Kentucky 4-H Livestock Skillathon Contest

2020 Resource Packet

Saturday – February 22, 2020

Western Kentucky University - Agricultural Exposition Center
Bowling Green, KY
Registration – 8:00 a.m. Central Time
Contest – 9:00 a.m. Central Time
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Kentucky 4-H State Livestock Skillathon Contest

Contest Date:
February 22, 2020

Location:
Western Kentucky University – Agricultural Exposition Center
Bowling Green, Kentucky

Contest Coordinator:
Zach Bartenslager – Extension Associate for Youth Livestock Programs
Department of Animal and Food Sciences
911 W.P. Garrigus Building
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Phone: (859) 257-7544
E-mail:

Rules and Regulations

Team and Contestant Eligibility

1. To be eligible to participate in the 2020 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. Clover, Intermediate, 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. Clover – 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 11th birthday as of January 1 of the current year. Parents will not be allowed to go through contest with their children.
   b. Intermediate – must have reached their 12th birthday as of January 1 of the current year, and must not have passed their 13th birthday as of January 1 of the current year.
   c. 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.

*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. Registration forms (located at http://afs4hyouth.ca.uky.edu/skillathon) are due to Steve Austin by January 24, 2020. Registration fees are $20.00 per individual, and checks for registration fees must be included with registration forms. Checks should be made payable to the “Kentucky 4-H Foundation” with “State Skillathon” included on the memo line. Entries received after January 24, 2020 will be charged $25.00 per individual.

6. No member may represent Kentucky in an out-of-state NATIONAL 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.

7. 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)”.

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

9. For past years Skillathon Answer Sheets see: http://www2.ca.uky.edu/afs4hyouth/skillathon

 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. Parents will not be allowed to go through with their children.

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. Teams will have (10) minutes to prepare and must present in the second (10) minutes.

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.
5. 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.**

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

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

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

9. Lunch will be provided and awards will be presented at the conclusion of the contest.

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**Awards**

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

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**Contest Classes – Clover 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.

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.

9. **Team Exercises/Activities**

   **NOTE:** Clover 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.*

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**Clover Skillathon Class List**

<table>
<thead>
<tr>
<th>Class Name/Activity</th>
<th>Points</th>
<th>Type</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail Meat ID</td>
<td>50</td>
<td>Raw</td>
<td>Identify 10 retail cuts (5 points each)</td>
</tr>
<tr>
<td>Livestock Feed ID</td>
<td>50</td>
<td>Raw</td>
<td>Identify 10 feedstuffs (5 points each)</td>
</tr>
<tr>
<td>Livestock Breed ID</td>
<td>50</td>
<td>Raw</td>
<td>Identify 10 breeds (5 points each)</td>
</tr>
<tr>
<td>Livestock Equipment I.D.</td>
<td>50</td>
<td>Raw</td>
<td>Identify 10 items (5 points each)</td>
</tr>
<tr>
<td>Retail Meat Judging Class</td>
<td>50</td>
<td>Hormel</td>
<td>Placing class only</td>
</tr>
<tr>
<td>Hay Judging Class</td>
<td>50</td>
<td>Hormel</td>
<td>Placing class only</td>
</tr>
<tr>
<td>Quality Assurance</td>
<td>50</td>
<td>Raw</td>
<td>5 questions (10 points each)</td>
</tr>
<tr>
<td>Quiz</td>
<td>50</td>
<td>Raw</td>
<td>25 questions (2 points each)</td>
</tr>
<tr>
<td>Team Quality Assurance</td>
<td>200</td>
<td>Raw</td>
<td></td>
</tr>
<tr>
<td>Team Animal Breeding/Marketing</td>
<td>200</td>
<td>Raw</td>
<td></td>
</tr>
</tbody>
</table>

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**Contest Classes – Intermediate Division**

**Individual Classes**

1. **Retail Meat Cut Identification:** (100 possible points) From a provided list, identify from photographs or pictures or actual cuts the uniformly accepted name of a combination of ten beef, pork, and lamb retail cuts, including the species.

2. **Livestock Feed Identification:** (100 possible points) From a list provided, identify from actual samples the proper name for ten livestock feeds and each corresponding nutrient group.

3. **Livestock Breed Identification:** (100 possible points) From a list provided, identify from photographs or pictures, ten livestock (beef cattle, swine, sheep, and goat) breeds, and the place of origin for the breed.
4. **Livestock/Meat Equipment Identification:** (100 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 or the meat industry and the use for the piece of equipment.

5. **Meat Judging Class:** (100 possible points) Rank two classes of four similar retail cuts.

6. **Fleece and Hay Judging Class:** (150 possible points) Rank a class of four hay samples and answer five questions on the class. Rank a class of four samples of fleece.

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.

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**Team Exercises/Activities**

*NOTE: Intermediate 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 and live animals to rank breeding animals for use within the situation.

*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.*

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**Intermediate Skillathon Class List**

<table>
<thead>
<tr>
<th>Class Name/Activity</th>
<th>Points</th>
<th>Type</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail Meat ID</td>
<td>100</td>
<td>Raw</td>
<td>Identify 10 retail cuts (5 points each) and the species (5 points each)</td>
</tr>
<tr>
<td>Livestock Feed ID</td>
<td>100</td>
<td>Raw</td>
<td>Identify 10 feedstuffs (5 points each) and their nutrient group (5 points each)</td>
</tr>
<tr>
<td>Livestock Breed ID</td>
<td>100</td>
<td>Raw</td>
<td>Identify 10 breeds (5 points each) and origin of breed (5 points each)</td>
</tr>
<tr>
<td>Livestock/Meat Equipment I.D.</td>
<td>100</td>
<td>Raw</td>
<td>Identify 10 items (5 points each) and its use (5 points each)</td>
</tr>
<tr>
<td>Retail Meat Judging Class I</td>
<td>50</td>
<td>Hormel</td>
<td>Placing class only</td>
</tr>
<tr>
<td>Retail Meat Judging Class II</td>
<td>50</td>
<td>Hormel</td>
<td>Placing class only</td>
</tr>
<tr>
<td>Hay Judging Class</td>
<td>50</td>
<td>Hormel</td>
<td>Placing class</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>Raw</td>
<td>5 questions (10 points each)</td>
</tr>
<tr>
<td>Fleece Judging Class</td>
<td>50</td>
<td>Hormel</td>
<td>Placing class only</td>
</tr>
<tr>
<td>Quality Assurance</td>
<td>50</td>
<td>Raw</td>
<td>10 questions (5 points each)</td>
</tr>
<tr>
<td>Quiz</td>
<td>50</td>
<td>Raw</td>
<td>25 questions (2 points each)</td>
</tr>
<tr>
<td>Team Quality Assurance</td>
<td>200</td>
<td>Raw</td>
<td></td>
</tr>
<tr>
<td>Team Animal Breeding/Marketing</td>
<td>200</td>
<td>Raw</td>
<td></td>
</tr>
</tbody>
</table>
Contest Classes-Senior Division

Individual Classes

1. **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.

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

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

4. **Livestock/Meat Equipment Identification:** (100 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 and the use for the piece of equipment.

5. **Meat Judging Class:** (150 possible points) Rank two classes of four similar retail cuts of meat and answer 5 questions pertaining to one class.

6. **Fleece and 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. Rank a class of four samples of fleece.

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:** 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. **Quality Assurance Exercise:** (200 possible points) 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.

3. **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.

*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.
## Senior Skillathon Class List

<table>
<thead>
<tr>
<th>Class Name/Activity</th>
<th>Points</th>
<th>Type</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Retail Meat ID</td>
<td>150</td>
<td>Raw</td>
<td>For each of 10 retail cuts provide: Retail name (5 points each)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Species (5 points each)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Wholesale cut (5 points each)</td>
</tr>
<tr>
<td>Livestock Feed ID</td>
<td>150</td>
<td>Raw</td>
<td>For each of 10 feedstuffs provide: Feedstuff name (5 points each)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Nutrient group (5 points each)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Uses/characteristics (5 points each)</td>
</tr>
<tr>
<td>Livestock Breed ID</td>
<td>150</td>
<td>Raw</td>
<td>For each of 10 breeds provide: Breed name (5 points each)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Origin of breed (5 points each)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Characteristics/traits (5 points each)</td>
</tr>
<tr>
<td>Livestock/Meat Equipment I.D.</td>
<td>100</td>
<td>Raw</td>
<td>For each of 10 items provide: Item name (5 points each)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Use (5 points each)</td>
</tr>
<tr>
<td>Retail Meat Judging Class I</td>
<td>50</td>
<td>Hormel</td>
<td>Placing class</td>
</tr>
<tr>
<td></td>
<td>50</td>
<td>Raw</td>
<td>5 questions (10 points each)</td>
</tr>
<tr>
<td>Retail Meat Judging Class II</td>
<td>50</td>
<td>Hormel</td>
<td>Placing class only</td>
</tr>
<tr>
<td>Hay Judging Class</td>
<td>50</td>
<td>Hormel</td>
<td>Placing class only with data</td>
</tr>
<tr>
<td>Fleece Judging Class</td>
<td>50</td>
<td>Hormel</td>
<td>Placing class only</td>
</tr>
<tr>
<td>Quality Assurance</td>
<td>50</td>
<td>Raw</td>
<td>10 questions (5 points each)</td>
</tr>
<tr>
<td>Quiz</td>
<td>50</td>
<td>Raw</td>
<td>25 questions (2 points each)</td>
</tr>
<tr>
<td>Team Quality Assurance</td>
<td>200</td>
<td>Raw</td>
<td></td>
</tr>
<tr>
<td>Team Animal Breeding/Marketing</td>
<td>200</td>
<td>Raw</td>
<td></td>
</tr>
<tr>
<td>Team Livestock Feeding/Performance</td>
<td>200</td>
<td>Raw</td>
<td></td>
</tr>
</tbody>
</table>
Retail Meat Cuts Identification

The following list highlights the retail meat cuts that may be used in the (C), Intermediate (I), and Senior (S) age divisions. Clovers will only be asked to provide the correct name for the retail cut. Intermediates will be asked to provide the correct name and species for the retail cut. Seniors will be asked to provide the correct name, species, and wholesale cut of origin for the retail cut.

### Beef Retail Meat Cuts
- Brisket, flat half (C,I,S)
- Brisket, point half (C,I,S)
- Brisket, whole (C,I,S)
- Chuck arm roast (C,I,S)
- Chuck arm roast, boneless (S)
- Chuck arm steak (C,I,S)
- Chuck arm steak, boneless (S)
- Chuck blade roast (C,I,S)
- Chuck blade steak (C,I,S)
- Chuck 7-bone roast (S)
- Chuck 7-bone steak (S)
- Flank steak (C,I,S)
- Loin sirloin steak, flat bone (C,I,S)
- Loin sirloin steak, pin bone (S)
- Loin sirloin steak, round bone (C,I,S)
- Loin sirloin steak, wedge bone (S)
- Loin sirloin steak, shell (S)
- Loin sirloin steak, boneless (S)
- Loin tenderloin steak (C,I,S)
- Loin T-bone steak (C,I,S)
- Loin top loin steak (C,I,S)
- Loin top loin steak, boneless (S)
- Plate short ribs (C,I,S)
- Plate skirt steak (C,I,S)
- Rib roast, large end (S)
- Rib roast, small end (S)
- Rib steak, small end (C,I,S)
- Rib steak, small end, boneless (S)
- Ribeye roast (S)
- Ribeye steak (C,I,S)
- Round bottom round roast (C,I,S)
- Round bottom round steak (C,I,S)
- Round eye round roast (C,I,S)
- Round eye round steak (C,I,S)
- Round rump roast, boneless (S)
- Round steak (C,I,S)
- Round tip roast (C,I,S)
- Round tip roast, cap off (S)
- Shank cross cuts (C,I,S)
- Shank cross cuts, boneless (S)

### Lamb Retail Meat Cuts
- Breast (C,I,S)
- Breast riblets (C,I,S)
- Leg American style roast (C,I,S)
- Leg center slice (C,I,S)
- Leg French style roast (C,I,S)
- Leg shank half (C,I,S)
- Rack rib chop (C,I,S)
- Leg sirloin chop (C,I,S)
- Leg sirloin half (C,I,S)
- Loin chop (C,I,S)
- Loin double chop (C,I,S)
- Loin center rib roast (C,I,S)
- Shoulder blade chop (C,I,S)
- Shoulder neck slice (C,I,S)
- Shoulder arm roast (C,I,S)
- Shoulder arm steak (C,I,S)
- Shoulder blade Boston roast (C,I,S)
- Sliced bacon (C,I,S)
- Smoked jowl (C,I,S)
- Shoulder square cut (C,I,S)

### Pork Retail Meat Cuts
- Fresh ham center slice (C,I,S)
- Fresh ham rump portion (C,I,S)
- Fresh ham shank portion (C,I,S)
- Fresh side pork (C,I,S)
- Loin blade chop (C,I,S)
- Loin blade roast (C,I,S)
- Loin butterfly chop (C,I,S)
- Shoulder arm picnic roast (C,I,S)
- Shoulder arm roast (C,I,S)
- Shoulder arm steak (C,I,S)
- Shoulder blade Boston roast (C,I,S)
- Sliced bacon (C,I,S)
- Smoked jowl (C,I,S)
- Spareribs (C,I,S)

### Wholesale cuts to be used by Senior Contestants

<table>
<thead>
<tr>
<th>Beef</th>
<th>Lamb</th>
<th>Pork</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brisket</td>
<td>Breast</td>
<td>Bacon (belly)</td>
</tr>
<tr>
<td>Chuck</td>
<td>Leg</td>
<td>Boston shoulder</td>
</tr>
<tr>
<td>Flank</td>
<td>Loin</td>
<td>Ham</td>
</tr>
<tr>
<td>Loin</td>
<td>Rack</td>
<td>Jowl</td>
</tr>
<tr>
<td>Plate</td>
<td>Shank</td>
<td>Loin</td>
</tr>
<tr>
<td>Rib</td>
<td>Shoulder</td>
<td>Picnic shoulder</td>
</tr>
<tr>
<td>Round</td>
<td></td>
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</tr>
<tr>
<td>Rump</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shank</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**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

**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. **Clovers** only provide answers for retail cut name. **Intermediates** provide answers for retail cut name and species of cut. **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 Clovers, 100 points total for Intermediates, 150 points total for Seniors).

<table>
<thead>
<tr>
<th>Retail Cut Name</th>
<th>Species of Cut</th>
<th>Wholesale Cut of Origin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex. 66</td>
<td>P</td>
<td>Q</td>
</tr>
</tbody>
</table>

**Retail Names – to be used in answer column 1 by Clovers, Intermediates, and Seniors**

**Beef Retail Cuts**

1. Brisket, flat half
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 roast, small end
29. Rib roast, 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

**Lamb Retail Cuts**

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

**Pork Retail Cuts**

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

**Species of Cut – to be used in answer column 2 by Intermediates and Seniors**

B. Beef  L. Lamb  P. Pork

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

**Beef Wholesale Cuts**

A. Brisket
B. Chuck
C. Flank
D. Loin
E. Plate
F. Rib
G. Round
H. Shank

**Lamb Wholesale Cuts**

I. Breast
J. Leg
K. Loin
L. Rack
M. Shank
N. Shoulder

**Pork Wholesale Cuts**

O. Belly (Side, Bacon)
P. Boston Butt
Q. Ham
R. Jowl
S. Loin
T. Picnic Shoulder
Feedstuffs Identification

The following list highlights the feedstuffs that may be used in the Clover (C), Intermediate (I), and Senior (S) age divisions. Clovers will only be asked to provide the correct name for the feedstuff. Intermediates will be asked to provide the correct name and corresponding nutrient group for the feedstuff. Seniors will be asked to provide the correct name, corresponding nutrient group, and important characteristics/uses for the feedstuff.

**Feedstuff Names**

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

**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)
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. Clovers only provide answers for feedstuff name. Intermediates provide answers for feedstuff name and nutrient group. Seniors provide answers for feedstuff name, nutrient group, and characteristics/uses of the feedstuff. Each question is worth 5 points (50 points total for Clovers, 100 points total for Intermediates, 150 points total for Seniors).

<table>
<thead>
<tr>
<th>Feedstuff Name</th>
<th>Nutrient Group</th>
<th>Characteristics/Uses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex. 18</td>
<td>P</td>
<td>F</td>
</tr>
</tbody>
</table>

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

**Feed Names – to be used in answer column 1 by Clovers, Intermediates, 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. Cottonseed meal
15. Cracked shelled corn
16. Crimped oats
17. Defluorinated rock phosphate
18. Dehydrated alfalfa meal
19. Dicalcium phosphate
20. DL-methionine
21. Dried Beet pulp
22. Dried molasses
23. Dried skim milk
24. Feather meal
25. Fish meal
26. Grain sorghum (whole)
27. Ground ear corn
28. Ground limestone
29. Ground shelled corn
30. Kentucky Bluegrass pasture
31. L-lysine HCl
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. Orchardgrass 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. Santequin
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 Intermediates and Seniors**

C. Carbohydrate (energy) M. Mineral
F. Fats (energy) V. Vitamin
P. Protein

**Important Characteristics/Uses of Feedstuffs – to be used in answer column 3 by and Seniors**

A. Most extensively produced feed grain in U.S.
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 U.S., 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 destroy anti-nutritional factors (trypsin inhibitor).
H. Most widely used protein supplement in the U.S.
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 glucosinolates.
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.
**Breeds of Livestock Identification**

The following list highlights the breeds that may be used in the Clover (C), Intermediate (I), and Senior (S) age divisions. Clovers will only be asked to provide the correct name for the breed. Intermediates will be asked to provide the correct name and corresponding origin of the breed. Seniors will be asked to provide the correct name, corresponding origin of the breed, and important characteristics/uses for the breed.

<table>
<thead>
<tr>
<th><strong>Beef Cattle</strong></th>
<th><strong>Goats</strong></th>
<th><strong>Sheep</strong></th>
<th><strong>Swine</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Angus (C,I,S)</td>
<td>Alpine (C,I,S)</td>
<td>Cheviot (C,I,S)</td>
<td>Berkshire (C,I,S)</td>
</tr>
<tr>
<td>Brahman (C,I,S)</td>
<td>American Cashmere (C,I,S)</td>
<td>Columbia (S)</td>
<td>Chester White (C,I,S)</td>
</tr>
<tr>
<td>Brangus (C,I,S)</td>
<td>Angora (C,I,S)</td>
<td>Corriedale (S)</td>
<td>Duroc (C,I,S)</td>
</tr>
<tr>
<td>Charolais (C,I,S)</td>
<td>Boer (C,I,S)</td>
<td>Dorper (S)</td>
<td>Hampshire (C,I,S)</td>
</tr>
<tr>
<td>Chianina (C,I,S)</td>
<td>Kiko (C,I,S)</td>
<td>Dorset (C,I,S)</td>
<td>Hereford (C,I,S)</td>
</tr>
<tr>
<td>Gelbvieh (C,I,S)</td>
<td>Lamancha (C,I,S)</td>
<td>Finnsheep (C,I,S)</td>
<td>Landrace (C,I,S)</td>
</tr>
<tr>
<td>Hereford (C,I,S)</td>
<td>Nubian (C,I,S)</td>
<td>Hampshire (C,I,S)</td>
<td>Pietrain (C,I,S)</td>
</tr>
<tr>
<td>Limousin (C,I,S)</td>
<td>Oberhasli (C,I,S)</td>
<td>Katahdin (S)</td>
<td>Poland China (C,I,S)</td>
</tr>
<tr>
<td>Maine Anjou (C,I,S)</td>
<td>Pygmy (C,I,S)</td>
<td>Merino (S)</td>
<td>Spotted (C,I,S)</td>
</tr>
<tr>
<td>Polled Hereford (C,I,S)</td>
<td>Saanen (C,I,S)</td>
<td>Montadale (C,I,S)</td>
<td>Tamworth (C,I,S)</td>
</tr>
<tr>
<td>Red Angus (C,I,S)</td>
<td>Spanish (C,I,S)</td>
<td>Oxford (C,I,S)</td>
<td>Yorkshire (C,I,S)</td>
</tr>
<tr>
<td>Red Poll (C,I,S)</td>
<td>Tennessee Fainting (C,I,S)</td>
<td>Polled Dorset (C,I,S)</td>
<td></td>
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<tr>
<td>Santa Gertrudis (C,I,S)</td>
<td>Toggenburg (C,I,S)</td>
<td>Rambouillet (C,I,S)</td>
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<tr>
<td>Shorthorn (C,I,S)</td>
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<td>Romney (C,I,S)</td>
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<tr>
<td>Simmenthal (C,I,S)</td>
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<td>Southdown (C,I,S)</td>
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<tr>
<td>Tarentaise (C,I,S)</td>
<td></td>
<td>Suffolk (C,I,S)</td>
<td></td>
</tr>
</tbody>
</table>

**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
- Beef Resource Handbook (4-H 117R)
- Sheep Resource Handbook (4-H 134R)
- Swine Resource Handbook (4-H 194R)
Below is information for the new sheep breeds that will be added for Senior contestants.

### Columbia

**Origin** – United States-(USDA Sheep Experiment Station in Dubois, Idaho)

**Type** – Dual Purpose (Meat and Wool)

**Wool** – High yielding, heavy fleece

**Descriptors** – Very large framed white face, bright white wool, pink nose

**Important Traits** – Large framed, fast growing dual purpose breed with good meat and a heavy wool clip

### Corriedale

**Origin** – New Zealand and Australia

**Type** – Dual Purpose (Meat and Wool)

**Wool** – Bulky, dense, and high yielding

**Descriptors** – Polled, large framed, white face and legs with wool covering extending down around the poll/forehead, darker pigment on nose, ears point straight out

**Important Traits** – Good carcass quality, fast growth, combines good meat and wool characteristics

[Continued on next page]
Breeds of Livestock Identification
– New Sheep Breeds for Senior Contestants – (continued)

Dorper
Origin – South Africa
Type – Meat Breed
Wool – Mixture of hair and wool, considered a hair sheep breed
Descriptors – Polled (hornless), moderate frame size, very thick and blocky, can be solid white (White Dorper) or have black pigmented fiber (hair) on head and neck, requires no shearing as the hair/wool mixture is naturally shed during warm weather
Important Traits – Extremely hardy, fast growing, fertile, can survive and thrive under harsh conditions

Katahdin
Origin – United States (Maine)
Type – Meat Breed
Wool – No fleece, considered a hair sheep breed
Descriptors – Hair can be many different colors or combinations, but most commonly white with some spots with no fiber (hair) on head or legs, medium frame size, hornless
Important Traits – adapted to a wide variety of production systems, higher tolerance to parasites and high temperatures and humidity, low maintenance, excellent mothering ability

Merino
Origin – Mainly Spain, but refined in United States and Australia
Type – Wool Breed
Wool – Very High Quality
Descriptors – Medium sized, rams are horned, but some polled strains exist, produces a very high quality and high yielding fleece
Important Traits – Wool production and strong flocking instinct
**Livestock Breeds 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. **Clovers** only provide answers for breed name. **Intermediates** provide answers for breed name and origin of breed. **Seniors** provide answers for breed name, origin of breed, and important characteristics/traits. Each question is worth 5 points (50 points total for Clovers, 100 points total for Intermediates, 150 points total for Seniors).

### Breeds – to be used in answer column 1 by Clovers, Intermediates, and Seniors

<table>
<thead>
<tr>
<th>Breed Name</th>
<th>Origin of Breed</th>
<th>Important Traits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ex. 20 H I</td>
<td></td>
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<tr>
<td>1.</td>
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<td>9.</td>
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<td>10.</td>
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</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Breed Name</th>
<th>Origin of Breed</th>
<th>Important Traits</th>
</tr>
</thead>
<tbody>
<tr>
<td>A.</td>
<td>Jeanerette, Louisiana</td>
<td></td>
</tr>
<tr>
<td>B.</td>
<td>Charolles, France</td>
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<tr>
<td>C.</td>
<td>Italy</td>
<td></td>
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<tr>
<td>D.</td>
<td>Bavaria, Germany</td>
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<tr>
<td>E.</td>
<td>Des Moines, Iowa</td>
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</tr>
<tr>
<td>F.</td>
<td>Alps of Switzerland</td>
<td></td>
</tr>
<tr>
<td>G.</td>
<td>New Zealand</td>
<td></td>
</tr>
</tbody>
</table>

### Important Characteristics/Traits

- **Beef Cattle Characteristics/Traits**
  - A. Disease resistance, heat resistance, hardiness, and maternal instincts.
  - B. Well defined muscling and good growth rate.
  - C. Growth rate, muscularity, 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.

- **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).

- **Goats 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 multi-purpose use (milk, meat, and hide).
  - L. Heavy milkers, rugged bone, and vigor. Saanens are sensitive to excessive sunlight and perform best in cooler conditions.
# Livestock/Meat Equipment Identification

The following list highlights the equipment that may be used in the Clover (C), Intermediate (I), and Senior (S) age divisions. Clovers will only be asked to provide the correct name for livestock equipment. Intermediates and Seniors will be asked to provide the correct name and appropriate use for livestock and meat equipment.

**Livestock Equipment (C,I,S)**

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>All-in-one castrator/docker</td>
<td>Foot rot shears</td>
</tr>
<tr>
<td>Artificial insemination pipettes</td>
<td>Freeze branding iron</td>
</tr>
<tr>
<td>Bowl waterer</td>
<td>Hoof knife</td>
</tr>
<tr>
<td>Balling gun</td>
<td>Hog holder (snare)</td>
</tr>
<tr>
<td>Barnes dehorner</td>
<td>Lamb tube feeder</td>
</tr>
<tr>
<td>Cattle clippers</td>
<td>Needle teeth nippers</td>
</tr>
<tr>
<td>Clipper comb</td>
<td>Nipple waterer</td>
</tr>
<tr>
<td>Clipper cutter</td>
<td>Nose ring</td>
</tr>
<tr>
<td>Currycomb</td>
<td>Nose ring pliers</td>
</tr>
<tr>
<td>Disposable syringes</td>
<td>Obstetrical (O.B.) chain</td>
</tr>
<tr>
<td>Drench gun</td>
<td>Paint branding iron</td>
</tr>
<tr>
<td>Ear notchers</td>
<td>Pistol-grip syringe</td>
</tr>
<tr>
<td>Ear tag pliers</td>
<td>Ram marking harness</td>
</tr>
<tr>
<td>Elastrator</td>
<td>Rumen magnate</td>
</tr>
<tr>
<td>Electric branding iron</td>
<td>Scalpels</td>
</tr>
<tr>
<td>Electric dehorner</td>
<td>Scotch comb</td>
</tr>
<tr>
<td>Electric docker</td>
<td>Shearer’s screwdriver</td>
</tr>
<tr>
<td>Emasculatome (Burdizzo)</td>
<td>Sheep shears (electric)</td>
</tr>
<tr>
<td>Emasculator</td>
<td>Slap tattoo</td>
</tr>
<tr>
<td>Ewe prolapse retainer</td>
<td>Tattoo pliers</td>
</tr>
<tr>
<td>Fencing pliers</td>
<td>Wool card</td>
</tr>
</tbody>
</table>

**Meat Equipment (I,S)**

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backfat ruler</td>
<td></td>
</tr>
<tr>
<td>Band saw</td>
<td></td>
</tr>
<tr>
<td>Bone dust scraper</td>
<td></td>
</tr>
<tr>
<td>Boning knife</td>
<td></td>
</tr>
<tr>
<td>Bowl chopper</td>
<td></td>
</tr>
<tr>
<td>Dehairing machine</td>
<td></td>
</tr>
<tr>
<td>Electrical stunner</td>
<td></td>
</tr>
<tr>
<td>Emulsifier</td>
<td></td>
</tr>
<tr>
<td>Ham net</td>
<td></td>
</tr>
<tr>
<td>Hand saw</td>
<td></td>
</tr>
<tr>
<td>Hard hat</td>
<td></td>
</tr>
<tr>
<td>Loin eye area grid</td>
<td></td>
</tr>
<tr>
<td>Meat grinder</td>
<td></td>
</tr>
<tr>
<td>Meat grinder auger</td>
<td></td>
</tr>
<tr>
<td>Meat grinder knife</td>
<td></td>
</tr>
<tr>
<td>Meat grinder plate</td>
<td></td>
</tr>
<tr>
<td>Meat grinder stuffing rod</td>
<td></td>
</tr>
<tr>
<td>Meat hook</td>
<td></td>
</tr>
<tr>
<td>Meat tenderizer</td>
<td></td>
</tr>
<tr>
<td>Meat trolley</td>
<td></td>
</tr>
<tr>
<td>Metal knife scabbard</td>
<td></td>
</tr>
<tr>
<td>Rubber apron</td>
<td></td>
</tr>
<tr>
<td>Sharpening steel</td>
<td></td>
</tr>
<tr>
<td>Smoke house</td>
<td></td>
</tr>
<tr>
<td>Thermometer</td>
<td></td>
</tr>
<tr>
<td>Tumbler</td>
<td></td>
</tr>
<tr>
<td>Vacuum sausage stuffer</td>
<td></td>
</tr>
<tr>
<td>Whale saw</td>
<td></td>
</tr>
</tbody>
</table>

**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/](http://www.enasco.com/farmandranch/))
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. Clovers will only be asked questions pertaining to the names of livestock equipment. Intermediates and Seniors provide answers for livestock/meat equipment names and equipment use. Each question is worth 5 points (50 points total for Clovers, 100 points total for Intermediates and Seniors).

### Equipment Names – to be used in answer column 1 by Clovers, Intermediates, and Seniors

<table>
<thead>
<tr>
<th>Equipment Name</th>
<th>Livestock Equipment</th>
<th>Meat Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. All-in-one castrator/docker</td>
<td>26. Lamb tube feeder</td>
<td>43. Backfat ruler</td>
</tr>
<tr>
<td>2. Artificial insemination pipettes</td>
<td>27. Needle teeth nippers</td>
<td>44. Band saw</td>
</tr>
<tr>
<td>5. Barnes dehorner</td>
<td>30. Nose ring pliers</td>
<td>47. Bowl chopper</td>
</tr>
<tr>
<td>7. Clipper comb</td>
<td>32. Paint branding iron</td>
<td>49. Electrical stunner</td>
</tr>
<tr>
<td>9. Currycom</td>
<td>34. Ram marking harness</td>
<td>51. Ham net</td>
</tr>
<tr>
<td>10. Disposable syringes</td>
<td>35. Rumen magnate</td>
<td>52. Hand saw</td>
</tr>
<tr>
<td>12. Ear notchers</td>
<td>37. Scotch comb</td>
<td>54. Loin eye area grid</td>
</tr>
<tr>
<td>13. Ear tag pliers</td>
<td>38. Shearer’s screwdriver</td>
<td>55. Meat grinder</td>
</tr>
<tr>
<td>15. Electric branding iron</td>
<td>40. Slap tattoo</td>
<td>57. Meat grinder knife</td>
</tr>
<tr>
<td>17. Electric docker</td>
<td>42. Tattoo pliers</td>
<td>59. Meat grinder stuff Rod</td>
</tr>
<tr>
<td>18. Emasculatome (Burdizzo)</td>
<td></td>
<td>60. Meat hook</td>
</tr>
<tr>
<td>20. Ewe prolapse retainer</td>
<td></td>
<td>62. Meat trolley</td>
</tr>
<tr>
<td>21. Fencing pliers</td>
<td></td>
<td>63. Metal knife scabbard</td>
</tr>
<tr>
<td>22. Foot rot shears</td>
<td></td>
<td>64. Rubber apron</td>
</tr>
<tr>
<td>23. Freeze branding iron</td>
<td></td>
<td>65. Sharpening steel</td>
</tr>
<tr>
<td>24. Hoof knife</td>
<td></td>
<td>66. Smoke house</td>
</tr>
<tr>
<td>25. Hog holder (snare)</td>
<td></td>
<td>67. Thermometer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>68. Tumbler</td>
</tr>
<tr>
<td></td>
<td></td>
<td>69. Vacuum sausage stuffer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>70. Whale saw</td>
</tr>
</tbody>
</table>

### Equipment Uses – to be used in answer column 2 by and Intermediates and Seniors

A. A device used to deposit boar semen into reproductive tract of a gilt or sow. The spiral tip or button end of the pipette is inserted into the cervix where the semen is deposited.

B. Used to administer various pills (medications) to cattle and horses. It is placed down the throat to administer the pills.

C. The part of cattle clippers that guides the hair towards the clipper cutter.

D. Used to administer precise amounts of liquid medications to cattle, sheep, goats, and horses. The hooked portion is placed in the animal’s mouth to administer the liquid medication.

E. An instrument used for the bloodless castration (young male calves, lambs, and goats) and docking of tails (young lambs and goats). It is used to place a small rubber ring over the scrotum or tail to shut off circulation.

F. Used to dock the tails of lambs and piglets. It cauterizes as it cuts the tail to eliminate excessive bleeding.

G. An instrument used for the bloodless castration of young male calves, lambs, and goats by severing (crushing) the testicular cord.

H. An instrument used to control vaginal prolapse in ewes.

I. Used to trim hooves of cattle, sheep, and goats to help prevent foot diseases.

J. Used to restrain hogs that are too big to catch and hold by hand. The cable portion of the hog catcher (snare) is placed over the hog’s snout to restrain the hog.

K. An instrument used to assist in pulling lambs from ewes that are experiencing lambing difficulties (dystocia).

L. Used to give vaccinations to multiple animals without needing to reload the syringe with more vaccine.

M. Used to insert a RALGRO pellet (for growth promotion) under the loose skin and above the cartilage on the back side of a beef calf’s ear.

N. A non-rusting, round post electric fence insulator. Will work on round posts up to about ½-inch diameter.

O. Used by shearsers to quickly replace the clipper comb and clipper cutter on cattle clippers.

P. Used to card (comb or rake) the wool on sheep prior to shearing.
Meats Judging

Clover contestants will be asked to rank one class of four similar retail cuts of meat. Intermediate 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:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Muscling</td>
<td>Size of the lean portion (amount of muscle)</td>
</tr>
<tr>
<td>Leanness (plate loss)</td>
<td>Fat and bone lost as the cut is cooked and consumed</td>
</tr>
<tr>
<td>Quality</td>
<td>Amount of marbling (small flecks of fat within the muscle); firmness with no signs of dryness or excess juices</td>
</tr>
<tr>
<td>Color</td>
<td>Beef should be bright cherry red; Pork should be bright grayish pink; Lamb should be light pink</td>
</tr>
</tbody>
</table>

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 for Senior Contestants:

  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 Livestock Volunteer Certification Resource Kit
Hay Judging

Clover contestants will be asked to visually rank one class of four hay samples. Intermediate contestants will be asked to visually rank a class of hay samples and answer five questions on the class. 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.

Ranking a Class of Hay on Visual Basis Only (Clovers/Intermediates)

The following criteria should be used when evaluating hay:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Bright green color is best; brown to dark brown color is poorest</td>
</tr>
<tr>
<td>Aroma*</td>
<td>Should be free from smell of mold, mildew, etc.</td>
</tr>
<tr>
<td>Leaf to stem ratio</td>
<td>High leaf to stem ratio is desirable; as stem size increases the leaf to stem ratio decreases</td>
</tr>
<tr>
<td>Purity</td>
<td>Should be free from weeds or other foreign plants which decrease the hay’s value (i.e., alfalfa should be all alfalfa)</td>
</tr>
<tr>
<td>Softness*</td>
<td>Hay that has been properly cured and stored should be soft to the touch</td>
</tr>
</tbody>
</table>

*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 Intermediate Contestants:

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 (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)

<table>
<thead>
<tr>
<th></th>
<th>Hay #1</th>
<th>Hay #2</th>
<th>Hay #3</th>
<th>Hay #4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry Matter 6.0 lb.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crude Protein 15.0% (dry matter basis)</td>
<td>88.6</td>
<td>88.4</td>
<td>88.6</td>
<td>87.9</td>
</tr>
<tr>
<td>TDN 65.0% (dry matter basis)</td>
<td>16.8</td>
<td>18.2</td>
<td>20.5</td>
<td>18.1</td>
</tr>
</tbody>
</table>

Forage Analysis (dry matter basis)

<table>
<thead>
<tr>
<th></th>
<th>Hay #1</th>
<th>Hay #2</th>
<th>Hay #3</th>
<th>Hay #4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dry matter, %</td>
<td>12.1</td>
<td>13.4</td>
<td>15.5</td>
<td>13.3</td>
</tr>
<tr>
<td>Crude protein, %</td>
<td>35.8</td>
<td>39.7</td>
<td>34.0</td>
<td>32.0</td>
</tr>
<tr>
<td>Digestible protein, %</td>
<td>62.0</td>
<td>63.0</td>
<td>64.7</td>
<td>63.0</td>
</tr>
<tr>
<td>Acid detergent fiber (ADF), %</td>
<td>112.0</td>
<td>113.0</td>
<td>115.5</td>
<td>113.3</td>
</tr>
<tr>
<td>TDN, %</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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](http://www.okrangelandswest.okstate.edu/pdfFiles/OSUextPubs/F-2588.pdf)
# Fleece Judging

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

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated clean wool content (yield and shrinkage)</td>
<td>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.</td>
</tr>
<tr>
<td>Length</td>
<td>Should be combing or staple length for the grade: i.e., fine, 3 in.; ½ blood, 3-½ in.; ⅘ blood, 3-⅛ in.; ⅘ blood, 4 in.; low ¼ blood, 4 ⅛ in.; braid, 4-⅜ in. Lengths more than ½ inch greater than this are of no additional value except increasing the yield and grease weight.</td>
</tr>
<tr>
<td>Quality or fineness</td>
<td>Should fall clearly in one of the grades according to fineness; i.e., fine, ½ blood; ⅘ blood; ¼ blood; low ¼ blood; braid. Uniformity of fineness particularly desirable. Cut heavily for hairy britch.</td>
</tr>
<tr>
<td>Soundness (strength)</td>
<td>Fiber should be strong throughout and free from breaks.</td>
</tr>
<tr>
<td>Purity</td>
<td>Free from hair, kemp, black or brown fibers. Cut heavily for black or brown fibers and coarse, hairy britch.</td>
</tr>
<tr>
<td>Character and color (crimp)</td>
<td>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.</td>
</tr>
</tbody>
</table>

*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](http://www.uky.edu/Ag/AnimalSciences/4h/livestockskillathon.html)
Quality Assurance (Individual)

When provided with a medication label/medication insert and (or) a scenario, all Clover, Intermediate, 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.

---

**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.

<table>
<thead>
<tr>
<th>Body Weight</th>
<th>Dosage</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 lb</td>
<td>2 ml</td>
</tr>
<tr>
<td>300 lb</td>
<td>6 ml</td>
</tr>
<tr>
<td>500 lb</td>
<td>10 ml</td>
</tr>
<tr>
<td>600 lb or more</td>
<td>12 ml</td>
</tr>
</tbody>
</table>

**Cautions:**
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°C and 8°C (36°F 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.

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**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)
- Kentucky Beef Quality Assurance Manual. Available at the following website: [http://www.ca.uky.edu/agc/pubs/id/id140/id140.pdf](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 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.

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Storage</th>
<th>Dosage</th>
<th>Route of Administration</th>
<th>Duration of Treatment</th>
<th>Withdrawal Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron Dextran-200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Storage</th>
<th>Dosage</th>
<th>Route of Administration</th>
<th>Duration of Treatment</th>
<th>Withdrawal Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apralan</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Storage</th>
<th>Dosage</th>
<th>Route of Administration</th>
<th>Duration of Treatment</th>
<th>Withdrawal Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flu-Sure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Storage</th>
<th>Dosage</th>
<th>Route of Administration</th>
<th>Duration of Treatment</th>
<th>Withdrawal Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neomycin Soluble</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Storage</th>
<th>Dosage</th>
<th>Route of Administration</th>
<th>Duration of Treatment</th>
<th>Withdrawal Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ivomec Premix</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Storage</th>
<th>Dosage</th>
<th>Route of Administration</th>
<th>Duration of Treatment</th>
<th>Withdrawal Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lincomix (300 mg/ml)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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/age/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:

<table>
<thead>
<tr>
<th>Ear Tag</th>
<th>Breed</th>
<th>DNA</th>
<th>ADG (lbs)</th>
<th>Description</th>
<th>Scrotal Measurement</th>
<th>Purchase Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1099</td>
<td>Suffolk</td>
<td>RRNS</td>
<td>1.34</td>
<td>Large frame, good terminal sire prospect</td>
<td>29 cm</td>
<td>$300</td>
</tr>
<tr>
<td>#775</td>
<td>Dorset</td>
<td>QRNN</td>
<td>0.90</td>
<td>Medium frame, stylish design</td>
<td>32 cm</td>
<td>$250</td>
</tr>
<tr>
<td>#1279</td>
<td>Blackface</td>
<td>QRNN</td>
<td>1.10</td>
<td>Medium frame, very good conformation</td>
<td>30 cm</td>
<td>$250</td>
</tr>
<tr>
<td>#44R</td>
<td>Suffolk</td>
<td>RRNN</td>
<td>1.00</td>
<td>Medium frame, very good conformation</td>
<td>30 cm</td>
<td>$350</td>
</tr>
<tr>
<td>#659</td>
<td>Columbia</td>
<td>QRNS</td>
<td>1.10</td>
<td>Large frame, good wool</td>
<td>31 cm</td>
<td>$300</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Ear Tag</th>
<th>Breed</th>
<th>ADG (lbs)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Suffolk</td>
<td>1.34</td>
<td>Large frame, good terminal sire prospect</td>
</tr>
<tr>
<td>2</td>
<td>Dorset</td>
<td>0.90</td>
<td>Medium frame, stylish design</td>
</tr>
<tr>
<td>3</td>
<td>Blackface</td>
<td>1.10</td>
<td>Medium frame, stylish design</td>
</tr>
<tr>
<td>4</td>
<td>Suffolk</td>
<td>1.00</td>
<td>Medium frame, very good conformation</td>
</tr>
<tr>
<td>5</td>
<td>Columbia</td>
<td>1.10</td>
<td>Large frame, good wool</td>
</tr>
</tbody>
</table>

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 these 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.

<table>
<thead>
<tr>
<th>Ration No.</th>
<th>Ingredients in Ration</th>
<th>% of Ration as Fed</th>
<th>Ration Price/Pound as Fed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Whole Corn, Corn Silage, Corn Gluten</td>
<td>60% 25% 15%</td>
<td>$0.06</td>
</tr>
<tr>
<td>2</td>
<td>Whole Oats, Cracked Corn, Beet Pulp</td>
<td>34% 33% 33%</td>
<td>$0.09</td>
</tr>
<tr>
<td>3</td>
<td>Whole Corn, Distillers Grain, Ground Hay</td>
<td>75% 15% 10%</td>
<td>$0.06</td>
</tr>
<tr>
<td>4</td>
<td>Cracked Corn, Ground Corn, Soybean Meal</td>
<td>60% 25% 15%</td>
<td>$0.07</td>
</tr>
<tr>
<td>5</td>
<td>Whole Oats, Whole Corn, Whole Cotton Seed</td>
<td>45% 45% 10%</td>
<td>$0.10</td>
</tr>
</tbody>
</table>

**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)