The Alaska Youth Livestock Skillathon Contest, adapted from the Kentucky 4-H State Livestock Skillathon Contest, is an educational experience that gives youth a greater understanding of livestock selection, meat, feedstuff, hay, fleece and equipment identification, evaluation and use, quality assurance and teamwork. Participants gain experience in the decision-making process by identifying livestock breeds, meat cuts, feedstuff, and livestock equipment, determining and ranking meat, hay, and fleece. Participants develop teamwork skills and group decision-making through livestock related team exercises.

The State Contest may determine qualification for national events. It is open to only those who qualify from districts in Alaska. Youth may participate as individuals or as team members.

Objectives

♦ Teach youth the principles of livestock selection, care, health, nutrition, feed selection, quality assurance, retail market and related aspects of the livestock industry.
♦ Stimulate youth achievement by providing the opportunity for competitive learning experience in an area of their special interest.
♦ Develop and strengthen youth decision-making skills.
♦ Help youth develop positive attitudes about their own abilities and their relationships with others.

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Contest and Eligibility

1. Contestants must be enrolled in 4-H and dues paid.

2. The District 4-H Agent/staff must certify each district’s entry.

3. Contestants must be 3rd through 12th grade for the current school year. The age divisions for the Alaska Youth Livestock Judging Contest are determined by the contestant’s age by October 1 for the current school year or previous school year if it is summer: Junior grade 3 - 5 Intermedit grade 6 – 8 Senior grade 9 - 12

Insurance

Districts are required to verify that all participants are covered by insurance before attending the State Contest.
**Grievances** -- Any protest must be submitted in writing (along with a $25 deposit) not less than one hour prior to the scheduled awards presentation. Protests will be reviewed by a three-member Grievance Committee. Deposits will be forfeited if the protest is not sustained. **Decisions of Grievance Committee are FINAL.**

**Code of Conduct**

All contestants, coaches, parents and spectators are expected to conduct themselves in an appropriate manner at all times. At no time will disrespectful behavior (be it toward contest officials, other contestants or coaches, or the general public) be tolerated. Failure to comply may result in immediate disqualification of any individuals, teams and/or family members of the violator.

**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.
3. Contestants will be allowed ten (10) minutes to complete the quiz and five (5) minutes to complete each of the eight individual competition classes. Teams will be allowed ten (10) minutes to complete the team activities.
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 five (5) minutes to complete the group assignment for each class and five minutes to present their solution or findings to a judge. 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.
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, unless directed otherwise.

**Rules and Regulations**

**Team and Contestant Eligibility**

1. Teams may consist of up to five (4) members, but only the top three (3) individual overall scores will be included in the team overall score. Districts 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 five (5).
2. 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.
3. 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 eligible to represent Alaska at the National Skillathon Contest which will be held in November in Louisville, Kentucky or Western 4-H RoundUp. To represent Alaska at a National Skillathon Contest, a Senior team must have four team members.
5. In the event a district with more than one Senior team competing at the State Skillathon Contests should win the State Skillathon Contest, that district 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 district that competed at the State Skillathon Contest are eligible for selection.
6. In the event a district 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 district 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.

7. No member may represent Alaska in an out-of-state NATIONAL Skillathon event in which he/she has previously participated. This includes the National Skillathon Contest in Louisville.

8. 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.

9. 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)”.

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

Awards  Individual and team awards will include: Top five individuals and teams overall (each)

Contest Classes-All Age Divisions

Individual Classes

1. Retail Meat Cut Identification: (150 possible points, 10 x 5 pts x 3) 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, 10 x 5 pts each x 3) 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, 10 x 5 pts each x 3) 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, 10 x 5 pts x 3) 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, Hormel placing x 2, 5 x 10 pts each) 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, Hormel placing x 2) 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 4 samples of fleece.

7. Quality Assurance Exercise: (50 possible points, 10 x 5 pts each) 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, 25 x 2 pts each) Complete a quiz concerning the total livestock industry.

Team Exercises/Activities

NOTE: 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.
Retail Meat Cuts Identification

The following list highlights the retail meat cuts that may be used. Contestants will be asked to provide the correct name, species, and wholesale cut of origin for the retail cut.

**Beef Retail Meat Cuts**

- 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
- 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

**Beef Wholesale cuts**

- Shank
- Brisket
- Chuck
- Flank
- Loin
- Plate
- Rib
- Round
- Rump

**Lamb Wholesale cuts**

- Breast
- Leg
- Loin
- Rack
- Shank
- Shoulder

**Pork Wholesale cuts**

- Bacon (belly)
- Boston shoulder
- Ham
- Jowl
- Loin
- Picnic shoulder

**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)
Feedstuffs Identification
The following list highlights the feedstuffs that may be used. Contestant will be asked to provide the correct name, corresponding nutrient group, and important characteristics/uses for the feedstuff.

**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
- Santooquin
- 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)
- Trypsosine
- Urea
- Vegetable oil
- White Clover hay
- White Clover pasture
- Vitamin premix
- Wheat (whole)
- Wheat bran
- Wheat middlings

**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 and Goat Resource Handbooks (4-H 134R)
- Swine Resource Handbook (4-H 194R)

Breeds of Livestock Identification
The following list highlights the livestock breeds that may be used. Contestants will identify ten breeds, ten livestock (beef cattle, swine, sheep, and goat) provide country of origin for the breed and unique characteristics/important traits.

**Beef Cattle**
- Angus
- Brahman
- Brangus
- Charolais
- Chianina
- Gelbvieh
- Hereford
- Limousin
- Maine Anjou
- Polled Hereford
- Red Angus
- Red Poll
- Santa Gertrudis
- Shorthorn
- Simmental
- Tarentaise

**Goats**
- Alpine
- American Cashmere
- Angora
- Boer
- Kiko
- Lamancha
- Nubian
- Oberhasli
- Pygmy
- Saanen
- Spanish
- Tennessee Fainting
- Toggenburg
- Cheviot
- Columbia

**Sheep**
- Corriedale
- Dorper
- Dorset
- Finnsheep
- Hampshire
- Katahdin
- Merino
- Montadale
- Oxford
- Polled Dorset
- Rambouillet
- Romney
- Southdown
- Suffolk

**Swine**
- Berkshire
- Chester White
- Duroc
Hampshire
Hereford
Landrace
Pietrain
Poland China
Spotted
Tamworth
Yorkshire
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:

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Livestock/Meat Equipment Identification
The following list highlights the equipment that may be used. Contestants will be asked to provide the correct name and appropriate use for livestock and meat equipment.

Livestock Equipment
All-in-one castrator/docker
Artificial insemination pipettes
Bowl waterer
Balling gun
Barnes dehorner
Cattle clippers
Clipper comb
Clipper cutter
Currycomb
Disposable syringes
Drench gun
Ear notchers
Ear tag pliers
Elastrator
Electric branding iron
Electric dehorner
Electric docker
Emasculatome (Burdizzo)
Emasculator
Ewe prolapse retainer
Fencing pliers
Foot rot shears
Freeze branding iron
Hoof knife
Hog holder (snare)
Lamb tube feeder
Needle teeth nippers
Nipple waterer
Nose ring
Nose ring pliers
Obstetrical (O.B.) chain
Paint branding iron
Pistol-grip syringe
Ram marking harness
Rumen magnate
Scalpels
Scotch comb
Shearer’s screwdriver
Sheep shears (electric)
Slap tattoo
Tattoo pliers
Wool card
Meat tenderizer
Meat trolley
Metal knife scabbard
Rubber apron
Sharpening steel
Smoke house
Thermometer
Tumbler
Vacuum sausage stuffer
Whale saw

Meat Equipment
Backfat ruler
Band saw
Bone dust scraper
Boning knife
Bowl chopper
Dehairing machine
Electrical stunner
Emulsifier
Ham net
Hand saw
Hard hat
Loin eye area grid
Meat grinder
Meat grinder auger
Meat grinder knife
Meat grinder plate
Meat grinder stuffing rod
Meat hook

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Meats Judging
Contestants will be asked to rank two classes of four similar retail cuts of meat and answer five questions on one class.

Ranking a Class of Retail Meat Cuts
The following criteria should be used when evaluating meat cuts:

Criteria Description
Muscling Size of the lean portion (amount of muscle)
Leanness (plate loss) Fat and bone lost as the cut is cooked and consumed
Quality Amount of marbling (small flecks of fat within the muscle); firmness with no signs of dryness or excess juices
Color Beef should be bright cherry red; Pork should be bright grayish pink; Lamb should be light pink
*FOR EXAMPLE: Heavy muscled, lean, high quality, correctly colored cuts should be placed high in the class, Fat, light muscled, discolored cuts should be placed low in the class.*

**Example Questions for 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

**Beef, Sheep, Goat Swine Resource Handbooks (Ohio State)**

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**Hay Judging**

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 (Juniors/Intermediates)**
The following criteria should be used when evaluating hay:

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

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

**Example Questions for 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 (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: Forage Analysis (dry matter basis) for 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)*
<table>
<thead>
<tr>
<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>88.6</td>
<td>88.4</td>
<td>88.6</td>
</tr>
<tr>
<td>Crude protein, %</td>
<td>16.8</td>
<td>18.2</td>
<td>20.5</td>
</tr>
<tr>
<td>Digestible protein, %</td>
<td>12.1</td>
<td>13.4</td>
<td>15.5</td>
</tr>
<tr>
<td>Acid detergent fiber (ADF), %</td>
<td>35.8</td>
<td>39.7</td>
<td>34.0</td>
</tr>
<tr>
<td>TDN, %</td>
<td>62.0</td>
<td>63.0</td>
<td>64.7</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)
- Beef, Sheep, Swine, Goat Resource Handbooks (Ohio State)

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**Fleece Judging**

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

**Criteria Description**

- **Estimated clean wool content (yield and shrinkage)**: High yield per fleece is desirable. Small amount of light-colored yolk as free from adhering sand, dirt, and vegetable matter as possible. Cut heavily if tied with any twine other than paper.

- **Length**: Should be combing or staple length for the grade: i.e., fine, 3 in.; ½ blood, 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](http://www.uky.edu/Ag/AnimalSciences/4h/livestockskillathon.html)
- Sheep Resource Handbook (Ohio State)

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**Quality Assurance (Individual)**

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

1. 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.

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 2o and 8o C (36o to 46o 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.

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 Program materials. Available from the National Pork Board (Phone: 515-223-2600; website: http://www.pork.org/Producers/YouthPQAPhys/default.aspx)
- Kentucky Beef Quality Assurance Manual. Available at the following website:http://www.ca.uky.edu/agc/pubs/id140/id140.pdf

Livestock Quiz

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

Example Questions
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
4. _______ Which of the following factors has resulted in today’s market hog being 50% leaner than hogs marketed in the 1960s?
   A. Improved genetics  B. America’s pork producers  C. Better feeding practices  D. All of the above

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.

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** Iron Dextran-200

| **Storage Dosage** |
| **Route of Administration** |
| **Duration of Treatment** |
| **Withdrawal Time** |

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

**Product Name** Apralan

| **Storage Dosage** |
| **Route of Administration** |
| **Duration of Treatment** |
| **Withdrawal Time** |

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

**Product Name** Flu-Sure

| **Storage Dosage** |
| **Route of Administration** |
| **Duration of Treatment** |
| **Withdrawal Time** |

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** Neomycin Soluble

| **Storage Dosage** |
| **Route of Administration** |
| **Duration of Treatment** |
| **Withdrawal Time** |

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** Ivermectin Premix

| **Storage Dosage** |
| **Route of Administration** |
| **Duration of Treatment** |
| **Withdrawal Time** |

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 crippling.

**Product Name** Lincomix (300 mg/ml)

| **Storage Dosage** |
| **Route of Administration** |
| **Duration of Treatment** |
| **Withdrawal Time** |

On what date can Wilbur safely be sold? ______________________

Learning Resources:
- Kentucky Livestock Volunteer Certification Resource Kit
- Beef Resource Handbook (4-H 117R)
- Youth Pork Quality Assurance Program materials
- Sheep Resource Handbook (4-H 134R)
- Available from the National Pork Board (Phone: 515-223-2600; Swine Resource Handbook (4-H 194R)
- 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, Sheep, Swine, Goat Resource Handbooks (Ohio State)
- *************************************************************************************************

Team Animal Breeding/Marketing Exercise
For this exercise teams will demonstrate how to make sound animal breeding and (or) marketing decisions.

Example Exercise: 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 4** are big Suffolk whose lambs gain extremely well, but are coarse in their skeletal makeup.
- **Ram 2** is a large Dorset whose daughters make good replacements and gain about 1 lb per day.
- **Ram 3** 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, stylish design</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>
</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.

Learning Resources:
- Kentucky Livestock Volunteer Certification Resource Kit
- Beef Resource Handbook (4-H 117R)
- Publication entitled “Judging Performance Classes” (ASC 167)
- Sheep Resource Handbook (4-H 134R)
- Swine Resource Handbook (4-H 194R)

which can be found on the Livestock Discovery CD. This Swine Resource Handbook (4-H 194R) publication provides examples of using scenarios and EPD data to place a class of animals.

Team Livestock Feeding/Performance Exercise

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.

<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 Oats</td>
<td>34%</td>
<td>$0.09</td>
</tr>
<tr>
<td></td>
<td>Cracked Corn</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Beet Pulp</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Whole Corn</td>
<td>75%</td>
<td>$0.06</td>
</tr>
<tr>
<td></td>
<td>Distillers Grain</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ground Hay</td>
<td>10%</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Cracked Corn</td>
<td>60%</td>
<td>$0.07</td>
</tr>
<tr>
<td></td>
<td>Ground Corn</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Soybean Meal</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Whole Oats</td>
<td>45%</td>
<td>$0.10</td>
</tr>
<tr>
<td></td>
<td>Whole Corn</td>
<td>45%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Whole Cotton Seed</td>
<td>10%</td>
<td></td>
</tr>
</tbody>
</table>

Learning Resources:
- Livestock Discovery CD
- Kentucky Livestock Volunteer Certification Resource Kit
- Beef Resource Handbook (4-H 117R)
- Sheep and Goat Resource Handbooks (4-H 134R)
- Swine Resource Handbook (4-H 194R)
Old Alaska 4-H State Livestock Skillathon Contest

The Alaska Youth Livestock Skillathon Contest, adapted from the Kentucky 4-H State Livestock Skillathon Contest, is an educational experience that gives youth a greater understanding of livestock selection, meat, feedstuff, hay, fleece and equipment identification, evaluation and use, quality assurance and teamwork. Participants gain experience in the decision-making process by identifying livestock breeds, meat cuts, feedstuff, and livestock equipment, determining and ranking meat, hay, and fleece. Participants develop teamwork skills and group decision-making through livestock related team exercises.

The State Contest may determine qualification for national events. It is open to only those who qualify from districts in Alaska. Youth may participate as individuals or as team members.

Objectives

♦ Teach youth the principles of livestock selection, care, health, nutrition, feed selection, quality assurance, retail market and related aspects of the livestock industry.
♦ Stimulate youth achievement by providing the opportunity for competitive learning experience in an area of their special interest.
♦ Develop and strengthen youth decision-making skills.
♦ Help youth develop positive attitudes about their own abilities and their relationships with others.

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Contest and Eligibility

1. Contestants must be enrolled in 4-H and dues paid.

2. The District 4-H Agent/staff must certify each district’s entry.

3. Contestants must be 3rd through 12th grade for the current school year. The age divisions for the Alaska Youth Livestock Judging Contest are determined by the contestant’s age by October 1 for the current school year or previous school year if it is summer:  Junior grade 3 - 5  Intermediate grade 6 – 8  Senior grade 9
Insurance
would be required to verify that all participants are covered by insurance before attending the State Contest.

Grievances -- Any protest must be submitted in writing (along with a $25 deposit) not less than one hour prior to the scheduled awards presentation. Protests will be reviewed by a three-member Grievance Committee. Deposits will be forfeited if the protest is not sustained. **Decisions of Grievance Committee are FINAL.**

Code of Conduct
All contestants, coaches, parents and spectators are expected to conduct themselves in an appropriate manner at all times. At no time will disrespectful behavior (be it toward contest officials, other contestants or coaches, or the general public) be tolerated. Failure to comply may result in immediate disqualification of any individuals, teams and/or family members of the violator.

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.
3. Contestants will be allowed ten (10) minutes to complete the quiz and five (5) minutes to complete each of the eight individual competition classes. Teams will be allowed ten (10) minutes to complete the team activities.
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 five (5) minutes to complete the group assignment for each class and five minutes to present their solution or findings to a judge. 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.
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(s).

Rules and Regulations
**Team and Contestant Eligibility**
1. 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. Districts 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).
2. 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.
3. 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 eligible to represent Alaska at the National Skillathon Contest which will be held in November in Louisville, Kentucky or Western 4-H RoundUp. To represent Alaska at a National Skillathon Contest, a Senior team must have four team members.
5. In the event a district with more than one Senior team competing at the State Skillathon Contests should win the State Skillathon Contest, that district 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 district that competed at the State Skillathon Contest are eligible for selection.

6. In the event a district 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 district 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.

7. No member may represent Alaska in an out-of-state NATIONAL Skillathon event in which he/she has previously participated. This includes the National Skillathon Contest in Louisville.

8. 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.

9. 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)”. 

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

Awards
Individual and team awards will include:
Top five individuals in Identification, Evaluation, Quality Assurance and Overall (each)
Top team in Identification, Evaluation and Quality Assurance (each) and top three teams Overall

Contest Classes – Junior Division

Individual Classes
1. Retail Meat Cut Identification: (50 possible points, 10x 5 pts each) 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, 10 x 5 pts each) From a list provided, identify from actual samples the proper name for ten livestock feeds.

3. Livestock Breed Identification: (50 possible points, 10 x 5 pts each) 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, 10 x 5 pts each) From a list provided, identify from photographs or pictures the proper name for ten pieces of equipment used in livestock production.

5. Meat Judging Class: (50 possible points, Hormel placing) Rank one class of four similar retail cuts of meat.

6. Hay Judging Class: (50 possible points, Hormel placing) Rank a class of four hay samples.

7. Quality Assurance Exercise: (50 possible points, 5 x 10 pts each) 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, 25 x 2 pts each) 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.*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.
Contest Classes – Intermediate Division

Individual Classes
1. **Retail Meat Cut Identification**: (100 possible points, 10 x 5 pts x 2) 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.
2. **Livestock Feed Identification**: (100 possible points, 10 x 5 pts x 2) 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, 10 x 5 pts x 2) 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, 10 x 5 pts x 2) From a list provided identify 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**: (100 possible points, Hormel placing x 2) Rank two classes of four similar retail cuts.
6. **Fleece and Hay Judging Class**: (150 possible points, Hormel placing x 2, 5 x 10 pts each) 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, 10 x 5 pts each) 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, 25 x 2 pts each) Complete a quiz concerning the total livestock industry.

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 required 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.

*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.

Contest Classes-Senior Division

Individual Classes
1. **Retail Meat Cut Identification**: (150 possible points, 10 x 5 pts x 3) 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, 10 x 5 pts each x 3) 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, 10 x 5 pts each x 3) 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, 10 x 5 pts x 3) From a list provided identify 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, Hormel placing x 2, 5 x 10 pts each) 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, Hormel placing x 2) 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 4 samples of fleece.
7. **Quality Assurance Exercise**: (50 possible points, 10 x 5 pts each) 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, 25 x 2 pts each) 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.

***************************************************************************

Retail Meat Cuts Identification

The following list highlights the retail meat cuts that may be used in the Junior (C), Intermediate (I), and Senior (S) age divisions. Juniors 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 porterhouse 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 heel of round roast (S)
- Round rump roast, boneless (S)
- Round steak (C, I, S)
- Round steak, boneless (S)
- Round tip roast (C, I, S)
- Round tip roast, cap off (S)
- Round tip steak (S)
- Round tip steak, cap off (S)
- Round top round roast (S)
- Round top round steak (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 roast (C, I, S)
- Rack rib roast (C, I, S)
- Rack rib roast, boneless (C, I, S)
- Shanks (C, I, S)
- Shoulder blade chop (C, I, S)
- Shoulder neck slice (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)
Loin center rib roast (C,I,S)
Loin center loin roast (C,I,S)
Loin chop (C,I,S)
Loin rib chop (C,I,S)
Loin sirloin chop (C,I,S)
Loin top loin 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

Beef
Bristed
Chuck
Flank
Loin
Plate
Rib
Round
Rump
Shank

Lamb
Breast
Leg
Loin
Shoulder

Pork
Bacon (belly)
Boston shoulder
Ham
Jowl
Loin
Picnic shoulder

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)

Feedstuffs Identification
The following list highlights the feedstuffs that may be used in the Juniors (C), Intermediate (I), and Senior (S) age divisions. Juniors 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
Alfalfa hay (C,I,S)
Alfalfa pasture (C,I,S)
Barley (whole) (C,I,S)
Blood meal (S)
Brewers dried grain (S)
Canola meal (S,I)
Copper sulfate (C,I,S)
Corn distillers dried grain (C,I,S)
Corn distillers dried grain w/solubles (S)
Corn gluten feed (S)
Corn gluten meal (S,I)
Cottonseed (whole) (C,I,S)
Cottonseed hulls (C,I,S)
Cottonseed meal (C,I,S)
Cracked shelled corn (C,I,S)
Crimped oats (S)
Defluorinated rock phosphate (C,I,S)
Dehydrated alfalfa meal (C,I,S)
Dicalcium phosphate (C,I,S)
DL-methionine (S)
Dried beet pulp (C,I,S)
Dried molasses (S,I)
Dried skim milk (S)
Feather meal (S)
Fish meal (S,I)
Grain sorghum (whole) (C,I,S)
Ground ear corn (C,I,S)
Ground limestone (C,I,S)
Ground shelled corn (C,I,S)
Kentucky Bluegrass pasture (C,I,S)
L-lysine HCl (S)
L-threonine (S)
L-tryptophan (S)
Linseed meal (S)
Liquid molasses (S,I)
Meat and bone meal (S)
Millet (whole) (C,I,S)
Oats (whole) (C,I,S)
Oat hulls (C,I,S)
Orchardgrass hay (C,I,S)
Orchardgrass pasture (C,I,S)
Oyster shells (C,I,S)
Peanut meal (S,I)
Red Clover hay (C,I,S)
Red Clover pasture (C,I,S)
Roller dried whey (S,I)
Rye (whole) (C,I,S)
Salt, white (C,I,S)
Santoquin (S)
Shelled corn (C,I,S)
Soybean hulls (C,I,S)
Soybean meal (C,I,S)
Soybeans (whole) (C,I,S)
Spray-dried animal plasma (S)
Spray-dried whey (S,I)
Steam flaked corn (C,I,S)
Steam rolled barley (S)
Steam rolled oats (S)
Steamed bone meal (C,I,S)
Sunflower meal (S,I)
Tall Fescue hay (C,I,S)
Tall Fescue pasture (C,I,S)
Timothy hay (C,I,S)
Timothy pasture (C,I,S)
Trace-mineral premix (S)
Trace-mineralized salt (C,I,S)
Triticale (whole) (S)
Tryptosine (S)

Urea (C,I,S)
Vegetable oil (S,I)
White Clover hay (C,I,S)
White Clover pasture (C,I,S)
Vitamin premix (S)
Wheat (whole) (C,I,S)
Wheat bran (C,I,S)
Wheat middlings (S)

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 and Goat Resource Handbooks (4-H 134R)
- Swine Resource Handbook (4-H 194R)

Breeds of Livestock Identification
The following list highlights the livestock breeds that may be used in the Junior (C), Intermediate (I), and Senior (S) age divisions. From a list provided, Juniors will identify from photographs or pictures, ten livestock (beef cattle, swine, sheep, and goat) breeds. Intermediates will also provide the origin of the breed. Seniors will identify ten breeds, provide origins and unique characteristics/important traits for the breed.

**Beef Cattle**
Angus (C,I,S)
Brahman (C,I,S)
Brangus (C,I,S)
Charolais (C,I,S)
Chianina (C,I,S)
Gelbvieh (C,I,S)
Hereford (C,I,S)
Limousin (C,I,S)
Maine Anjou (C,I,S)
Polled Hereford (C,I,S)
Red Angus (C,I,S)
Red Poll (C,I,S)
Santa Gertrudis (C,I,S)
Shorthorn (C,I,S)
Simmental (C,I,S)
Tarentaise (C,I,S)

**Sheep**
Cheviot (C,I,S)
Columbia (S)
Corriedale (S)
Dorper (S)
Dorset (C,I,S)
Finnsheep (C,I,S)
Hampshire (C,I,S)
Katahdin (S)
Merino (S)
Montadale (C,I,S)
Oxford (C,I,S)
Polled Dorset (C,I,S)
Rambouillet (C,I,S)
Romney (C,I,S)
Southdown (C,I,S)
Suffolk (C,I,S)

**Swine**
Berkshire (C,I,S)
Chester White (C,I,S)
Duroc (C,I,S)
Hampshire (C,I,S)
Hereford (C,I,S)
Landrace (C,I,S)
Pietrain (C,I,S)
Poland China (C,I,S)
Spotted (C,I,S)
Tamworth (C,I,S)
Yorkshire (C,I,S)

**Goats**
Alpine (C,I,S)
American Cashmere (C,I,S)
Angora (C,I,S)
Boer (C,I,S)
Kiko (C,I,S)
Lamancha (C,I,S)
Nubian (C,I,S)
Oberhasli (C,I,S)
Pygmy (C,I,S)
Saanen (C,I,S)
Spanish (C,I,S)
Tennessee Fainting (C,I,S)
Toggenburg (C,I,S)
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

Livestock/Meat Equipment Identification

The following list highlights the equipment that may be used in the Junior (C), Intermediate (I), and Senior (S) age divisions. Juniors 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)**
- All-in-one castrator/docker
- Artificial insemination pipettes
- Bowl waterer
- Balling gun
- Barnes dehorner
- Cattle clippers
- Clipper comb
- Clipper cutter
- Currycomb
- Disposable syringes
- Drench gun
- Ear notchers
- Ear tag pliers
- Elastrator
- Electric branding iron
- Electric dehorner
- Electric docker
- Emasculator (Burdizzo)
- Ewe prolapse retainer
- Fencing pliers
- Foot rot shears
- Freeze branding iron
- Hoof knife
- Hog holder (snare)
- Lamb tube feeder
- Needle teeth nippers
- Nipple waterer
- Nose ring
- Nose ring pliers
- Obstetrical (O.B.) chain
- Paint branding iron
- Pistol-grip syringe
- Ram marking harness
- Rumen magnate
- Scalpels
- Scotch comb
- Shearer’s screwdriver
- Sheep shears (electric)
- Slap tattoo
- Tattoo pliers

**Meat Equipment (I,S)**
- Backfat ruler
- Band saw
- Bone dust scraper
- Boning knife
- Bowl chopper
- Dehairing machine
- Electrical stunner
- Emulsifier
- Ham net
- Hand saw
- Hard hat
- Loin eye area grid
- Meat grinder
- Meat grinder auger
- Meat grinder knife
- Meat grinder plate
- Meat grinder stuffing rod
- Meat hook
- Meat tenderizer
- Meat trolley
- 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 Livestock Volunteer Certification Resource Kit
- Beef Resource Handbook (4-H 117R)
- Sheep and Goat Resource Handbooks (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/)
Meats Judging
Junior 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:

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, 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
- Beef, Sheep, Goat Swine Resource Handbooks (Ohio State)

Hay Judging
Junior 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 fed, and a production scenario.

Ranking a Class of Hay on Visual Basis Only (Juniors/Intermediates)
The following criteria should be used when evaluating hay:

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

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

Example Questions for 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: Forage Analysis (dry matter basis) for 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</td>
<td>6.0 lb.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Crude Protein</td>
<td>15.0% (dry matter basis)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TDN</td>
<td>65.0% (dry matter basis)</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)

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**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:

**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.; ⅛ blood, 3-⅛ 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; ⅛ 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](http://www.uky.edu/Ag/AnimalSciences/4h/livestockskillathon.html)
- Sheep Resource Handbook (Ohio State)

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**Quality Assurance (Individual)**

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

1. **Name of Medication**
2. **Active Ingredient(s)**
3. **Species**
4. **Approved Uses**
5. Dosage
6. Cautions
7. Route of Administration

**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.

**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 2o and 8o C (36o to 46o 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)
- Youth Pork Quality Assurance 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

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

**Example Questions**
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
4. ______ Which of the following factors has resulted in today’s market hog being 50% leaner than hogs marketed in the 1960s?
   A. Improved genetics   B. America’s pork producers   C. Better feeding practices   D. All of the above

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**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 Junior exercise would be a shorter length or simpler version that required less information).

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

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

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

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

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

**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** Neomycin Soluble  
**Storage Dosage**  
**Route of Administration**  
**Duration of Treatment**  
**Withdrawal Time**

**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** Ivomec Premix  
**Storage Dosage**  
**Route of Administration**  
**Duration of Treatment**  
**Withdrawal Time**

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

On what date can Wilbur safely be sold?

__________________________________________________________________

**Learning Resources:**
- Kentucky Livestock Volunteer Certification Resource Kit
- Beef Resource Handbook (4-H 117R)
- Youth Pork Quality Assurance Program materials.
- Sheep Resource Handbook (4-H 134R)
- Available from the National Pork Board (Phone: 515-223-2600; Swine Resource Handbook (4-H 194R) 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, Sheep, Swine, Goat Resource Handbooks (Ohio State)

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**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 coarse 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, stylish design</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 Juniors:
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
- Beef Resource Handbook (4-H 117R)
- Publication entitled “Judging Performance Classes” (ASC 167)
- Sheep Resource Handbook (4-H 134R)
- Swine Resource Handbook (4-H 194R)
- Beef, Sheep, Goat, Swine Resource Handbooks (Ohio State)

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Team Livestock Feeding/Performance Exercise 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.

<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</td>
<td>60%</td>
<td>$0.06</td>
</tr>
<tr>
<td></td>
<td>Corn Silage</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Corn Gluten</td>
<td>15%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ingredient Combinations</td>
<td>Protein (%)</td>
<td>Price ($)</td>
</tr>
<tr>
<td>---</td>
<td>-------------------------</td>
<td>-------------</td>
<td>-----------</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 and Goat Resource Handbooks (4-H 134R)
- Swine Resource Handbook (4-H 194R)