

# 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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## Table of Contents

Contest Eligibility, Rules and Regulations .....	1-3
Awards .....	3
Contest Classes and Scoring .....	3
Retail Meat Cut Identification .....	





## **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	Ribeye steak
Brisket, point half	Round bottom round roast
Brisket, whole	Round bottom round steak
Chuck arm roast	Round eye round roast
Chuck arm roast, boneless	Round eye round steak
Chuck arm steak	Round heel of round roast
Chuck arm steak, boneless	Round rump roast, boneless
Chuck blade roast	Round steak
Chuck blade steak	Round steak, boneless
Chuck 7-bone roast	Round tip roast
Chuck 7-bone steak	Round tip roast, cap off
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	



Hampshire  
Hereford  
Landrace  
Pietrain  
Poland China  
Spotted  
Tamworth  
Yorkshire

NOTE: For information on origins and  
breed characteristics/traits see the



Dry matter, %



**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 (360 to 460 F). Warm to room temperature and shake well before using. Keep refrigerated when not in use.

**Warnings:** kn-4(i)ID 10BDC BT/F6 in use.

## 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/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:** 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.

1	Whole Oats Cracked Corn Beet Pulp	34% 33% 33%	\$0.09
2	Whole Corn Distillers Grain		

# Old Alaska 4-H State Livestock Skillathon Contest

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Contest Eligibility, Rules and Regulations .....	1-3
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**Insurance**

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

Districts

**Grievances --**





**Team Exercises/Activities**

*NOTE: Senior team members will confer as a group to complete the following exercises/activities. All team members must participate a*



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**  
 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

- 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

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*)

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.

### 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

Wool card

### 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:

## 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)

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





These four rams are starting to show some age. You have found the following replacement prospects:

<b><i>Ear Tag</i></b>	<b><i>Breed</i></b>	<b><i>DNA</i></b>	<b><i>ADG (lbs)</i></b>	<b><i>Description</i></b>	<b><i>Scrotal Measurement</i></b>	<b><i>Purchase Price</i></b>
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#775	Dorset	QRNN	0.90	Medium frame, stylish design	32 cm	\$250
#1279	Blackface	QRNN				



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		