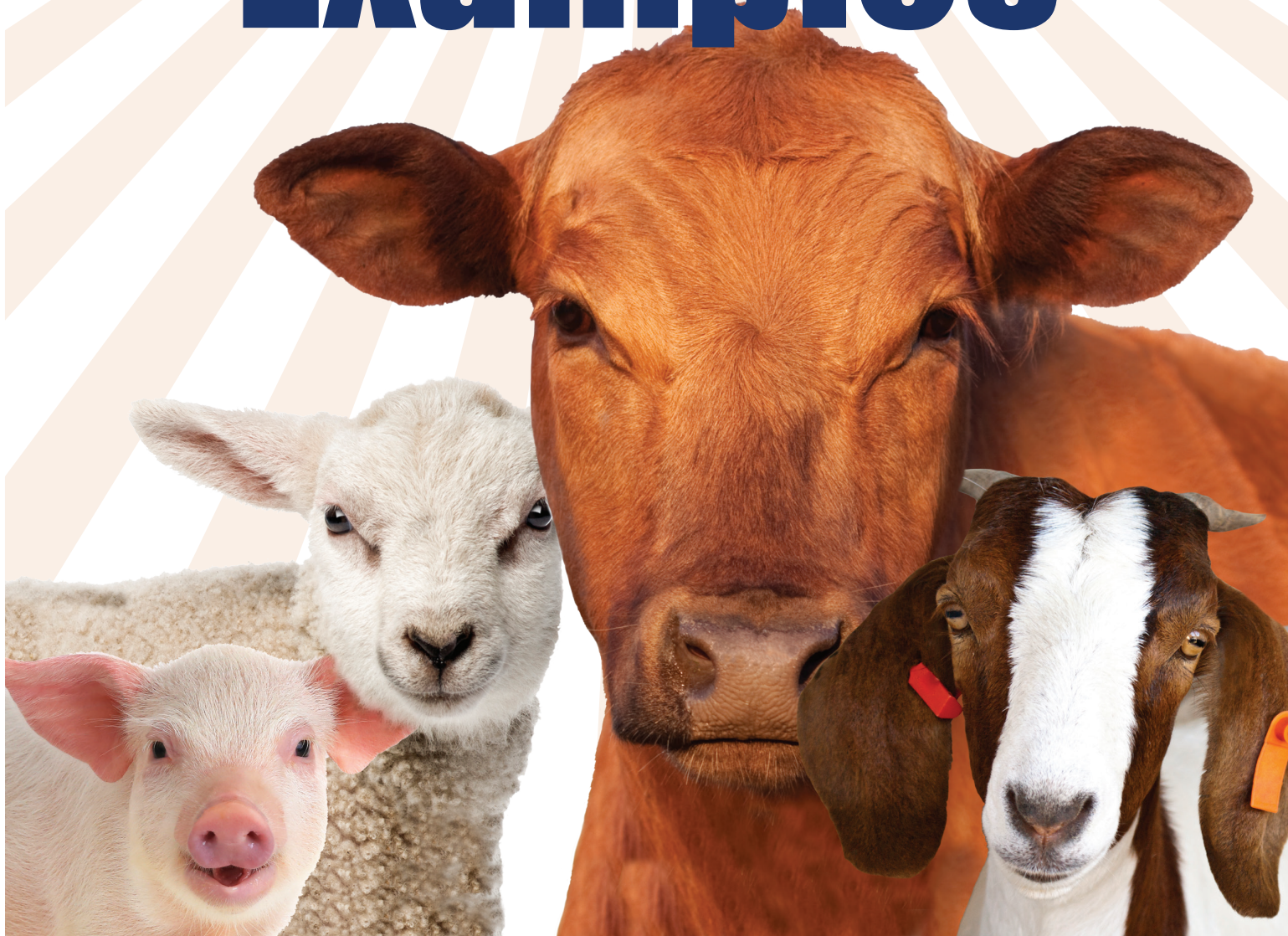# ALABAMA 4-H
### Alabama Cooperative Extension System

# Livestock Skillathon
# Rules and Examples

# Alabama 4-H Livestock Skillathon Rules and Regulations

## Team and Contestant Eligibility

- All Alabama 4-H age youth (9–18) in good standing are eligible to compete. Junior and Senior contestants will compete in separate age divisions, and contestants must participate in their appropriate age division. The age breaks for the age divisions are as follows (age as of January 1 of the upcoming year):

  » Junior: 9–13 years old

  » Senior: 14–18 years

- Teams may consist of up to four members, but only the top three individual overall scores will be included in the team overall score. Counties with more than four contestants in a particular age division may have multiple teams, but the number of contestants per team may not exceed four.

  » All members of a four-person team will compete, but the member receiving the lowest overall score will automatically be declared the alternate. The alternate's scores will not be included in any of the team totals, but will be considered in making all individual awards.

  » Teams consisting of three members will not have an alternate and all members' scores will count toward individual and team awards.

  » Counties that have less than three individuals in a division (Junior or Senior) may work with other counties to make a full team of three or four individuals.

- The high placing Senior team will be invited to represent Alabama at the National Skillathon Contest which will be held in November in Louisville, Kentucky. To represent Alabama at the National Skillathon Contest, a Senior team must have four team members.

  » In the event a county with more than one Senior team competing at the State Skillathon Contest should win, that county may choose amongst all of its Senior age contestants in determining the youth that will compete at the National Skillathon Contest. Only youth from that county that competed at the State Skillathon Contest are eligible for selection.

  » In the event a county with only three Senior contestants (one team of three Senior contestants) wins the State Skillathon Contest, that team must pick up a fourth team member from another county to be eligible for competition at the National Skillathon Contest. The added team member must be a Senior age youth and must have competed at the State Skillathon Contest.

- Registration for the event is through 4HOnline. You may obtain information regarding registration deadlines from your county 4-H Agent.

- No member may represent Alabama in an out-of-state National Skillathon event in which he or she has previously participated. This includes the National Skillathon Contest in Louisville. Additionally, a member may not participate in the National 4-H Livestock Skillathon Contest and the National 4-H Livestock Judging Contest held in conjunction with the North American International Livestock Exposition in Louisville the same year. Contestants in 4-H competitive events must not have participated in official postsecondary (university, college, junior college, or technical school) competitive events of a similar nature and in the same subject matter area.

- This contest covers the understanding and practical application and the principles of animal sciences related to beef, sheep, swine, and goats.

- Potential educational resources are included in this packet. In particular, the following resource should prove helpful. Kentucky 4-H Livestock Skillathon Information: http://afs4hyouth.ca.uky.edu/skillathon

## Skillathon Method of Conduct

- All 4-H Livestock Skillathon contestants will report promptly to the Skillathon testing location. The agenda for the event will be made available by the organizers to that contestants will arrive on time. Only contestants or those adults assisting with the contest (group leaders, card runners, contest officials, etc.) will be permitted in the competition area.

- Contestants will be allowed 15 minutes to complete each of the ten individual competition classes. Senior teams will be allowed 20 minutes to complete the team activities.

- During the individual competition round, contestants will be divided into groups and will remain with that assigned group throughout the round of classes. While completing the individual competition classes, there will be no conferring between contestants or between a contestant and anyone else except as directed by contest officials. The team competition round will follow the individual competition round.



- Team members will complete one official answer sheet for each team class representing the combined effort of all team members. Teams will be allowed 20 minutes to complete



the group assignment for each class and turn in an answer sheet. During the team competition round of the contest, contestants will only be allowed to confer with their own team members during the time period allowed for each class.

- Contestants shall not wear any hats.

- Contestants should bring a blank notepad, clipboard, blank paper, and writing instruments (pencil preferred). Contestants may not bring books, notes, pamphlets, reference materials, calculators (one will be provided if needed), or cell phones into the contest area. Contestants found in contempt of this rule will be disqualified.

- Contestants are not to pick up or touch any item that is being identified or evaluated in the individual competition classes.

## Skillathon Classes: Junior Division

### Individual Classes (500 possible points)

- Retail Meat Cut Identification: (50 possible points) From a provided list, identify from photographs or pictures the uniformly accepted name of a combination of ten beef, pork, and lamb retail cuts.

- Livestock Feed Identification (50 possible points): From a list provided, identify from actual samples the proper name for ten livestock feeds.

- Livestock Breed Identification (50 possible points): From a list provided, identify from photographs or pictures, ten livestock (beef cattle, swine, sheep, and goat) breeds.

- Livestock/Meat Equipment Identification (50 possible points): From a list provided, identify from photographs or pictures the proper name

for ten pieces of equipment used in livestock production or the meat industry.

- Meat Judging Class I (50 possible points): Rank one class of four similar retail cuts of meat.

- Meat Judging Class II (50 possible points): Rank one class of four similar retail cuts of meat.

- Hay Judging Class (50 possible points): Rank a class of four hay samples.

- Wool Judging Class (50 possible points): Rank a class of four samples of fleece.



- Quality Assurance Exercise (50 possible points): Demonstrate how to read a medicine label, calculate withdrawal times, complete a treatment record, and make responsible management decisions regarding quality assurance.

- Quiz (50 possible points): Complete a quiz concerning the total livestock industry.



## Skillathon Classes: Senior Division

### Individual Classes (950 possible points)

- Retail Meat Cut Identification (150 possible points): From a provided list, identify from photographs or pictures the uniformly accepted name of a combination of ten beef, pork, and lamb retail cuts, including the species, wholesale cut from which each retail cut originates, and the retail cut.

- Livestock Feed Identification (150 possible points): From a provided list, identify from actual samples the proper name for ten livestock feeds, each corresponding nutrient group, and the unique characteristics or uses of the feedstuff.

- Livestock Breed Identification (150 possible points): From a provided list, identify from photographs or pictures ten livestock (beef cattle, swine, sheep, and goat) breeds, origin of the breed, and unique characteristics and important traits for the breed.

- Livestock/Meat Equipment Identification (100 possible points): From a provided list, identify from photographs or pictures the proper name for ten pieces of equipment used in livestock production or the meat industry and the use for the piece of equipment.

- Meat Judging Class I (100 possible points): Rank one class of four similar retail cuts of meat and answer five questions pertaining to the class.

- Meat Judging Class II (50 possible points): Rank one class of four similar retail cuts of meat.

- Hay Judging Class (100 possible points): Rank a class of four hay samples with forage analysis information, nutrient requirements of the species being fed, and a production scenario. Answer five questions pertaining to the class.

- Wool Judging Class (50 possible points): Rank a class of four samples of fleece.

- Quality Assurance Quiz (50 possible points): Demonstrate how to read a medicine label, calculate withdrawal times, complete a treatment record, and make responsible management decisions regarding quality assurance.

- Quiz (50 possible points): Complete a quiz concerning the total livestock industry.



## Team Exercises/Activities

Senior team members will confer as a group to complete the following exercises/activities. All team members must participate and have an active role. The specific components that are required for each activity/exercise will be age appropriate.

- Animal Breeding and Selection: Team members will evaluate a breeding animal scenario and make animal selection decisions based upon performance data to rank breeding animals for use within the situation.

- Livestock Marketing and Management: Team members will evaluate a number of feed rations and related information concerning the feed rations and rank the feed rations from most ideal to least ideal to meet a specific livestock production scenario.

- Quality Assurance Exercise: Total team scores will be determined by adding the three highest individual team members' class totals with the total accumulated from the team's competition classes.

# Skillathon Retail Meat Cut Identification

INSTRUCTIONS: For each picture, use the columns on the right to choose the number or letter that indicates your answer for each retail meat cut. Use capital letters and write neatly. Juniors only provide answers for retail cut name from a list of ten answers. Seniors provide answers for retail cut name, species of cut, and wholesale cut of origin. Each question is worth 5 points (50 points total for Juniors and 150 points total for Seniors).

| | Retail Cut Name | Species of Cut | Wholesale Cut of Origin |
|---|---|---|---|
| Ex. | 66 | P | Q |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |

## Retail Names to be used in answer column 1 by Juniors and Seniors

### BEEF RETAIL MEAT CUTS

| | | |
|---|---|---|
| 1. Brisket, flat half | 19. Sirloin steak | 37. Country style ribs |
| 2. Brisket, point half | 20. Top sirloin steak, boneless | 38. Bottom round roast |
| 3. Brisket, whole | 21. Shoulder roast | 39. Bottom round steak |
| 4. Arm roast | 22. Shoulder steak | 40. Eye round roast |
| 5. Arm roast, boneless | 23. Tenderloin steak | 41. Eye round steak |
| 6. Arm steak | 24. Porterhouse steak | 42. Heel of round roast |
| 7. Arm steak, boneless | 25. T-bone steak | 43. Rump roast, boneless |
| 8. Blade roast | 26. Top loin steak | 44. Round steak |
| 9. Blade steak | 27. Top loin steak, boneless | 45. Round steak, boneless |
| 10. 7-bone roast | 28. Short ribs | 46. Tip roast |
| 11. 7-bone steak | 29. Skirt steak | 47. Tip roast, cap off |
| 12. Flank steak | 30. Ribeye roast | 48. Tip steak |
| 13. Sirloin steak, flat bone | 31. Ribeye steak | 49. Top round roast |
| 14. Sirloin steak, pin bone | 32. Ribeye steak, lip on | 50. Top round steak |
| 15. Sirloin steak, round bone | 33. Eye roast | 51. Top blade steak |
| 16. Sirloin steak, wedge bone | 34. Petite Tender | 52. Bottom round rump roast |
| 17. Top sirloin steak, cap off | 35. Mock Tender Roast | |
| 18. Top sirloin cap steak | 36. Tenderloin Roast | |

### LAMB RETAIL MEAT CUTS

| | | |
|---|---|---|
| 43. Breast | 49. Sirloin half | 55. Rib roast, Frenched |
| 44. Breast riblets | 50. Loin chop | 56. Shanks |
| 45. American style roast | 51. Loin double chop | 57. Blade chop |
| 46. Leg center slice | 52. Loin roast | 58. Neck slice |
| 47. French style roast | 53. Rib chop | 59. Shoulder square cut |
| 48. Sirloin chop | 54. Rib roast | |

### PORK RETAIL MEAT CUTS

| | | |
|---|---|---|
| 60. Fresh ham center slice | 67. Center rib roast | 74. Arm steak |
| 61. Fresh ham rump portion | 68. Center loin roast | 75. Blade Boston roast |
| 62. Fresh ham shank portion | 69. Loin chop | 76. Sliced bacon |
| 63. Fresh side pork | 70. Rib chop | 77. Smoked jowl |
| 64. Blade chop | 71. Sirloin chop | 78. Spareribs |
| 65. Blade roast | 72. Arm picnic roast | |
| 66. Butterfly chop | 73. Arm roast | |

## Species of Cut to be used in answer column 2 by Seniors

| | | |
|---|---|---|
| B. Beef | L. Lamb | P. Pork |

## Wholesale Cut of Origin to be used in answer column 3 by Seniors

| BEEF WHOLESALE CUTS | LAMB WHOLESALE CUTS | PORK WHOLESALE CUTS |
|---|---|---|
| A. Brisket | I. Breast | O. Belly (Side, Bacon) |
| B. Chuck | J. Leg | P. Boston Butt |
| C. Flank | K. Loin | Q. Ham |
| D. Loin | L. Rack | R. Jowl |
| E. Plate | M. Shank | S. Loin |
| G. Round | N. Shoulder | T. Picnic Shoulder |
| H. Shank | | |

# Skillathon Livestock Feed Identification

INSTRUCTIONS: For each picture, use the columns on the right to choose the number or letter that indicates your answer for each livestock feedstuff. Use capital letters and write neatly. Juniors only provide answers for feedstuff name from a list of ten answers. Seniors provide answers for feedstuff name, nutrient group, and characteristics/uses of the feedstuff. Each question is worth 5 points (50 points total for Juniors and 150 points total for Seniors).

| | Feedstuff Name | Nutrient Group | Characteristics /Uses |
|---|---|---|---|
| Ex. | 18 | P | F |
| 1. | | | |
| 2. | | | |
| 3. | | | |
| 4. | | | |
| 5. | | | |
| 6. | | | |
| 7. | | | |
| 8. | | | |
| 9. | | | |
| 10. | | | |

## Feed Names to be used in answer column 1 by Juniors and Seniors

1. Alfalfa hay
2. Alfalfa pasture
3. Barley (whole)
4. Blood meal
5. Brewers dried grain
6. Canola meal
7. Copper sulfate
8. Corn distillers dried grain
9. Corn distillers dried grain with soluble
10. Corn gluten feed
11. Corn gluten meal
12. Cottonseed (whole)
13. Cottonseed hulls
14. Cotton seed meal
15. Cracked shelled corn
16. Crimped oats
17. Defluorinated rock phosphate
18. Dehydrated alfalfa meal
19. Dicalcium phosphate
20. Distiller's grain
21. DL-methionine
22. Dried beet pulp
23. Dried molasses
24. Dried skim milk
25. Feather meal

26. Fish meal
27. Grain sorghum (whole)
28. Ground ear corn
29. Ground limestone
30. Kentucky bluegrass pasture
31. L-lysine HC1
32. L-threonine
33. L-tryptophan
34. Linseed meal
35. Liquid molasses
36. Meat and bone meal
37. Millet (whole)
38. Oats (whole)
39. Oat hulls
40. Orchardgrasss hay
41. Orchardgrass pasture
42. Oyster shells
43. Peanut meal
44. Red clover hay
45. Red clover pasture
46. Roller dried whey
47. Rye (whole)
48. Salt, white
49. Santoquin
50. Shelled corn
51. Soybean hulls

52. Soybean meal
53. Soybeans (whole)
54. Spray-dried animal plasma
55. Spray-dried whey
56. Steam flaked corn
57. Steam rolled barley
58. Steam rolled oats
59. Steamed bone meal
60. Sunflower meal
61. Tall fescue hay
62. Tall fescue pasture
63. Timothy hay
64. Timothy pasture
65. Trace-mineral premix
66. Trace-mineralized salt
67. Triticale (whole)
68. Tryptosine
69. Urea
70. Vegetable oil
71. Vitamin premix
72. Wheat (whole)
73. Wheat bran
74. Wheat middlings
75. White clover hay
76. White clover pasture

## Feeds Nutrient Groups to be used in answer column 2 by Seniors

C. Carbohydrate (energy)

F. Fats (energy)

M. Mineral

P. Protein

V. Vitamin

## Important Characteristics/Uses of Feedstuffs to be used in answer column 3 by Seniors

A. Most extensively produced feed grain in United States.

B. Due to high fiber content, it is fed primarily to ruminant animals.

C. Except when fed to poultry, it is typically ground or rolled prior to feeding.

D. Grown primarily in dry regions of United States where there is not enough rain for corn production

E. A synthetic cereal grain, derived by crossing wheat with rye

F. Excellent feedstuff for horses and ruminants (high in protein, minerals, and vitamins). Sometimes used as a laxative in prefarrowing sow diets.

G. Widely grown source of protein. rarely fed in the whole, full-fat form, but can be if first heated to destory antinutritional factors (trypsin inhibitor).

H. Most widely used protein supplement in the United States.

I. Not used in monogastric feeds due to toxicity problems associated with gossypol (a yellow pigment)

J. A crop derived from rapeseed, but unlike traditional rapeseed is low in both erucic acid and glucosinates.

K. Protein is somewhat low in digestibility due to tannins found in the skin and has poor amino acid balance.

L. Good source of ruminant bypass protein and used in limited amounts in young pig diets.

M. Primarily used in milk replacers and starter diets for young animals.

N. By-product from making cheese that is produced by roller-drying the liquid that remains after the casein and most of the fat has been removed.

O. Excellent source of digestible protein, B vitamins, and minerals.

P. High in protein and contains active immunoglobulins.

Q. By-product of the distiller's industry and consists of the dried, screened, coarse grain fraction that remains after the removal of the alcohol from a yeast fermented mash.

R. Obtained by processing rock phosphates into phosphoric acid, which is then reacted with calcium carbonate (limestone).

S. Included at high levels (250 ppm) in swine diets where it acts as a growth promotant.

# Skillathon Livestock Breed Identification

INSTRUCTIONS: For each picture, use the columns on the right to choose the number or letter that indicates your answer for each livestock breed. Use capital letters and write neatly. Juniors only provide answers for breed name from a list of ten answers. Seniors provide answers for breed name, origin of breed, and important characteristics/traits. Each question is worth 5 points (50 points total for Juniors and 150 points total for Seniors).

|  | Breed Name | Origin of Breed | Important Traits |
|---|---|---|---|
| Ex. | 20 | H | I |
| 1. |  |  |  |
| 2. |  |  |  |
| 3. |  |  |  |
| 4. |  |  |  |
| 5. |  |  |  |
| 6. |  |  |  |
| 7. |  |  |  |
| 8. |  |  |  |
| 9. |  |  |  |
| 10. |  |  |  |

## Breed Names to be used in answer column 1 by Juniors and Seniors

| BEEF BREEDS | GOAT BREEDS | SHEEP BREEDS | SWINE BREEDS |
|---|---|---|---|
| 1. Angus | 16. Alpine | 29. Cheviot | 46. Berkshire |
| 2. Brahman | 17. American Cashmere | 30. Columbia | 47. Chester White |
| 3. Brangus | 18. Angora | 31. Corriedale | 48. Duroc |
| 4. Charolais | 19. Boer | 32. Dorper | 49. Hampshire |
| 5. Chianina | 20. Kiko | 33. Dorset | 50. Hereford |
| 6. Gelbvieh | 21. Lamancha | 34. Finnsheep | 51. Landrace |
| 7. Hereford | 22. Nubian | 35. Hampshire | 52. Pietrain |
| 8. Limousin | 23. Oberhasli | 36. Katahdin | 53. Poland China |
| 9. Maine Anjou | 24. Pygmy | 37. Merino | 54. Spotted |
| 10. Polled Hereford | 25. Saanen | 38. Montadale | 55. Tamworth |
| 11. Red Angus | 26. Spanish | 39. Oxford | 56. Yorkshire |
| 12. Santa Gertrudis | 27. Tennessee Fainting | 40. Polled Dorset |  |
| 13. Shorthorn | 28. Toggenburg | 41. Rambouillet |  |
| 14. Simmental |  | 42. Romney |  |
| 15. Tarentaise |  | 43. Southdown |  |
|  |  | 44. Suffolk |  |
|  |  | 45. White Dorper |  |

## Origins of Breeds to be used in answer column 2 by Seniors

| | | |
|---|---|---|
| A. Louisiana (U.S.) | F. Switzerland | L. North Carolina State University |
| B. France | H. Africa | M. Pennsylvania (U.S.) |
| C. Italy | I. Oregon (U.S.) | N. Iowa and Nebraska (U.S.) |
| D. Germany | J. Finland | O. Belgium |
| E. Iowa (U.S.) | K. England | P. Indiana (U.S.) |

## Important Characteristics/Traits Origins of Breeds to be used in answer column 3 by Seniors

### BEEF CATTLE CHARACTERISTICS/TRAITS

A. Disease resistance, heat resistance, hardiness, and maternal instincts

B. Well defined muscling and good growth rate

C. Growth rate, muscling, early puberty, calving ease, and mothering ability

D. Foraging ability, docile, and good fertility

E. Heavily muscled, high carcass yield, growth rate, and feed efficiency

F. Excellent meat quality (nicely marbled), calving ease, and hardy

### GOAT CHARACTERISTICS/TRAITS

G. Hardy, adaptable animals that thrive in any climate while maintaining good health and excellent production

H. Insulative properties of dual coat, hardy, and high health

I. Meat yield, growth rate, browsing ability, fertility, adaptability to wide climatic conditions, and extended breeding season

J. Milk yield, high butterfat, sturdy, hardy, and excellent temperament

K. High butterfat content, extended breeding season, best suited for hot conditions, and multipurpose use (milk, meat, and hide)

L. Heavy milkers, rugged bone, and vigor. Saanens are sensitive to excessive sunlight and perform best in cooler conditions.

### SHEEP CHARACTERISTICS/TRAITS

M. Carcass conformation, will breed out of season, and milking ability

N. Prolificacy, mothering ability, and wool production

O. Carcass conformation, growth rate, feed conversion, and milking ability

P. Carcass conformation, heavy fleece, and lambing percentage

Q. Herding instinct and wool production

R. Carcass conformation, early maturity, and adaptability to varied climates

### SWINE CHARACTERISTICS/TRAITS

S. Aggressive breeder and high growth rate

T. Prolificacy (litter size), milking ability, mothering ability

U. Extreme muscling and leanness

V. Carcass quality (intramuscular fat)

W. Excellent rate of gain and feed efficiency

X. Conception rate and meat quality (intramuscular fat)

# Skillathon Livestock/Meat Equipment Identification

INSTRUCTIONS: For each picture, use the columns on the right to choose the number or letter that indicates your answer for each piece of equipment. Use capital letters and write neatly. Juniors will only be asked questions pertaining to the names of livestock/meat equipment a list of ten answers. Seniors provide answers for livestock/meat equipment names and equipment use. Each question is worth 5 points (50 points total for Juniors and Seniors).

|  | Equipment Name | Equipment Use |
|---|---|---|
| Ex. | 17 | F |
| 1. | | |
| 2. | | |
| 3. | | |
| 4. | | |
| 5. | | |
| 6. | | |
| 7. | | |
| 8. | | |
| 9. | | |
| 10. | | |

## Equipment Names to be used in answer column 1 by Juniors and Seniors

### LIVESTOCK EQUIPMENT

1. All-in-one castrator/docker
2. Artificial insemination pipettes
3. Ammonia sensor
4. Automatic dosing syringe
5. Beef cattle frame stick
6. Beef show halter
7. Bowl waterer
8. Balling gun
9. Barnes dehorner
10. Calf jack/puller
11. Calf weaner
12. Cattle clippers
13. CIDR
14. CIDR Applicator
15. Clipper comb
16. Clipper cutter
17. Currycomb
18. Disposable syringes
19. Drench gun
20. Ear notchers
21. Ear tag
22. Ear tag pliers
23. Elastrator
24. Electric branding iron
25. Electric dehorner
26. Electric docker
27. Electric fence tester
28. Electronic ID tag
29. Emasculatome (Burdizzo)
30. Emasculator
31. Ewe prolapse retainer
32. Fencing pliers
33. Forage probe
34. Freeze branding iron
35. Heat detection patch
36. Hog snare
37. Hoof knife
38. Hoof trimmers
39. Intravenous set
40. Lamb/kid puller
41. Lamb tube feeder
42. Marking harness
43. Nasal cannula
44. Needle teeth nippers
45. Nipple waterer
46. Nose
47. Nose ring
48. Nose ring pliers
49. Obstetrical (O.B.) chain
50. Obstetrical snare
51. Paint branding iron
52. Pig resuscitator
53. Pistol-grip syringe
54. Prolapse ring retainer
55. Ralgro implant gun
56. Rice pelvimeter
57. Rumen magnate
58. Scalpels
59. Scotch comb
60. Scrotal tape
61. Shearer's screwdriver
62. Sheep shears (electric)
63. Slap tattoo
64. Tattoo pliers
65. Tube Dehorner
66. Vacutainer
67. Wool card

### MEAT EQUIPMENT

68. Backfat ruler
69. Boning knife
70. Emulsifier
71. Hand saw
72. Hard hat
73. Loin eye area grid
74. Meat grinder
75. Meat hook
76. Meat tenderizer
77. Sharpening steel
78. Thermometer
79. Tumbler

## Equipment Uses to be used in answer column 3 by Seniors

A. Castration or docking
B. Breeding, reproduction, or birthing
C. Medication or preventative health care management
D. Identification
E. Foot care
F. Dehorning
G. Grooming
H. Animal restraint
I. Farm management
J. Meat quality
K. Processing meats

# Skillathon Meats Judging

Junior contestants will be asked to rank two classes of four similar retail cuts of meat. Senior contestants will be asked to rank two classes of four similar retail cuts of meat and answer five questions on one class.

| Ranking a Class of Retail Meat Cuts | |
|---|---|
| The following criteria should be used when evaluating meat cuts: | |
| **CRITERIA** | **DESCRIPTION** |
| Muscling | Size of the lean portion (amount of muscle) |
| Leanness (plate loss) | Fat and bone lost as the cut is cooked and consumed |
| Quality | Amount of marbling (small flecks of fat within the muscle); firmness with no signs of dryness or excess juices |
| Color | Beef should be bright cherry red; pork should be bright grayish pink; lamb should be light pink |
| FOR EXAMPLE: | Heavy muscled, lean, high quality, correctly colored cuts should be placed high in the class<br>Fat, light muscled, discolored cuts should be placed low in the class. |

## Example Questions for Senior Contestants

• Which cut had the highest lean to fat ratio?

• Which cut had the least marbling?

• Which cut had the most correct beef color?

• Between cut 1 and cut 3, which cut had a finer texture?

• Which cut would have the greatest plate loss?

# Skillathon Hay Judging

Junior contestants will be asked to visually rank one class of four hay samples. Senior contestants will be asked to rank a class of four hay samples with forage analysis information, nutrient requirements of the species being feed, and a production scenario, and answer five questions on the class.

| Ranking a Class of Hay on Visual Basis Only (Juniors) | |
|---|---|
| The following criteria should be used when evaluating hay: | |
| **CRITERIA** | **DESCRIPTION** |
| Color | Bright green color is best; brown to dark brown color is poorest |
| Aroma* | Should be free from smell of mold, mildew, etc. |
| Leaf to stem ratio | High leaf to stem ratio is desirable; as stem size increases the leaf to stem ratio decreases |
| Purity | Should be free from weeds or other foreign plants which decrease the hay's value (i.e., alfalfa should be all alfalfa) |
| Softness* | Hay that has been properly cured and stored should be soft to the touch |

*When judging some hay classes, it may not be permitted to touch or smell the hay samples. In those cases, place the class using only color, leaf to stem ratio, and purity.

## Example Questions for Senior Contestants

• Which hay sample appears to have the finest stems?

• Which hay visually appears to have the highest percentage of alfalfa content?

• Which hay has the least desirable color?

• Which hay will likely result in the highest feeding loss when fed to sheep?

• Which sample will likely result in the lowest feeding loss when fed to sheep?

## Example Production Scenario, Nutrient Requirements, and Forage Analysis (Seniors)

### Scenario
The hay being ranked will be fed to ewes during early lactation. Ewes with singles and those with twins will be sorted into two groups after lambing, with the hay being used primarily with ewes nursing twins. Any hay remaining will be marketed to other local sheep producers.

| Nutrient requirements |
|---|
| (155 lb ewe nursing twins, first 6-8 weeks of lactation) |
| Dry Matter 6.0 lb |
| Crude Protein 15.0% (dry matter basis) |
| TDN 65.0% (dry matter basis) |

| Forage Analysis (dry matter basis) | HAY #1 | HAY #2 | HAY #3 | HAY #4 |
|---|---|---|---|---|
| Dry matter, % | 88.6 | 88.4 | 88.6 | 87.9 |
| Crude protein, % | 16.8 | 18.2 | 20.5 | 18.1 |
| Digestible protein, % | 12.1 | 13.4 | 15.5 | 13.3 |
| Acid detergent fiber (ADF), % | 35.8 | 39.7 | 34.0 | 32.0 |
| TDN, % | 62.0 | 63.0 | 94.7 | 63.0 |

# Skillathon Wool Judging

Junior and Senior contestants will be asked to visually rank one class of four fleeces. The following criteria should be used when evaluating fleeces:

| Visually Rank One Class of Four Fleeces | |
|---|---|
| The following criteria should be used when evaluating fleeces: | |
| CRITERIA | DESCRIPTION |
| Estimated clean wool content (yield and shrinkage) | High yield per fleece is desirable. Small amount of light-colored yolk as free from adhering sand, dirt, and vegetable matter as possible. Cut heavily if tied with any twine other than paper. |
| Length | Should be combing or staple length for the grade: i.e., fine, 3 in; ½ blood, 3½ in; ⅜ blood, 3¾ in; ¼ blood, 4 in; low ¼ blood, 4¼ in; braid, 4½ in. Lengths more than ½ inch greater than this are of no additional value except increasing the yield and grease weight. |
| Quality or fineness | Should fall clearly in one of the grades according to fineness; i.e., fine, ½ blood; ⅜ blood; ¼ blood; low ¼ blood; braid. Uniformity of fineness particularly desirable. Cut heavily for hairy britch. |
| Soundness (strength) | Fiber should be strong throughout and free from breaks. |
| Purity | Free from hair, kemp, black or brown fibers. Cut heavily for black or brown fibers and coarse, hairy britch. |
| Character and color (crimp) | Evenly crimped or wavy from base to tip. Crimp should be distinct. Free from frowsy wool. Soft and springy to the touch. White to cream, bright color most desirable. Should be free from stains and with an even distribution of yolk. |

*Taken from Judging Wool and Mohair by J.L. Groff and G. Ahlschwede (Texas A&M University).

# Skillathon Quality Assurance

When provided with a medication label/medication insert and a scenario, all Junior and Senior contestants (with age appropriateness) should be able to demonstrate how to read a medicine label, calculate withdrawal times, complete a treatment record, and make responsible management decisions regarding quality assurance. An example medication label/insert (with the key parts labeled) is shown below.

**(1)** *Swinibiotic*

(Compicillin in Aqueous Solution) **(2)**

**Directions for use: See package insert**

**(3)** For use in Nonlactating Beef Cattle and Swine

*Read Entire Brochure Carefully Before Using This Product*

**For Intramuscular Use Only**

**Active Ingredients:** Swinibiotic is an effective antimicrobial preparation containing compicillin hydrochloride. Each ml of this suspension contains 250,000 units of compicillin hydrochloride in an aqueous base.

**(4)** **Indications: Beef Cattle** – pneumonia, bronchitis, mastitis, foot rot, wound infections. **Swine** – pneumonia, mastitis, wound infections, and other bacterial infections caused by or associated with compicillin-susceptible species.

**Recommended Dosage**

The usual dose is 2 ml per 100 lb of body weight given once daily for 3 days.
Maximum dose is 12 ml/day.

| Body Weight | Dosage |
|---|---|
| 100 lb | 2 ml |
| 300 lb | 6 ml |
| 500 lb | 10 ml |
| 600 lb or more | 12 ml |

**(5)**

**(6)** **Caution:** *1.* Do not mix Swinibiotic with other injectable solutions as this may cause precipitation of the active ingredients. *2.* Swinibiotic should be injected deep within the fleshy muscle of the neck. Do not inject this medication in the loin, hip, rump, subcutaneously, intravenously, or near a major nerve because it may cause tissue damage. **(7)** *3.* If improvement does not occur within 48 hours, the diagnosis should be reconsidered and appropriate treatment initiated. *4.* Treated animals should be closely observed for 30 minutes after treatment. Should an adverse reaction occur, discontinue treatment and immediately administer epinephrine and antihistamines. *5.* Swinibiotic must be stored between $2^o$ and $8^o$ C ($36^o$ to $46^o$ F). Warm to room temperature and shake well before using. Keep refrigerated when not in use. **(8)**

**(9)** **Warnings:** The use of this medication in beef cattle and swine must be discontinued for 28 days before treated animals are slaughtered for food. Do not use in lactating animals.

**How Supplied:** Swinibiotic is available in vials of 50 ml. **(10)**

1. Name of Medication
2. Active Ingredient(s)
3. Species
4. Approved Uses
5. Dosage

6. Cautions
7. Route of Administration
8. Storage Requirements
9. Warnings (Withholding Times)
10. Sizes Available

# Skillathon Livestock Quiz

All Junior and Senior contestants will complete a 25-question quiz of general animal science and livestock production information.

## Example Questions for Juniors

The following criteria should be used when evaluating fleeces:

1. Which of the following swine breeds was developed in Chester County, Pennsylvania?

| | | | |
|---|---|---|---|
| A. Chester White | B. Duroc | C. Spotted | D. Poland China |

2. The dressed body of a slaughtered meat animal is called the:

| | | | |
|---|---|---|---|
| A. Scale | B. Carcass | C. Breed type | D. Dock |

3. Which of the following is a form of identification for beef animals?

| | | | |
|---|---|---|---|
| A. Ear tagging | B. Vaccination | C. Dehorning | D. Feeding |

## Example Questions for Seniors

1. Which of the following factors has resulted in today's market hog being 50% leaner as opposed to hogs marketed in the 1960s?

| | | | |
|---|---|---|---|
| A. Improved Genetics | B. America's pork producers | C. Better feeding practices | D. All of the previous |

2. The amount of fat cover a market animal possesses is called:

| | | | |
|---|---|---|---|
| A. Finish | B. Substance | C. Balance | D. Structural correctness |

3. The comfortable space animals develop around them is called their:

| | | | |
|---|---|---|---|
| A. Point of balance | B. Blind spot | C. Comfort or flight zone | D. Handler position |

4. What is the average length of gestation for a pregnant sow?

| | | | |
|---|---|---|---|
| A. 180 days | B. 114 days | C. 90 days | D. 150 days |

# Skillathon Team Animal Breeding/Marketing Exercise

**Team activities are for Seniors only.** For this exercise, teams will demonstrate how to make sound animal breeding and marketing decisions.

## Example Exercise for Seniors

You are a commercial lamb producer and your primary target is fast growing lambs for slaughter. However, the neighbor kids like to get some 4-H lambs from you. You also prefer to keep replacements from your own flock.

Your ewe flock is mostly whiteface for an improved wool price. You currently have the four rams described below:

• **Rams 1 and 2** are big Suffolk whose lambs gain extremely well, but are course in their skeletal makeup.

• **Ram 3** is a large Dorset whose daughters make good replacements and gain about 1 lb per day.

• **Ram 4** is a medium frame blackface cross whose lambs are much smoother and make good show lambs. These four rams are starting to show some age. You have found the following replacement prospects:

| EAR TAG | BREED | DNA | ADG (lbs) | DESCRIPTION | SCROTAL MEASUREMENT | PURCHASE PRICE |
|---------|-------|-----|-----------|-------------|---------------------|----------------|
| #1099 | Suffolk | RRNS | 1.34 | Large frame, good terminal sire prospect | 29 cm | $300 |
| #775 | Dorset | QRNN | 0.90 | Medium frame, stylish design | 32 cm | $250 |
| #1279 | Blackface | QRNN | 1.10 | Medium frame, stylish design | 30 cm | $250 |
| #44R | Suffolk | RRNN | 1.00 | Medium frame, very good conformation | 30 cm | $350 |
| #659 | Columbia | QRNS | 1.10 | Large frame, good wool | 31 cm | $300 |

You only have $600 plus any salvage value ($100 each) from selling all or some of your current rams to spend on the replacements. Using the scenario and the data in the table above, determine if you would keep any of your existing rams and which of the replacement prospects you would purchase. You can only maintain four total rams. Discuss with a contest official how you arrived at your decision and show how much money you would spend.

# Skillathon Team Livestock Feeding/Performance Exercise

**Team activities are for Seniors only.** For this exercise, teams will evaluate and rank a number of feed rations the most ideal to the least ideal to meet a specific livestock production scenario.

## Example Exercise for Seniors

You have 500 black hided steers in your feedlot weighing 950 pounds. You want to market this group of cattle 100 days from now at an average weight of 1,275 pounds. Rank theses feeds in the order that you would feed them for the remaining 100 days. All rations are balanced to meet mineral requirements.

However, no additional roughage will be offered. Your final 2 minutes will be used to explain the differences between your top and bottom choice to the contest official.

| RATION NO. | INGREDIENTS IN RATION | % OF RATION AS FED | RATION PRICE/ POUND AS FED |
|---|---|---|---|
| 1 | Whole corn<br>Corn silage<br>Corn gluten | 60%<br>25%<br>15% | $0.06 |
| 2 | Whole oats<br>Cracked corn<br>Beet pulp | 34%<br>33%<br>33% | $0.09 |
| 3 | Whole corn<br>Distillers grain<br>Ground hay | 75%<br>15%<br>10% | $0.06 |
| 4 | Cracked corn<br>Ground corn<br>Soybean meal | 60%<br>25%<br>15% | $0.07 |
| 5 | Whole oats<br>Whole corn<br>Whole cotton seed | 45%<br>45%<br>10% | $0.10 |

**Revised November 2025,** 4HYD-2280