



# 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 3<sup>rd</sup> through 12<sup>th</sup> 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 - 12**

## Insurance

are required to verify that all participants are covered by insurance before attending the State Contest.

Districts

**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.

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

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## 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***

Brisket, flat half  
Brisket, point half  
Brisket, whole  
Chuck arm roast  
Chuck arm roast, boneless  
Chuck arm steak  
Chuck arm steak, boneless  
Chuck blade roast  
Chuck blade steak  
Chuck 7-bone roast  
Chuck 7-bone steak  
Flank steak  
Loin sirloin steak, flat bone  
Loin sirloin steak, pin bone  
Loin sirloin steak, round bone  
Loin sirloin steak, wedge bone  
Loin sirloin steak, shell  
Loin sirloin steak, boneless  
Loin tenderloin steak  
Loin porterhouse steak  
Loin T-bone steak)  
Loin top loin steak  
Loin top loin steak, boneless  
Plate short ribs  
Plate skirt steak  
Rib roast, large end  
Rib roast, small end  
Rib steak, small end  
Rib steak, small end, boneless  
Ribeye roast

Ribeye steak  
Round bottom round roast  
Round bottom round steak  
Round eye round roast  
Round eye round steak  
Round heel of round roast  
Round rump roast, boneless  
Round steak  
Round steak, boneless  
Round tip roast  
Round tip roast, cap off  
Round tip steak  
Round tip steak, cap off  
Round top round roast  
Round top round steak  
Shank cross cuts  
Shank cross cuts, boneless

### ***Lamb Retail Meat Cuts***

Breast  
Breast riblets  
American style roast  
Leg center slice  
Leg French style roast  
Leg shank half  
Rack rib chop  
Leg sirloin chop  
Leg sirloin half  
Loin chop  
Loin double chop  
Loin roast

Rack rib roast  
Rack rib roast, boneless  
Shanks  
Shoulder blade chop  
Shoulder neck slice  
Shoulder square cut)

### ***Pork Retail Meat Cuts***

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

### ***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)  
☐ Retail Meat Cut Identification – Flash Card Set (X180b, 150 cards, \$75). [Available from ITCS Instructional Materials website at <http://www.aces.uiuc.edu/IM/>]  
☐ Retail Meat Cut Identification and Technology – CD-ROM (MDS100, CD-ROM, \$75). [Available from ITCS Instructional Materials website at <http://www.aces.uiuc.edu/IM/>]

## 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  
Santoquin  
Shelled corn  
Soybean hulls  
Soybean meal  
Soybeans (whole)  
Spray-dried animal plasma  
Spray-dried whey  
Steam flaked corn  
Steam rolled barley  
Steam rolled oats  
Steamed bone meal  
Sunflower meal  
Tall Fescue hay  
Tall Fescue pasture  
Timothy hay  
Timothy pasture

Trace-mineral premix  
Trace-mineralized salt  
Triticale (whole)  
Tryptosine  
Urea  
Vegetable oil  
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)

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## 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

### **Sheep**

Cheviot  
Columbia

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:

[http://www.ag.auburn.edu/users/sschmidt/breed\\_id2/](http://www.ag.auburn.edu/users/sschmidt/breed_id2/)

- ☐ Beef Resource Handbook (4-H 117R)
- ☐ Sheep and Goat Resource Handbooks (4-H 134R)
- ☐ Swine Resource Handbook (4-H 194R)

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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  
Emasculator (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 magnet  
Scalpels  
Scotch comb  
Shearer's screwdriver  
Sheep shears (electric)  
Slap tattoo  
Tattoo pliers  
Wool card

### ***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

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/>)

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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
  - ☐ Meat Evaluation Classes, Part 1: Beef (F270-1 filmstrip, 100 fr., w/guide, \$43). [Available from ITCS Instructional Materials website at <http://www.aces.uiuc.edu/IM/>]
  - ☐ Meat Evaluation Classes, Part 2: Pork & Lamb (F270-2 filmstrip, 85 fr., w/guide, \$37). [Available from ITCS Instructional Materials website at <http://www.aces.uiuc.edu/IM/>]
  - ☐ Meat Evaluation Classes, Part 2: Pork & Lamb (S270-2 slide set, 85 fr., w/guide, \$54). [Available from ITCS Instructional Materials website at <http://www.aces.uiuc.edu/IM/>]
- 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)*

## Hay #1 Hay #2 Hay #3 Hay #4

Dry matter, %	88.6	88.4	88.6	87.9
Crude protein, %	16.8	18.2	20.5	18.1
Digestible protein, %	12.1	13.4	15.5	13.3
Acid detergent fiber(ADF), %	35.8	39.7	34.0	32.0
TDN, %	62.0	63.0	64.7	63.0

### Learning Resources:

□ Oklahoma State University publication entitled “Hay Judging” (F-2588). A copy can be obtained at the following website: <http://www.okrangelandswest.okstate.edu/pdfFiles/OSUextPubs/F-2588.pdf>

□ University of Kentucky publication entitled “Quality Hay Production” (AGR-62). A copy can be obtained at the following website: <http://www.ca.uky.edu/agc/pubs/agr/agr62/agr62.pdf>

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.; ¾ 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; ¾ 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>

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 20 and 80 C (36 to 46 F). Warm to room temperature and shake well before using. Keep refrigerated when not in use.

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

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

#### **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/agc/pubs/id/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 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** *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?

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### 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/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:** 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:

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

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)
- 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.
- 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.

<i>Ration No.</i>	<i>Ingredients in Ration</i>	<i>% of Ration as Fed</i>	<i>Ration Price/Pound as Fed</i>
1	Whole Oats Cracked Corn Beet Pulp	34% 33% 33%	\$0.09
2	Whole Corn Distillers Grain Ground Hay	75% 15% 10%	\$0.06
3	Cracked Corn Ground Corn Soybean Meal	60% 25% 15%	\$0.07
4	Whole Oats Whole Corn Whole Cotton Seed	45% 45% 10%	\$0.10

#### Learning Resources:

- ☐ Livestock Discovery CD
- ☐ Kentucky Livestock Volunteer Certification Resource Kit
- ☐ Beef Resource Handbook (4-H 117R)
- ☐ Sheep 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 3<sup>rd</sup> through 12<sup>th</sup> 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

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.
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.

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## 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

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## 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, 10x 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 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.

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## 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 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.

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## 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)

## Wholesale cuts to be used by Senior Contestants

### Beef

Brisket  
 Chuck  
 Flank  
 Loin  
 Plate  
 Rib  
 Round  
 Rump  
 Shank

### Lamb

Breast  
 Leg  
 Loin  
 Rack  
 Shank  
 Shoulder

### Pork

Bacon (belly)  
 Boston shoulder  
 Ham  
 Jowl  
 Loin  
 Picnic shoulder

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)

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

## Learning Resources:

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## 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)

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## **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*)

### **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*)

### **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*)

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

**Learning Resources:**

- ☐ Livestock Discovery CD
- ☐ Kentucky Livestock Volunteer Certification Resource Kit

- ☐ Oklahoma State Univ. Breeds of Livestock website:  
<http://www.ansi.okstate.edu/breeds/>
- ☐ Auburn Univ. Breeds of Livestock website:  
[http://www.ag.auburn.edu/users/sschmidt/breed\\_id2/](http://www.ag.auburn.edu/users/sschmidt/breed_id2/)
- ☐ Beef Resource Handbook (4-H 117R)
- ☐ Sheep and Goat Resource Handbooks (4-H 134R)
- ☐ Swine Resource Handbook (4-H 194R)

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## 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.

Wool card

### 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  
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

### 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 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
  - Meat Evaluation Classes, Part 1: Beef (F270-1 filmstrip, 100 fr., w/guide, \$43). [Available from ITCS Instructional Materials website at <http://www.aces.uiuc.edu/IM/>]
  - Meat Evaluation Classes, Part 2: Pork & Lamb (F270-2 filmstrip, 85 fr., w/guide, \$37). [Available from ITCS Instructional Materials website at <http://www.aces.uiuc.edu/IM/>]
  - Meat Evaluation Classes, Part 2: Pork & Lamb (S270-2 slide set, 85 fr., w/guide, \$54). [Available from ITCS Instructional Materials website at <http://www.aces.uiuc.edu/IM/>]
- Beef, Sheep, Goat Swine Resource Handbooks (Ohio State)

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## 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 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 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*  
Dry Matter 6.0 lb., Crude Protein 15.0% (dry matter basis), TDN 65.0% (dry matter basis)

Hay #1 Hay #2 Hay #3 Hay #4

Dry matter, %	88.6	88.4	88.6	87.9
Crude protein, %	16.8	18.2	20.5	18.1
Digestible protein, %	12.1	13.4	15.5	13.3
Acid detergent fiber(ADF), %	35.8	39.7	34.0	32.0
TDN, %	62.0	63.0	64.7	63.0

### Learning Resources:

□ Oklahoma State University publication entitled “Hay Judging” (F-2588). A copy can be obtained at the following website: <http://www.okrangelandswest.okstate.edu/pdfFiles/OSUextPubs/F-2588.pdf>

□ University of Kentucky publication entitled “Quality Hay Production” (AGR-62). A copy can be obtained at the following website: <http://www.ca.uky.edu/agc/pubs/agr/agr62/agr62.pdf>

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

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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.; ¾ 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; ¾ 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>

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**

**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 20 and 80 °C (36 to 46 °F). Warm to room temperature and shake well before using. Keep refrigerated when not in use.

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

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

**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/agc/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

**Learning Resources:**

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

## Team Quality Assurance Exercise

For this exercise teams will demonstrate how to read an animal health product label, calculate dosage rates and withdrawal times, complete a treatment record, be familiar with administration routes, and make responsible management decisions regarding quality assurance. The following exercise is an example that would be 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?

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### 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/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:

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

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

#### Example Exercise for 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.

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

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

#### Learning Resources:

□ Kentucky Livestock Volunteer Certification Resource Kit □ Beef Resource Handbook (4-H 117R)  
 □ Publication entitled “Judging Performance Classes” (ASC 167) □ Sheep Resource Handbook (4-H 134R)  
 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.  
 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.

<i>Ration No.</i>	<i>Ingredients in Ration</i>	<i>% of Ration as Fed</i>	<i>Ration Price/Pound as Fed</i>
1	Whole Corn	60%	\$0.06
	Corn Silage	25%	
	Corn Gluten	15%	



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

**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)