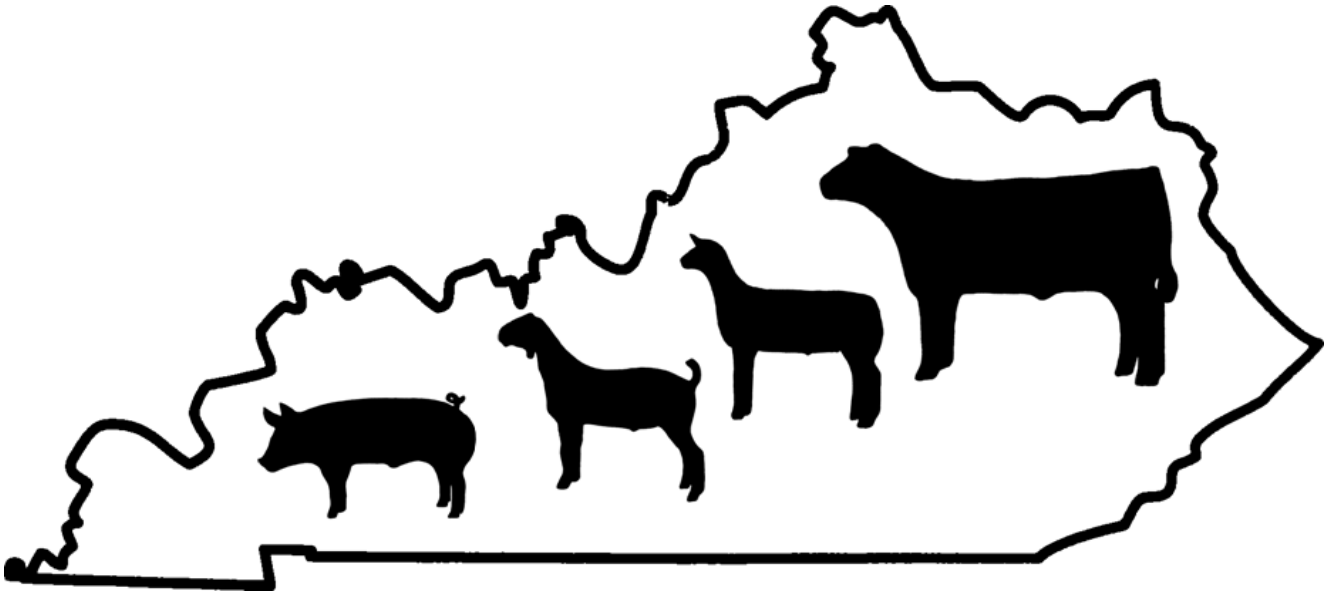
Kentucky 4-H Livestock Skillathon

2024 Resource Packet



Saturday, February 17, 2024

L. D. Brown Ag Expo Center, Western KY University

406 Elrod Rd., Bowling Green, KY 42104

Registration – 8:30 A.M. CST.

Contest – 9:00 A.M. CST.

Awards Banquet – 5:30 P.M. CST.

Kentucky 4-H State Livestock Skillathon Contest

Contest Date:
February 17, 2024

Location:
L. D. Brown Ag Expo Center, Western Kentucky University
406 Elrod Rd., Bowling Green, KY 42104

Contest Coordinators:

Larissa Tucker and Ann Leed
Extension Associate for Youth Livestock Programs
Department of Animal and Food Sciences
406 W.P. Garrigus Building
Lexington, KY 40546-0215
Phone: (859) 257-5986
E-mail:

Contest Registration and Payment is due by Friday, February 1, 2024

Contest Registration: Form will be available on website

Contest Payment: Please mail one check per county

Rules and Regulations

Team and Contestant Eligibility

1. To be eligible to participate in the 2024 State Skillathon Contest, contestants must have completed their six (6) hours of educational training under the coordination of the local Certified Volunteer Leader prior to the State Skillathon Contest.

2. All Kentucky 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:
    a. Junior – must have reached their 9th birthday, or be in the fourth grade in school, as of January 1 of the current year, and must not have passed their 13th birthday as of January 1 of the current year. **Parents will not be allowed to go through contest with their children.**
    b. Senior – must have reached their 14th birthday as of January 1 of the current year, and not have passed their 19th birthday as of January 1 of the current year.
    c. Cloverbud - Clover Buds may participate in the State Skillathon Contest. However, in remaining consistent with the Clover Bud Policy, activities for Clover Buds will be noncompetitive and no awards will be presented to Clover Buds. **This division will not be scored and they will be in their own group while going through the contest.**

3. Teams may consist of up to four (4) members, but only the top three (3) individual overall scores will be included in the team overall score. **Counties with more than four (4) contestants in a particular age division may have multiple teams, but the number of contestants per team may not exceed four (4).**

a. 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.

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

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

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

   b. In the event a county with only three Senior (3) contestants [only one (1) team of three (3) 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.

5. No member may represent Kentucky in an out-of-state <u>NATIONAL</u> Skillathon event in which he/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 post-secondary (university, college, junior college or technical school) competitive events of a similar nature and in the same subject matter area.

6. According to the last policy statement agreed upon by 4-H and FFA officials, "An individual may participate in the same 4-H or FFA contest provided the contest is not being conducted on the same day or in connection with the same event (i.e. State Fair or similar event)".

7. This contest covers the understanding and practical application and the principles of Animal Sciences related to beef, sheep, swine, and goats.

8. For past years Skillathon Answer Sheets see: https://afs.ca.uky.edu/4h-youth/meat-animal/livestock-skillathon

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Contest Method of Conduct

1. Contestants in the State Skillathon Contests shall check-in with the contest coordinator or their representative on the day of the contest at least **30 minutes** prior to the scheduled starting time.

2. Only contestants or those adults assisting with the contest (group leaders, card runners, contest officials, etc.) will be permitted in the competition area. **<u>Parents will not be allowed to go through with their children.</u>**

3. Contestants will be allowed ten (10) minutes to complete each of the eight individual competition classes. Teams will be allowed twenty (20) minutes to complete the team activities. **<u>Teams will have (10) minutes to prepare and must present in the second (10) minutes</u>**.

4. 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.
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5. **Contestants will complete a scantron sheet for scoring the individual rounds of competition. Contestants should put answers on the scantron sheet during the allotted time. There will be 10 minutes at the end of the individual competition to make sure the scantron sheet is bubbled correctly. This is not the time to bubble the entire sheet there will not be time.**

6. Team members will complete one official answer sheet for each team class representing the combined effort of all team members. Teams will be allowed twenty (20) minutes to complete the group assignment for each class and turn in their 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. **Teams will have (10) minutes to prepare and must present in the second (10) minutes.**

7. **Everyone participating in the team activity will be seated with their team until it is time for their rotation through the team activities. The combined teams or individuals who want to experience the team activity will need to go last in the rotation.**

8. **Contestants shall not wear any hats.**

9. Contestants should bring a blank steno pad, clipboard, blank paper, calculator (simple 4 function), and writing instruments **(#2 pencil is mandatory for scantron)**. Contestants may not bring books, notes, pamphlets, reference materials, or cell phones into the contest area. **Contestants found in contempt of this rule will be disqualified.**

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

Awards Banquet

Individual and team awards will be given in each age division, and will include:

Top 10 individuals in Identification
Top 10 individuals in Evaluation
Top 10 Individuals in Quality Assurance
Top 20 Individuals Overall
Top 5 teams in Identification
Top 5 teams in Evaluation
Top 5 teams in Quality Assurance
Top 10 teams Overall
Recognition of first year participants
Top 5 9/10-Year-Old Division Overall

Contest Classes – Junior Division

Individual Classes

1. **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, including the species, wholesale cut from which each retail cut originates, and the retail cut.

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

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

4. **Livestock Equipment Identification:** (50 possible points) From a list provided, identify from photographs or pictures or actual equipment the proper name for ten pieces of equipment used in livestock production.
5. **Meat Judging Class:** (50 possible points) Rank one class of four similar actual retail cuts of meat.
6. **Hay Judging Class:** (50 possible points) Rank a class of four hay samples.
7. **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.
8. **Quiz:** (50 possible points) Complete a quiz concerning the total livestock industry.

Team Exercises/Activities

NOTE: Junior 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.

1. **Quality Assurance Exercise:** (200 possible points) Team members will demonstrate how to read an animal health product label, calculate dosage rates and withdrawal times, complete a treatment record, be familiar with administration routes, and make responsible management decisions regarding quality assurance.

2. **Animal Breeding and Marketing Exercise:** (200 possible points) 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 and **actual live animals**.

   *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.

Junior Skillathon Class List

Class Name/Activity	Points	Type	Comments
Retail Meat ID	50	Scantron	Identify 10 retail cuts (2 pts/species; 1 pt/primal; 2 pts./retail)
Livestock Feed ID	50	Scantron	Identify 10 feedstuffs (5 points each)
Livestock Breed ID	50	Scantron	Identify 10 breeds (5 points each)
Livestock Equipment I.D.	50	Scantron	Identify 10 items (5 points each)
Retail Meat Judging Class	50	Scantron	Placing class only
Hay Judging Class	50	Scantron	Placing class only
Quality Assurance	50	Scantron	10 questions (5 points each)
Quiz	50	Scantron	25 questions (2 points each)
Individual Total Points Possible	**400**		
Team Quality Assurance	200	Raw	
Team Animal Breeding/Marketing	200	Raw	
Team Total Points Possible (counting top 3 scores)	**1600**		

Contest Classes-Senior Division

Individual Classes

1. **Retail Meat Cut Identification**: (60 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.

2. **Livestock Feed Identification:** (60 possible points) From a list provided, identify from actual samples the proper name for ten livestock feeds, and the unique characteristics or uses of the feedstuff.

3. **Livestock Breed Identification:** (60 possible points) From a list provided, identify from photographs or pictures, ten livestock (beef cattle, swine, sheep, and goat) breeds, and unique characteristics/important traits for the breed.

4. **Livestock/Meat Equipment Identification:** (60 possible points) From a list provided identify from photographs or pictures the proper name for 20 pieces of equipment used in livestock production or the meat industry and the use for the piece of equipment.

5. **Wool Judging Class:** (50 possible points) Rank the class of four wool samples/fleeces.

6. **Hay Judging Class:** (50 possible points) Rank a class of four hay samples with forage analysis information, nutrient requirements of the species being fed and a production scenario.

7. **Quality Assurance Exercise:** (60 possible points) Demonstrate how to read a medicine label, calculate withdrawal times, complete a treatment record, and make responsible management decisions regarding quality assurance.

8. **Quiz:** (60 possible points) Complete a quiz concerning the total livestock industry.

Team Exercises/Activities

NOTE: 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.

1. **Animal Breeding and Marketing Exercise:** (200 possible points) 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.

2. **Livestock Feeding and Performance Exercise:** (200 possible points) 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.

3. **Meat & Carcass Evaluation & Marketing**: (200 possible points) May include ranking one class or four similar retail cuts, evaluating photos of carcasses, and pricing carcasses using a grid.

   *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.

Class list on following page.

Senior Skillathon Class List

Class Name/Activity	Points	Type	Comments
Retail Meat ID	60	Scantron	For each of 10 retail cuts provide: Retail name (2 points each) Species (2 points each) Wholesale cut (2 points each)
Livestock Feed ID	60	Scantron	For each of 10 feedstuffs provide: Feedstuff name (3 points each) Uses/characteristics (3 points each)
Livestock Breed ID	60	Scantron	For each of 10 breeds provide: Breed name (3 points each) Characteristics/traits (3 points each)
Livestock/Meat Equipment I.D.	60	Scantron	For each of 20 items provide: Item name (3 points each)
Wool Judging Class	50	Scantron	Placing class
Hay Judging Class	50	Scantron	Placing class only with data
Quality Assurance	60	Scantron	20 questions (3 points each)
Quiz	60	Scantron	30 questions (2 points each)
Individual Total	**460**		
Team Animal Breeding/Marketing	200	Raw	
Team Livestock Feeding/Performance	200	Raw	
Team Meat & Carcass Evaluation & Marketing	200	Raw	
Team Total	**1980**		

Retail Meat Cuts Identification

List of Retail and Wholesale cuts to study. This list is an example and skillathon questions are not limited to this list.

Beef Retail Meat Cuts

Brisket, flat half
Brisket, point half
Brisket, whole
Chuck arm roast
Chuck arm roast, boneless
Chuck arm steak
Chuck arm steak, boneless
Chuck blade roast
Chuck blade steak
Chuck 7-bone roast
Chuck 7-bone steak
Flank steak
Loin sirloin steak, flat bone
Loin sirloin steak, pin bone
Loin sirloin steak, round bone
Loin sirloin steak, wedge bone
Loin sirloin steak, shell
Loin sirloin steak, boneless
Loin tenderloin steak
Loin porterhouse steak
Loin T-bone steak
Loin top loin steak
Loin top loin steak, boneless
Plate short ribs
Plate skirt steak
Rib roast, large end
Rib roast, small end
Rib steak, small end
Rib steak, small end, boneless
Ribeye roast
Ribeye steak
Round bottom round roast
Round bottom round steak
Round eye round roast
Round eye round steak
Round heel of round roast
Round rump roast, boneless
Round steak
Round steak, boneless
Round tip roast
Round tip roast, cap off
Round tip steak
Round tip steak, cap off
Round top round roast
Round top round steak
Shank cross cuts
Shank cross cuts, boneless

Lamb Retail Meat Cuts

Breast
Breast riblets
Leg American style roast
Leg center slice
Leg French style roast
Leg shank half
Rack rib chop
Leg sirloin chop
Leg sirloin half
Loin chop
Loin double chop
Loin roast
Rack rib roast
Rack rib roast, boneless
Shanks
Shoulder blade chop
Shoulder neck slice
Shoulder square cut

Pork Retail Meat Cuts

Fresh ham center slice
Fresh ham rump portion
Fresh ham shank portion
Fresh side pork
Loin blade chop
Loin blade roast
Loin butterfly chop
Loin center rib roast
Loin center loin roast
Loin chop
Loin rib chop
Loin sirloin chop
Loin top loin chop
Shoulder arm picnic roast
Shoulder arm roast
Shoulder arm steak
Shoulder blade Boston roast
Sliced bacon
Smoked jowl
Spareribs

Wholesale cuts

Beef	*Lamb*	*Pork*
Brisket	Breast	Bacon (belly)
Chuck	Leg	Boston shoulder
Flank	Loin	Ham
Loin	Rack	Jowl
Plate	Shank	Loin
Rib	Shoulder	Picnic shoulder
Round		
Rump		
Shank		

Learning Resources:

- Livestock Discovery CD
- Kentucky Livestock Volunteer Certification Resource Kit
- Beef Resource Handbook (4-H 117R)
- Sheep Resource Handbook (4-H 134R)
- Swine Resource Handbook (4-H 194R)
- Retail Meat Cut Identification – Flash Card Set (X180b, 150 cards, $75). [Available from ITCS Instructional Materials website at http://www.aces.uiuc.edu/IM/]
- Retail Meat Cut Identification and Technology – CD-ROM (MDS100, CD-ROM, $75). [Available from ITCS Instructional Materials website at http://www.aces.uiuc.edu/IM/]

EXAMPLE TEST SHEET

Senior 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. **You must bubble in the scantron sheet corresponding with Species, Primal Cut, and both digits of the Retail cut**. You may fill this sheet out and keep to go over with your coaches at the end of the contest. **Seniors** provide answers for retail cut name, species of cut, and wholesale cut of origin. Each question is worth 2 points each (60 points total for Seniors).

ID #	Species	Primal Cut	Retail Cut First Digit	Retail Cut Second Digit
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Species of Cut – to be used in answer column 1 by Seniors

(You may use the letter more than once!!)

B. Beef L. Lamb P. Pork

Primal Cut of Origin – to be used in answer column 2 by Seniors

Beef Wholesale Cuts	Lamb Wholesale Cuts	Pork Wholesale Cuts
A. Chuck	F. Leg	K. Belly (Side, Bacon)
B. Loin	G. Loin	L. Boston Butt
C. Rib	H. Rack	M. Loin
D. Round	I. Shoulder	N. Picnic Shoulder
E. Variety cut	J. Variety cut	

Retail Names – to be used in answer column 3 by Seniors

Beef Retail Meat Cuts

1. Beef for stew
2. Brisket, point half
3. Brisket, whole
4. Arm roast
5. Arm roast, boneless
6. Arm steak
7. Arm steak, boneless
8. Blade roast
9. Blade steak
10. 7-bone roast
11. 7-bone steak
12. Flank steak
13. Sirloin steak, flat bone
14. Sirloin steak, pin bone
15. Sirloin steak, round bone
16. Sirloin steak, wedge bone
17. Sirloin steak, shell
18. Sirloin steak, boneless
19. Tenderloin steak
20. Porterhouse steak
21. T-bone steak
22. Top loin steak
23. Top loin steak, boneless
24. Short ribs
25. Skirt steak
26. Rib roast, large end
27. Rib roast, small end
28. Rib steak, small end
29. Rib steak, small end, boneless
30. Ribeye roast
31. Ribeye steak
32. Bottom round roast
33. Bottom round steak
34. Eye round roast
35. Eye round steak
36. Heel of round roast
37. Rump roast, boneless
38. Round steak
39. Round steak, boneless
40. Tip roast
41. Tip roast, cap off
42. Tip steak
43. Tip steak, cap off
44. Top round roast
45. Top round steak
46. Cross cuts
47. Cross cuts, boneless
48. Kidney

Lamb Retail Meat Cuts

49. Breast
50. Breast riblets
51. American style roast
52. Leg Center slice
53. French style roast
54. Leg shank half
55. Sirloin chop
56. Leg sirloin half
57. Loin chop
58. Loin double chop
59. Loin roast
60. Rib chop
61. Rib roast
62. Rib roast, boneless
63. Shanks
64. Blade chop
65. Neck slice
66. Heart

Pork Retail Meat Cuts

67. Fresh ham center slice
68. Fresh ham rump portion
69. Fresh ham shank portion
70. Fresh side pork
71. Blade chop
72. Blade roast
73. Butterfly chop
74. Center rib roast
75. Center loin roast
76. Loin chop
77. Rib chop
78. Sirloin chop
79. Top loin chop
80. Arm picnic roast
81. Arm roast
82. Arm steak
83. Blade Boston roast
84. Sliced bacon
85. Smoked jowl
86. Smoked Canadian Style Bacon

EXAMPLE TEST SHEET

Junior 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. **You must bubble in the scantron sheet corresponding with Species, Primal Cut, and both digits of the Retail cut**. You may fill this sheet out and keep to go over with your coaches at the end of the contest. **Juniors** provide answers for species of cut, primal cut of origin and retail cut name,. Species is worth 2 points each, Primal 1 point each and Retail 2 points each (50 points total for Juniors).

ID #	Species	Primal Cut	Retail Cut First Digit	Retail Cut Second Digit
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Species of Cut – to be used in answer column 1 by Juniors

(You may use the letter more than once!!)

B. Beef L. Lamb P. Pork

Primal Cut of Origin – to be used in answer column 2 by Juniors

Beef Wholesale Cuts	Lamb Wholesale Cuts	Pork Wholesale Cuts
A. Chuck	E. Leg	H. Belly (Side, Bacon)
B. Loin	F. Shoulder	I. Loin
C. Round	G. Variety cut	J. Picnic Shoulder
D. Variety cut		

Retail Names – to be used in answer column 3 by Juniors

Beef Retail Meat Cuts

01. Beef for stew
02. Brisket, point half
03. Brisket, whole
04. Arm roast
05. Arm roast, boneless
06. Arm steak
07. Arm steak, boneless
08. Blade roast
09. Blade steak
10. 7-bone roast
11. 7-bone steak
12. Flank steak
13. Sirloin steak, flat bone
14. Sirloin steak, pin bone
15. Sirloin steak, round bone
16. Sirloin steak, wedge bone
17. Sirloin steak, shell
18. Sirloin steak, boneless
19. Tenderloin steak
20. Porterhouse steak
21. T-bone steak
22. Top loin steak
23. Top loin steak, boneless
24. Short ribs
25. Skirt steak
26. Rib roast, large end
27. Rib roast, small end
28. Rib steak, small end
29. Rib steak, small end, boneless
30. Ribeye roast
31. Ribeye steak
32. Bottom round roast
33. Bottom round steak
34. Eye round roast
35. Eye round steak
36. Heel of round roast
37. Rump roast, boneless
38. Round steak
39. Round steak, boneless
40. Tip roast
41. Tip roast, cap off
42. Tip steak
43. Tip steak, cap off
44. Top round roast
45. Top round steak
46. Cross cuts
47. Cross cuts, boneless
48. Kidney

Lamb Retail Meat Cuts

49. Breast
50. Breast riblets
51. American style roast
52. Leg Center slice
53. French style roast
54. Leg shank half
55. Sirloin chop
56. Leg sirloin half
57. Loin chop
58. Loin double chop
59. Loin roast
60. Rib chop
61. Rib roast
62. Rib roast, boneless
63. Shanks
64. Blade chop
65. Neck slice
66. Heart

Pork Retail Meat Cuts

67. Fresh ham center slice
68. Fresh ham rump portion
69. Fresh ham shank portion
70. Fresh side pork
71. Blade chop
72. Blade roast
73. Butterfly chop
74. Center rib roast
75. Center loin roast
76. Loin chop
77. Rib chop
78. Sirloin chop
79. Top loin chop
80. Arm picnic roast
81. Arm roast
82. Arm steak
83. Blade Boston roast
84. Sliced bacon
85. Smoked jowl
86. Smoked Canadian Style Bacon

Feedstuffs Identification

List of feedstuffs to study. This list is an example and skillathon questions are not limited to this list.

Feedstuff Names

Alfalfa hay
Alfalfa pasture
Barley (whole)
Blood meal
Brewers dried grain
Canola meal
Copper sulfate
Corn distillers dried grain
Corn distillers dried grain w/solubles
Corn gluten feed
Corn gluten meal
Cottonseed (whole)
Cottonseed hulls
Cottonseed meal
Cracked shelled corn
Crimped oats
Defluorinated rock phosphate
Dehydrated alfalfa meal
Dicalcium phosphate
DL-methionine
Dried beet pulp
Dried molasses
Dried skim milk
Feather meal
Fish meal
Grain sorghum (whole)
Ground ear corn
Ground limestone
Ground shelled corn
Kentucky Bluegrass pasture
L-lysine HCl
L-threonine
L-tryptophan
Linseed meal
Liquid molasses
Meat and bone meal
Millet (whole)
Oats (whole)
Oat hulls
Orchardgrass hay
Orchardgrass pasture
Oyster shells
Peanut meal
Red Clover hay
Red Clover pasture
Roller dried whey
Rye (whole)
Salt, white
Santoquin
Shelled corn
Soybean hulls
Soybean meal
Soybeans (whole)
Spray-dried animal plasma
Spray-dried whey
Steam flaked corn
Steam rolled barley
Steam rolled oats
Steamed bone meal
Sunflower meal
Tall Fescue hay
Tall Fescue pasture
Timothy hay
Timothy pasture
Trace-mineral premix
Trace-mineralized salt
Triticale (whole)
Tryptosine
Urea
Vegetable oil
Vitamin premix
Wheat (whole)
Wheat bran
Wheat middlings
White Clover hay
White Clover pasture

Livestock Feedstuffs Nutrient Groups

Carbohydrates (energy)
Fats (energy)
Minerals
Protein
Vitamins
Water

Learning Resources:

- Livestock Discovery CD
- Kentucky Livestock Volunteer Certification Resource Kit
- Beef Resource Handbook (4-H 117R)
- Sheep Resource Handbook (4-H 134R)
- Swine Resource Handbook (4-H 194R)

Senior Livestock Feed Identification

EXAMPLE TEST SHEET

INSTRUCTIONS: For each picture, use the columns on the right to choose the letter that indicates your answer for each feedstuff name and for the important characteristics/use. **You must bubble in the scantron sheet corresponding with feed identification and feed usage**. You may fill this sheet out and keep to go over with your coaches at the end of the contest. Each question is worth 3 points for each part of the question. (60 points total for Seniors).

	Feedstuff Name	Characteristic/Uses
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____

Feed Names – to be used in answer column 1 by Seniors

A. Barley (whole)
B. Blood Meal
C. Brewers dried grain
D. Corn distillers dried grain with soluble
E. Corn gluten feed
F. Dicalcium phosphate
G. Dried molasses
H. Fish meal
I. Grain sorghum (whole)
J. Ground ear corn
K. Ground limestone
L. Linseed meal
M. Liquid molasses
N. Millet (whole)
O. Oats (whole)
P. Soybean meal
Q. Trace-mineralized salt
R. Urea
S. Vitamin Premix
T. Wheat (whole)

Important Characteristics/Uses of Feedstuffs – to be used in answer column 2 by Seniors

A. A mineral that is obtained by processing rock phosphates into phosphoric acid, which is then reacted with calcium carbonate. Used in livestock, horse and poultry feeds.
B. A carbohydrate that has less energy than corn, but has more protein, lysine and fiber.
C. A carbohydrate that is widely grown in the U.S. Primarily used in human food but can be fed to livestock. Lower in energy compared to corn but higher in protein compared to corn.
D. A protein that is primarily fed to ruminants as a source of protein and energy (high fiber content limits its use in monogastrics). Contains corn bran and soluble protein.
E. A carbohydrate that is widely grown in the cool moist climates of the U.S. This feedstuff is used extensively in horse feeds and feeds for starving young animals. Can be fed whole but usually processed prior to feeding.
F. A dried carbohydrate that is highly palatable and readily available source of energy. Most commonly added to ruminant and horse diets.
G. A carbohydrate used as an energy source. It is a good feedstuff for poultry, hogs and ruminants. It has been noted that this feedstuff has approximately (on average) 15 percentage units less starch than corn silage.
H. A carbohydrate that has been ground through a hammer mill or burr mill. Reduces particle size which increases the surface area and improves starch digestibility. Due to high fiber content it is fed primarily to ruminant animals.
I. A protein that is a by-product of the distillers industry. Primarily used as a protein and energy source in ruminant and horse feeds but may be fed in limited amounts to monogastrics.
J. A carbohydrate that is highly palatable and readily available source of energy. Most commonly added to ruminant and horse diets. Is a liquid by-product of sugarcane.
K. A mineral that is commonly fed free choice to grazing animal in either loose or block form.
L. A protein that is a by-product of the meat packing industry that is produced by grinding dried blood into a meal.
M. A protein that should only be fed to ruminants. Often referred to as non-protein nitrogen. Can be toxic if fed at excessive levels.
N. A mineral that is a natural source of calcium. Also called calcium carbonate. An inexpensive source of calcium used in livestock, horse and poultry diets.

Junior Livestock Feed Identification

EXAMPLE TEST SHEET

INSTRUCTIONS: For each picture, use the columns on the right to choose the letter that indicates your answer for each feedstuff name. **You must bubble in the scantron sheet corresponding with feed identification**. You may fill this sheet out and keep to go over with your coaches at the end of the contest. Each question is worth 5 points (50 points total for Juniors).

Feed Identification

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Feed Names – to be used in answer column 1 by Juniors

1. Barley (whole)
2. Cottonseed (whole)
3. Cottonseed hulls
4. Cottonseed meal
5. Ground Limestone
6. Liquid molasses
7. Oats (whole)
8. Rye (whole)
9. Salt, white
10. Shelled Corn
11. Soybeans (whole)
12. Steam flake corn
13. Vegetable oil
14. Wheat (whole)

Breeds of Livestock Identification

List of breeds to study. This list is an example and skillathon questions are not limited to this list.

Beef Cattle	Goats	Sheep	Swine
Angus	Alpine	Cheviot	Berkshire
Brahman	American Cashmere	Columbia	Chester White
Brangus	Angora	Corriedale	Duroc
Charolais	Boer	Dorper	Hampshire
Chianina	Kiko	Dorset	Hereford
Gelbvieh	Lamancha	Finnsheep	Landrace
Hereford	Nubian	Hampshire	Pietrain
Limousin	Oberhasli	Katahdin	Poland China
Maine Anjou	Pygmy	Merino	Spotted
Polled Hereford	Saanen	Montadale	Tamworth
Red Angus	Spanish	Oxford	Yorkshire
Red Poll	Tennessee Fainting	Polled Dorset	
Santa Gertrudis	Toggenburg	Rambouillet	
Shorthorn		Romney	
Simmental		Southdown	
Tarentaise		Suffolk	

NOTE: For information on origins and breed characteristics/traits see the Livestock Discovery CD or one of the resources listed below.

Learning Resources:

- Livestock Discovery CD
- Kentucky Livestock Volunteer Certification Resource Kit
- Oklahoma State Univ. Breeds of Livestock website: http://www.ansi.okstate.edu/breeds/
- Auburn Univ. Breeds of Livestock website: http://www.ag.auburn.edu/users/sschmidt/breed_id2/
- Beef Resource Handbook (4-H 117R)
- Sheep Resource Handbook (4-H 134R)
- Swine Resource Handbook (4-H 194R)

Senior Livestock Breeds Identification

EXAMPLE TEST SHEET

INSTRUCTIONS: For each picture, use the columns on the right to choose the letter that indicates your answer for each livestock breed and for the important characteristics/traits. **You must bubble in the scantron sheet corresponding with Breed Identification and Breed Description**. You may fill this sheet out and keep to go over with your coaches at the end of the contest. Each question is worth 3 points for each part of the question. (60 points total for Seniors).

	Breed Name	Important Traits
1.	_____	_____
2.	_____	_____
3.	_____	_____
4.	_____	_____
5.	_____	_____
6.	_____	_____
7.	_____	_____
8.	_____	_____
9.	_____	_____
10.	_____	_____

Breed Names – to b used in answer colu n 1 by Seniors

Beef Breeds	Goat Breeds	Sheep Breeds	Swine Breeds
1. Angus	7. Alpine	9. Polypay	15. Berkshire
2. Red Angus	8. Lamancha	10. Romney	16. Poland China
3. Simmental		11. Lincoln	17. Yorkshire
4. Red Poll		12. Southdown	18. Hereford
5. Brahman		13. White Face Cross	19. Tamworth
6. Maine – Anjou		14. Texel	20. Duroc

Important Characteristics/Traits Origins of Breeds – to be used in ans wer column 2 by Seniors

Beef Cattle Characteristics/Traits

A. Heat tolerance, insect and parasite resistance, hardiness, and maternal instincts; Origin – Developed in the U.S. from Bos Indicus cattle from India.
B. Heavily muscled, high carcass yield, growth rate, feed efficiency, and milk production; Origin – Simme Valley of Switzerland.
C. Growth rate, muscling, early puberty, calving ease, and mothering ability; Origin – Germany.
D. Excellent meat quality (nicely marbled), calving ease and hardy; Origin – British Isles.

Goats Characteristics/Traits

E. Known for milk yield, high butterfat, sturdy, hardy and excellent temperament; Origin - Oregon.

F. Hardy, adaptable animals that thrive in any climate while maintaining good health and excellent production; Origin – Alps of Switzerland.

Sheep Characteristics/Traits

G. Carcass conformation, early maturity, and adaptability to varied climates; Origin – Sussex, England.
H. Wool production, muscling, and late fattening; Origin – Kent, England.
I. High lifetime prolificacy, large lamb crop, ability to lamb more frequently; Origin – U.S. Sheep Experiment Station Dubois, ID.
J. Lean, muscular carcasses, a dominate terminal sire; Origin – Netherlands.

Swine Characteristics/Traits

K. Aggressive breeders and mothering ability; Origin – England.
L. Conception rate and meat quality (intramuscular fat); Origin – England.
M. Prolificacy (litter size), milking ability, mothering ability; Origin – England.
N. Excellent rate of gain and feed efficiency; Origin – U.S. (New Jersey/New York).

EXAMPLE TEST SHEET

Junior Livestock Breeds Identification

INSTRUCTIONS: For each picture, use the columns on the right to choose the letter that indicates your answer for each livestock breed. **You must bubble in the scantron sheet corresponding with Breed Identification**. You may fill this sheet out and keep to go over with your coaches at the end of the contest. **Juniors** only provide answers for breed identification. Each question is worth 5 points (50 points total for Juniors).

Breed Identification

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Breed Names – to be used in answer column 1 by Juniors

Beef Breeds	Swine Breeds	Sheep Breeds	Goat Breeds
1. Red Poll	5. Berkshire	9. Polypay	13. Alpine
2. Simmental	6. Hampshire	10. Lincoln	14. Lamancha
3. Red Angus	7. Tamworth	11. Southdown	
4. Brahman	8. Yorkshire	12. Texel	

Livestock/Meat Equipment Identification

List of breeds to study. This list is an example and skillathon questions are not limited to this list.

Livestock Equipment		Meat Equipment
All-in-one castrator/docker	Foot rot shears	Backfat ruler
Artificial insemination pipettes	Freeze branding iron	Band saw
Bowl waterer	Hoof knife	Bone dust scraper
Balling gun	Hog holder (snare)	Boning knife
Barnes dehorner	Lamb tube feeder	Bowl chopper
Cattle clippers	Needle teeth nippers	Dehairing machine
Clipper comb	Nipple waterer	Electrical stunner
Clipper cutter	Nose ring	Emulsifier
Currycomb	Nose ring pliers	Ham net
Disposable syringes	Obstetrical (O.B.) chain	Hand saw
Drench gun	Paint branding iron	Hard hat
Ear notchers	Pistol-grip syringe	Loin eye area grid
Ear tag pliers	Ram marking harnass	Meat grinder
Elastrator	Rumen magnate	Meat grinder auger
Electric branding iron	Scalpels	Meat grinder knife
Electric dehorner	Scotch comb	Meat grinder plate
Electric docker	Shearer's screwdriver	Meat grinder stuffing rod
Emasculatome (Burdizzo)	Sheep shears (electric)	Meat hook
Emasculator	Slap tattoo	Meat tenderizer
Ewe prolapse retainer	Tattoo pliers	Meat trolley
Fencing pliers	Wool card	Metal knife scabbard
		Rubber apron
		Sharpening steel
		Smoke house
		Thermometer
		Tumbler
		Vacuum sausage stuffer
		Whale saw

NOTE: For information on appropriate uses for livestock and meat equipment see the Livestock Discovery CD or one of the resources listed below.

Learning Resources:

- Livestock Discovery CD
- Kentucky Kentucky Livestock Volunteer Certification Resource Kit
- Beef Resource Handbook (4-H 117R)
- Sheep Resource Handbook (4-H 134R)
- Swine Resource Handbook (4-H 194R)
- Nasco Farm & Ranch Catalog (Catalogs can be obtained free of charge from Nasco's website: http://www.enasco.com/farmandranch/)

Senior Livestock/Meat Equipment Identification

EXAMPLE TEST SHEET

INSTRUCTIONS: For each picture, use the column on the right to choose the letter that indicates your answer for each piece of equipment. **You must bubble in the scantron sheet corresponding with Equipment Identification**. You may fill this sheet out and keep to go over with your coaches at the end of the contest. Each question is worth 3 points (60 points total for Seniors).

Equipment Name

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

Equipment Names – to be used in answer column 1 by Seniors

Livestock/Meat Equipment

A. All in one castrator/docker
B. Backfat Ruler
C. Balling gun
D. Boning knife
E. Crease Nail Puller
F. Emasculatome (Burdizzo)
G. Emasculator
H. Emulsifier
I. Fencing pliers
J. Hanging Scale
K. Hog Snare
L. Loin eye area grid
M. Meat Hook
N. Needle teeth nippers
O. Nipple waterer
P. Plastic sleeve
Q. Rumen magnate
R. Water Heater
S. Wood post electric fence insulator
T. Wool card

EXAMPLE TEST SHEET

Junior Livestock/Meat Equipment Identification

INSTRUCTIONS: For each picture, use the columns on the right to choose the letter that indicates your answer for each piece of equipment. **You must bubble in the scantron sheet corresponding with Equipment Identification**. You may fill this sheet out and keep to go over with your coaches at the end of the contest. Juniors provide answers for livestock/meat equipment names. Each question is worth 5 points (50 points total for Juniors).

Equipment Identification

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

Equipment Names – to be used in answer column 1 by Juniors

A. Boning Knife
B. Currycomb
C. Emasculatome (Burdizzo)
D. Fencing Pliers
E. Hanging Scale
F. Hard hat
G. Hog Snare
H. Meat Hook
I. Needle teeth nippers
J. Ram marking harness
K. Rumen Magnet
L. Semen storage tank
M. Wood post electric fence insulator
N. Wool Card

Meats Judging

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*
	Fat, light muscled, discolored cuts should be placed low in the class.

Example Questions:

1) Which cut had the highest lean to fat ratio?
2) Which cut had the least marbling?
3) Which cut had the most correct beef color?
4) Between cut 1 and cut 3, which cut had a finer texture?
5) Which cut would have the greatest plate loss?

Learning Resources:

- Livestock Discovery CD
- Kentucky Kentucky Livestock Volunteer Certification Resource Kit
- Meat Evaluation Classes, Part 1: Beef (F270-1 filmstrip, 100 fr., w/guide, $43). [Available from ITCS Instructional Materials website at http://www.aces.uiuc.edu/IM/]
- Meat Evaluation Classes, Part 2: Pork & Lamb (F270-2 filmstrip, 85 fr., w/guide, $37). [Available from ITCS Instructional Materials website at http://www.aces.uiuc.edu/IM/]
- Meat Evaluation Classes, Part 2: Pork & Lamb (S270-2 slide set, 85 fr., w/guide, $54). [Available from ITCS Instructional Materials website at http://www.aces.uiuc.edu/IM/]

Hay Judging

Ranking a Class of Hay on Visual Basis Only

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:

1. Which hay sample appears to have the finest stems?
2. Which hay visually appears to have the highest percentage of alfalfa content?
3. Which hay has the least desirable color?
4. Which hay will likely result in the highest feeding loss when fed to sheep?
5. Which sample will likely result in the lowest feeding loss when fed to sheep?

Example Production Scenario, Nutrient Requirements, and Forage Analysis

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	64.7	63.0

Learning Resources:
- Oklahoma State University publication entitled "Hay Judging" (F-2588). A copy can be obtained at the following website: http://www.okrangelandswest.okstate.edu/pdfFiles/OSUextPubs/F-2588.pdf
- University of Kentucky publication entitled "Quality Hay Production" (AGR-62). A copy can be obtained at the following website: http://www.ca.uky.edu/agc/pubs/agr/agr62/agr62.pdf

Fleece Judging

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, 3-½ in.; ⅜ blood, 3-¾ in.; ¼ blood, 4 in.; low ¼ blood, 4-¼ in.; braid, 4-½ 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.

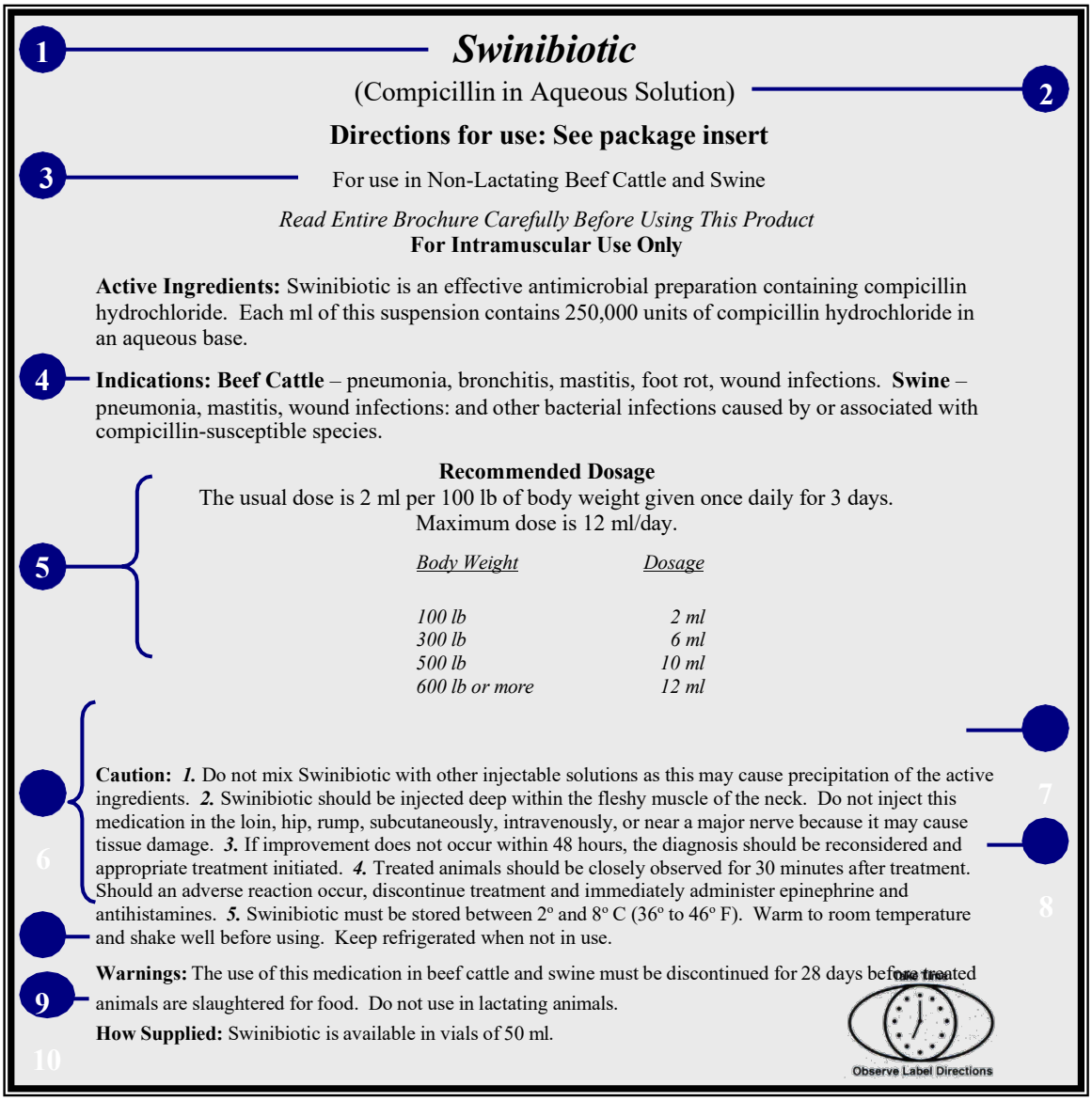
*Taken from *Judging Wool and Mohair* by J.L. Groff and G. Ahlschwede (Texas A&M University).

Learning Resources:

- Texas A&M University publication entitled "Judging Wool and Mohair" (AS3-4.058). A copy can be obtained at the following website: http://www.uky.edu/Ag/AnimalSciences/4h/livestockskillathon.html

Quality Assurance (Individual)

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**



Swinibiotic

(Compicillin in Aqueous Solution)

Directions for use: See package insert

For use in Non-Lactating 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.

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*

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. ***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° and 8° C (36° to 46° F). Warm to room temperature and shake well before using. Keep refrigerated when not in use.

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.

Observe Label Directions

Learning Resources:

- Kentucky Livestock Volunteer Certification Resource Kit
- Beef Resource Handbook (4-H 117R)
- Sheep Resource Handbook (4-H 134R)
- Swine Resource Handbook (4-H 194R)
- Youth Pork Quality Assurance Plus Program materials. Available from the National Pork Board (Phone: 515-223-2600; website: http://www.pork.org/Producers/YouthPQAPlus/default.aspx)
- Kentucky Beef Quality Assurance Manual. Available at the following website: http://www.ca.uky.edu/agc/pubs/id/id140/id140.pdf

Livestock Quiz

All Clover, Intermediate, and Senior contestants will complete a 25 question quiz of general animal science and livestock production information.

Example Questions – Clovers and Intermediates

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 – 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 above

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 C. Comfort or flight zone
   B. Blind spot 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

Learning Resources:
- Livestock Discovery CD
- Kentucky Kentucky Livestock Volunteer Certification Resource Kit
- Beef Resource Handbook (4-H 117R)
- Sheep Resource Handbook (4-H 134R)
- Swine Resource Handbook (4-H 194R)
- UK Agripedia website (http://www.ca.uky.edu/Agripedia/)

Team Quality Assurance Exercise

For this exercise teams will demonstrate how to read an animal health product label, calculate dosage rates and withdrawal times, complete a treatment record, be familiar with administration routes, and make responsible management decisions regarding quality assurance. The following exercise is an example that would appropriate for Intermediate and Senior teams (a Clover exercise would be a simpler version that required less information and/or a shorter duration of time).

EXAMPLE TEAM QUALITY ASSURANCE EXERCISE

Follow the medical history of a pig on a confinement hog operation from birth to slaughter by filling in the boxes in the chart below with the requested information for each medication that the pig (Wilbur) receives throughout his lifetime. [NOTE: All medication labels will be supplied during the actual contest.]

September 27, 2004: Happy Birthday! It's a boy! Wilbur is farrowed, his weight is 4 lbs. Iron is administered.

Product Name	Storage	Dosage	Route of Administration	Duration of Treatment	Withdrawal Time
Iron Dextran-200					

September 30, 2004: Scours in the farrowing house, weight is still 4 lbs. Administer Apramycin.

Product Name	Storage	Dosage	Route of Administration	Duration of Treatment	Withdrawal Time
Apralan					

October 11, 2004: Wilbur is weaned, weight is 18 lbs. Routine vaccine of the herd.

Product Name	Storage	Dosage	Route of Administration	Duration of Treatment	Withdrawal Time
Flu-Sure					

October 25, 2004: Chronic cough in nursery, vet prescribes medication to treat the entire nursery. There are 325 hog's in Wilbur's nursery room with an average weight of 28 pounds.

Product Name	Storage	Dosage	Route of Administration	Duration of Treatment	Withdrawal Time
Neomycin Soluble					

December 6, 2004: Routine worming of pigs in the grower-finisher barn. There are 200 head in the barn with an average weight of 125 lbs.

Product Name	Storage	Dosage	Route of Administration	Duration of Treatment	Withdrawal Time
Ivomec Premix					

January 24, 2005: Finisher: Wilbur comes up lame, due to bacterial arthritis, his weight is 240 lbs. You decide to treat Wilbur for three days and sell him before he's completely crippled.

Product Name	Storage	Dosage	Route of Administration	Duration of Treatment	Withdrawal Time
Lincomix (300 mg/ml)					

On what date can Wilbur safely be sold? _____

Learning Resources:

- Kentucky Livestock Volunteer Certification Resource Kit
- Youth Pork Quality Assurance Plus Program materials. Available from the National Pork Board (Phone: 515-223-2600; website: http://www.pork.org/Producers/YouthPQAPlus/default.aspx)
- Kentucky Beef Quality Assurance Manual. Available at the following website: http://www.ca.uky.edu/agc/pubs/id/id140/id140.pdf
- Beef Resource Handbook (4-H 117R)
- Sheep Resource Handbook (4-H 134R)
- Swine Resource Handbook (4-H 194R)

Team Animal Breeding/Marketing Exercise

For this exercise teams will demonstrate how to make sound animal breeding and (or) marketing decisions.

Example Exercise for Intermediates and 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.

Example Exercise for Clovers:

You are a commercial lamb producer whose flock is made up of mainly Dorset crossbred ewes. Your primary target is fast growing lambs for slaughter. However the neighbor kids like to get some 4-H lambs from you. You need to purchase a new ram. Discuss with a contest official which of the following rams you would select, and answer the five questions below about the rams.

Ear Tag	*Breed*	*ADG (lbs)*	*Description*
1	Suffolk	1.34	Large frame, good terminal sire prospect
2	Dorset	0.90	Medium frame, stylish design
3	Blackface	1.10	Medium frame, stylish design
4	Suffolk	1.00	Medium frame, very good conformation
5	Columbia	1.10	Large frame, good wool

1. _____ Which ram would probably sire the fastest growing lambs?
2. _____ Which ram would offer the least increase in performance?
3. _____ Which ram is considered a "dual purpose" breed?
4. _____ Which two rams would probably sire the more maternally oriented daughters?
5. _____ Between Rams 2 and 3, which one would you choose to produce 4-H lambs and why?

Learning Resources:

- Kentucky Livestock Volunteer Certification Resource Kit
- Publication entitled "Judging Performance Classes" (ASC 167) which can be found on the Livestock Discovery CD. This publication provides examples of using scenarios and EPD data to place a class of animals.
- Beef Resource Handbook (4-H 117R)
- Sheep Resource Handbook (4-H 134R)
- Swine Resource Handbook (4-H 194R)

Team Livestock
Feeding/Performance Exercise
Senior Teams 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:

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 1275 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 Corn Silage Corn Gluten	60% 25% 15%	$0.06
2	Whole Oats Cracked Corn Beet Pulp	34% 33% 33%	$0.09
3	Whole Corn Distillers Grain Ground Hay	75% 15% 10%	$0.06
4	Cracked Corn Ground Corn Soybean Meal	60% 25% 15%	$0.07
5	Whole Oats Whole Corn Whole Cotton Seed	45% 45% 10%	$0.10

Learning Resources:
- Livestock Discovery CD
- Kentucky Livestock Volunteer Certification Resource Kit
- Beef Resource Handbook (4-H 117R)
- Sheep Resource Handbook (4-H 134R)
- Swine Resource Handbook (4-H 194R)

Team Carcass Pricing Activity

Beef carcass pricing classes consist of four beef carcasses (pictures) which are priced individually and placed according to the resulting differences in carcass value. The four beef carcasses included in a pricing class often exhibit extreme variation in weight, quality grade, yield grade, and may possess a variety of carcass defects. All of these characteristics are assessed and factored into the final price for each carcass.

The base carcass price ($/cwt) for each carcass is determined using a pricing grid similar to the one shown below. After determining the base price for each carcass, discounts for carcass weight, dairy-type, and trim loss/bruises are deducted to arrive at a final carcass price per hundredweight.

Example Beef Pricing Grid

	Beef Cattle Price ($/cwt)						
	Prime	**Choice (High/Average**	**Low Choice**	**Select**	**Standard**	**Hardbone**	**Dark Cutter/Blood Splash**
Yield Grade 1	$109	$106	$104	$94	$84	$78	$70
Yield Grade 2	$107	$104	$102	$92	$82	$78	$70
Yield Grade 3	$105	$102	$100	$90	$80	$78	$70
Yield Grade 4	$85	$82	$80	$70	$60	$58	$50
Yield Grade 5	$80	$77	$75	$65	$55	$53	$45
Discounts ($/cwt)							
Carcass Weight (lb)							
<500	($25)						
500-549	($20)						
950-999	($20)						
>1000	($25)						
Dairy type	($25) * Dairy-type carcasses are not eligible for yield grade 1 & 2 premiums						
Major trim loss	($10) per side						

Example of a Value-Based Carcass Pricing Class

	#1	#2	#3	#4
Hot Carcass Weight	842	972	627	755
Quality Grade	Standard	High Choice	Low Choice	Low Choice
Yield Grade	2.9	4.3	2.2	3.4
Hardbone	No	No	No	No
Dark Cutter/Blood Splash	No	No	No	Yes
Muscle Type	Beef	Beef	Dairy	Beef
Major Trim Loss	None	None	None	1 side
Base Price ($/cwt)	**$82.00**	**$82.00**	**$102.00**	**$70.00**
Carcass Weight Discount	0	($20.00)	0	0
Dairy-Type Discount	0	0	($25.00)	0
Total Major Trim Loss Discount	0	0	0	($10.00)
Final Carcass Price ($/cwt)	**$82.00**	**$62.00**	**$77.00**	**$60.00**
Final Placing	**1**	**3**	**2**	**4**