry association or research the Internet for information on poultry production. Tell about your findings.
- B) Make a sketch of a layer house or broiler house showing nests, roosts, feeders, waterers, and means of ventilation. Explain how insulation, ventilation, temperature controls, automatic lights, and other environmental controls are used to protect birds from heat, cold, and bad weather.
- C) Tell about the grading of eggs. Tell how broilers (fryers) are graded. Describe the classes of chicken meat.
- D) Define the following terms: hen, rooster, chick, capon, tom, poult.

Scout Name: _____ Unit #: _____ Date: _____

Requirement 1

Name four breeds of livestock in each of the following classifications. For each breed, tell their principal use, merits and where the breed originated

HORSES

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

DAIRY CATTLE

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

Scout Name: _____ Unit #: _____ Date: _____

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

BEEF CATTLE

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

SHEEP

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

Scout Name: _____ Unit #: _____ Date: _____

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

HOGS

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

Breed: _____ Origination: _____

Merits: _____

Principal Uses: _____

Requirement 2

Provide the name, symptoms, and treatment for a few of the principal diseases in your area that afflict the animals in each classification.

HORSES

Disease: _____

Symptoms: _____

Treatment: _____

Disease: _____

Symptoms: _____

Treatment: _____

Scout Name: _____ Unit #: _____ Date: _____

Disease: _____

Symptoms: _____

Treatment: _____

DAIRY CATTLE

Disease: _____

Symptoms: _____

Treatment: _____

Disease: _____

Symptoms: _____

Treatment: _____

Disease: _____

Symptoms: _____

Treatment: _____

BEEF CATTLE

Disease: _____

Symptoms: _____

Treatment: _____

Disease: _____

Symptoms: _____

Treatment: _____

Disease: _____

Symptoms: _____

Treatment: _____

SHEEP

Disease: _____

Symptoms: _____

Treatment: _____

Scout Name: _____ Unit #: _____ Date: _____

Disease: _____

Symptoms: _____

Treatment: _____

Disease: _____

Symptoms: _____

Treatment: _____

HOGS

Disease: _____

Symptoms: _____

Treatment: _____

Disease: _____

Symptoms: _____

Treatment: _____

Disease: _____

Symptoms: _____

Treatment: _____

Requirement 3

Explain the major differences in digestive systems of ruminant and nonruminant animals: _____

Explain the differences in feeds typically used for beef cattle and for dairy cows: _____

Scout Name: _____ Unit #: _____ Date: _____

Give a brief description of your visit: _____

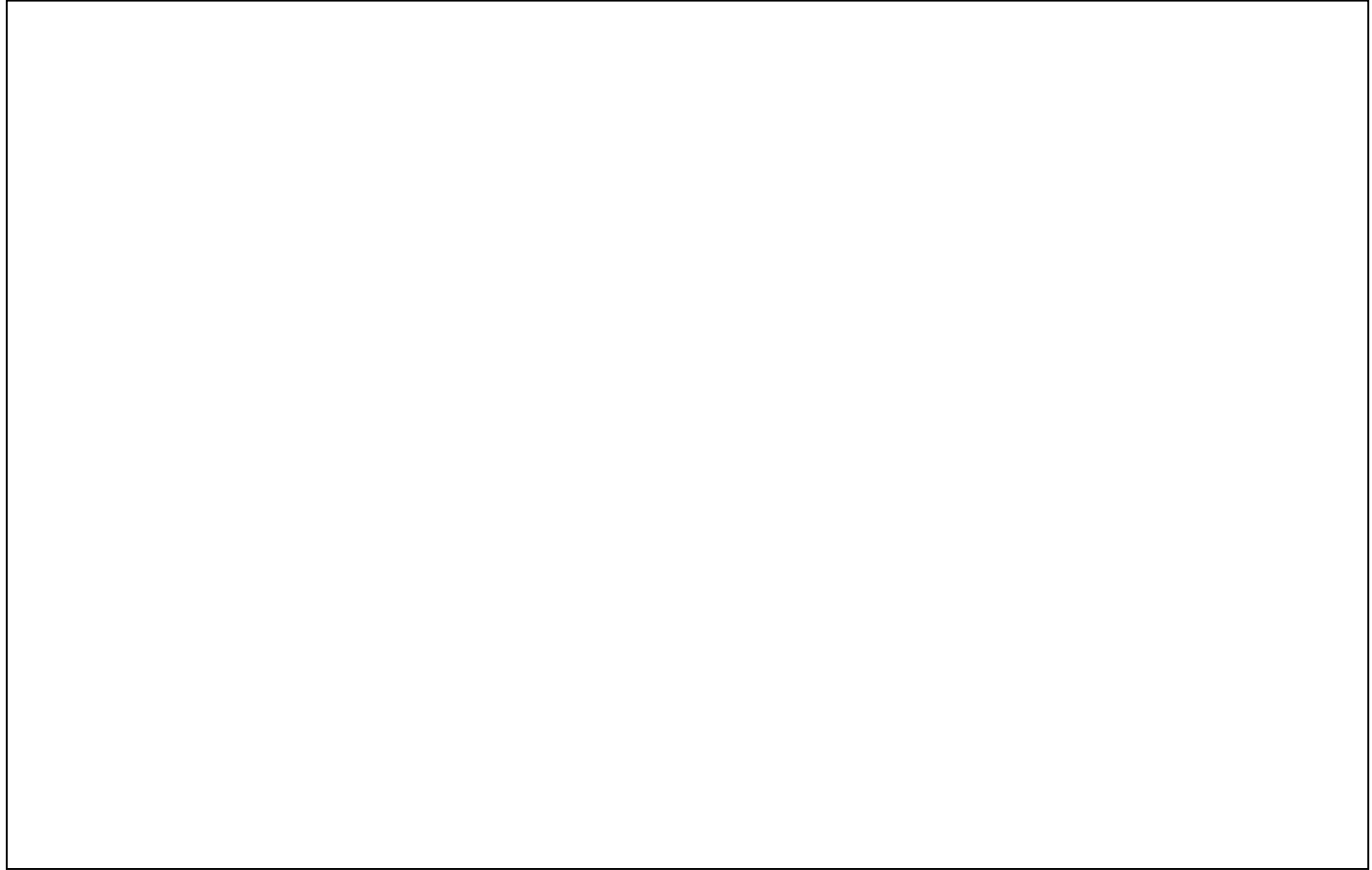
During your visit talk with the operator. Tell how the cattle were handled, fed, weighed, and shipped: _____

Use this area to sketch a plan of a feedlot, forage and grain storage facilities, and loading chute for 30 or more fattening steers, or a corral plan with cutting and loading chutes for handling 50 or more beef cows and their calves at one time.



Scout Name: _____ Unit #: _____ Date: _____

Use this area to make a sketch showing the principal wholesale and retail cuts of beef.



Tell about the U.S Department of Agriculture dual grading system of beef: _____

Tell about the grades in each system: _____

Describe the following terms:

Bull: _____

Steer: _____

Bullock: _____

Cow: _____

Heifer: _____

Freemartin: _____

Heiferette: _____

Calf: _____

Scout Name: _____ Unit #: _____ Date: _____

If you selected the *Dairying Option*:

Tell how a cow or goat converts forage and grain into milk: _____

Make a chart in the area below that shows the ingredients in cow's milk or goat's milk. Chart the amount of each ingredient.

Explain the requirements for producing Grade A milk: _____

Tell how milk is pasteurized: _____

Tell about the kinds of equipment and sanitation standards for dairy farms: _____

Scout Name: _____ Unit #: _____ Date: _____

Define the following terms:

Bull: _____

Cow: _____

Steer: _____

Heifer: _____

Springer: _____

Buck: _____

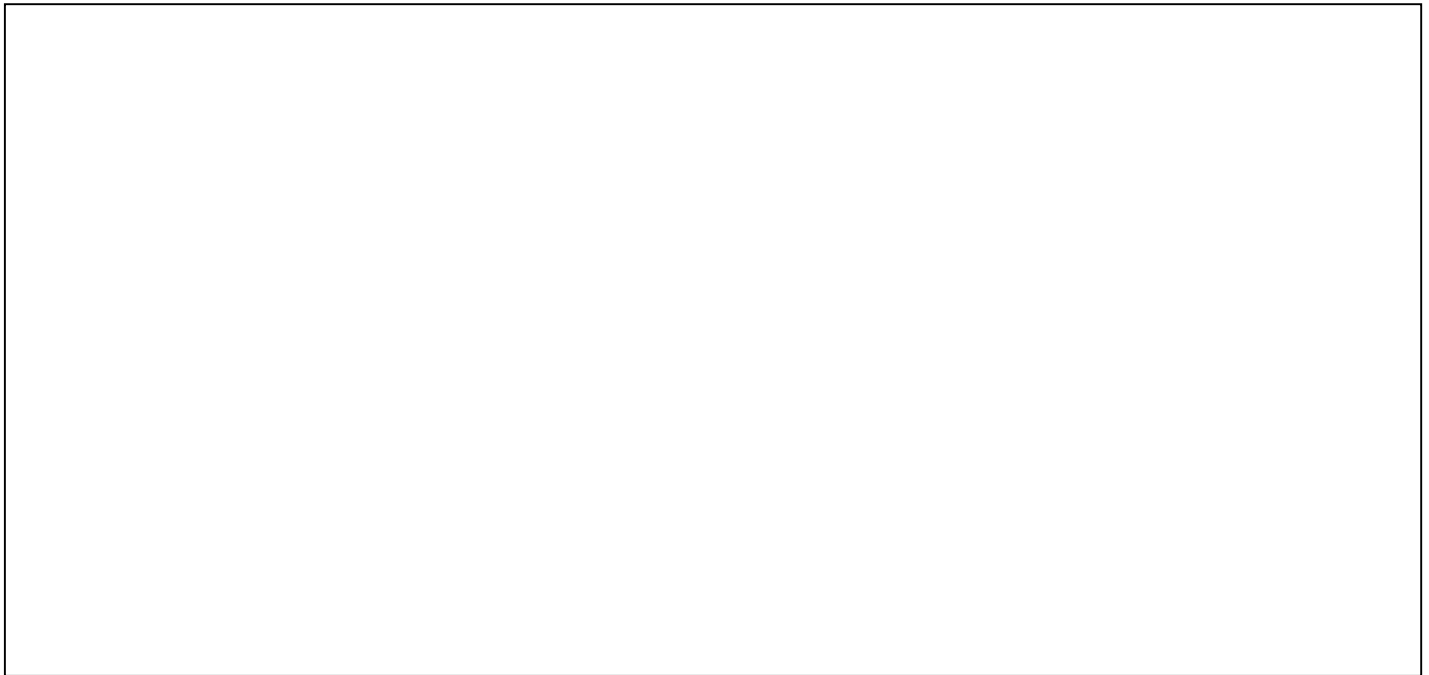
Doe: _____

Kid: _____

Visit a dairy farm or milk processing plant. Tell about your visit: _____

If you selected the **Horse Option**:

Use this area to make a sketch of a useful saddle horse barn and exercise yard:



Tell the history of the horse and the benefits it has brought to people: _____

Scout Name: _____ Unit #: _____ Date: _____

Define the following terms:

Mare: _____

Stallion: _____

Gelding: _____

Foal: _____

Colt: _____

Filly: _____

Mustang: _____

Quarter Horse: _____

Draft Horse: _____

Pacer: _____

Trotter: _____

Pinto: _____

Calico: _____

Palomino: _____

Overo: _____

Tobiano: _____

Visit a horse farm. Describe your visit: _____

Outline the proper feeding of a horse doing light work: _____

Explain why the amount and kind of feed will change according to the kind of horse and the work it does: _____

Describe the symptoms of colic: _____

Scout Name: _____ Unit #: _____ Date: _____

If you selected the *Sheep Option*:

Use this area to make a sketch of a live lamb. Show the location of the various wholesale and retail cuts:



Select two breeds that would be appropriate for the production of crossbred market lambs in your region.

What breed should the lambs be? _____

Choose three breeds and offer a crossbreeding plan that would use the best characteristics of each breed for maximum sheep production efficiency:

Plan: _____

Scout Name: _____ Unit #: _____ Date: _____

Tell about the recommended USDA grades of pork: _____

Tell the basis for each grade: _____

Define the following terms:

Gilt: _____

Sow: _____

Barrow: _____

Boar: _____

If you selected the **Poultry Option**:

You have been given three options for part A of this requirement. Select and complete one of them.

If you selected **Option A**

___ Manage an egg-producing flock for five months. Keep records of feed purchased, eggs sold, medication, vaccination, and mortality. After the five month period present your records to your counselor for review.

If you selected **Option B**:

___ Raise 20 chicks, poults, or ducklings. Keep records of feed intake, weight gains, medication, vaccination, and mortality. Present your records to your counselor for review.

___ Kill and dress two birds

If you selected **Option C**:

Visit a commercial layer or broiler chicken producer, or a turkey production unit. Tell about your visit. If you cannot visit a commercial poultry or egg farm, view a video from a poultry association or research the Internet for information on poultry production. Tell about your findings: _____

Scout Name: _____ Unit #: _____ Date: _____

Make a sketch of a layer house or broiler house. Show nests, roosts, feeders, waterers, and means of ventilation.



Explain how insulation, ventilation, temperature controls, automatic lights, and other environmental controls are used to protect birds from heat, cold, and bad weather: _____

Tell about the grading of eggs: _____

Tell how broilers (fryers) are graded: _____

Describe the classes of chicken meat: _____

Define the following terms:

Hen: _____

Rooster: _____

Chick: _____

Capon: _____

Tom: _____

Poult: _____