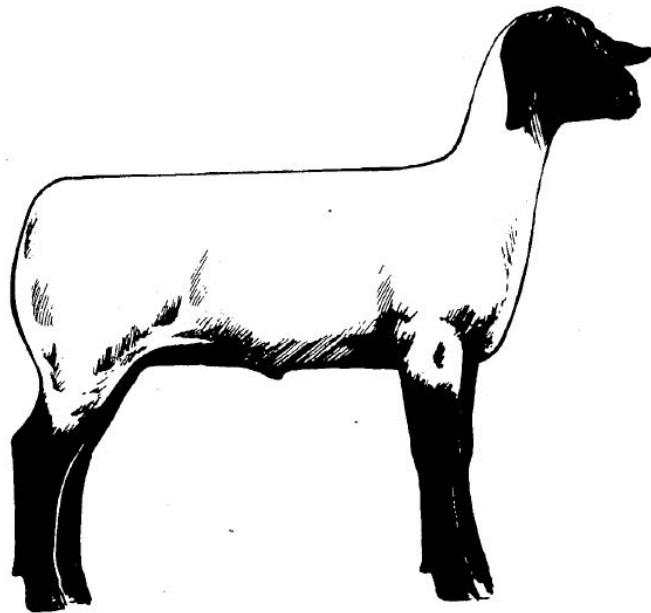


Osceola County 4-H

Market Lamb

**SKILL-A-THON REFERENCE BOOK
&
SENIOR SKILL-A-THON ACTIVITIES**

2021-2022



UF | **IFAS Extension**
UNIVERSITY of FLORIDA



	BEEF CATTLE	SWINE	SHEEP
INTACT MALE	BULL	BOAR	RAM
MALE CASTRATED PRIOR TO DEVELOPMENT OF SECONDARY SEXUAL CHARACTERISTICS	STEER	BARROW	WETHER
MALE CASTRATED AFTER DEVELOPMENT OF SECONDARY SEXUAL CHARACTERISTICS	STAG	STAG	STAG
FEMALE THAT HAS PRODUCED PROGENY	COW	SOW	EWE
YOUNG FEMALE WITH NO PROGENY	HEIFER	GILT	EWE
VERY YOUNG PROGENY	CALF	PIG	LAMB

LAMB SKILL-A-THON

Introduction

This manual is provided as a **study guide** for the skill-a-thon competition and should be used as an additional aid to ongoing educational programs. Sections are labeled **Junior, Intermediate, & Senior** to help exhibitors and educators identify which materials are required for their age level. The topic for this year's Skill-a-thon is **nutrition**.

Topics for the Knowledge and Skills Stations may include the following:

Juniors (age 8-10 as of September 1, 2021)

Body parts
Breeds
Structure
Sheep Nutrition
Feed Classification & Feed Identification
Common Livestock Terms

Intermediates (age 11-13 as of September 1, 2021)

All of the above plus...
Parts of a Feed Label
Basic Livestock Terms

Seniors (age 14 and over as of September 1, 2021)

All of the above plus....
Nutritional Disorder

The contest will be held on January 26, 2022, from 2:00 p.m. until 6:00 p.m. in the KVLS Arena.

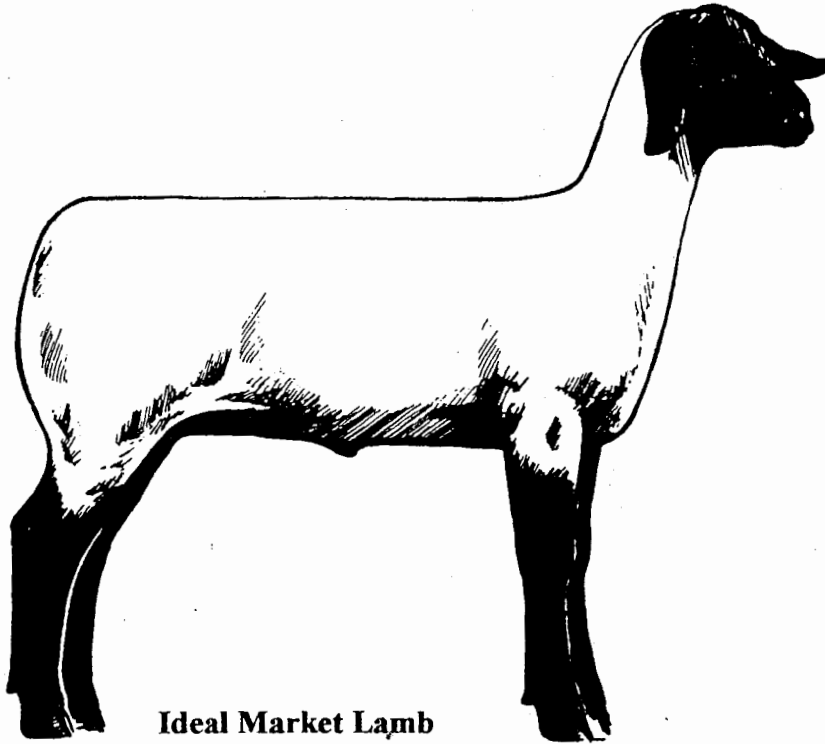
KVLS Skill-a-thon Rules for 2021-2022

1. All market exhibitors must take the Skill-a-thon in their project area for the animal that they are showing in order to participate in the market programs, i.e. steer exhibitors must take the Steer Skill-a-thon. Any exhibitor who does not meet the required grade average on their report card or who does not have a report card must score 70% on the Skill-a-thon to participate in the Market Animal Program.
2. All exhibitors must take the Skill-a-thon for the first time on their own, then a reader can be requested the second time, if a passing grade is not achieved.
3. Awards will be given on the score of the first Skill-a-thon taken. Top awards are only given for passing scores (70% or above).
4. Only those exhibitors who do not make a 3.25 grade point requirement are required to take and make a passing score of 70% or above in order to participate in the market animal program.
5. Exhibitors must stay in the testing room once they have signed up to take the Skill-a-thon.
6. Exhibitors showing a second animal must stay in the testing room to take the second animal Skill-a-thon.
7. No parents or other adults not on the Committee are allowed in the Skill-a-thon room.
8. No exhibitors are allowed to have cell phones while in the Skill-a-thon room.
9. No time limit will be imposed on the exhibitors.
10. Skill-a-thon handbooks will be given at the start of the project.

KVLS Awards

There will be a Junior (8-10), Intermediate (11-13), Senior (14 - graduate from High School) division for the contest. Within each division, 1st, 2nd and 3rd place will receive rosette ribbons and a monetary award.

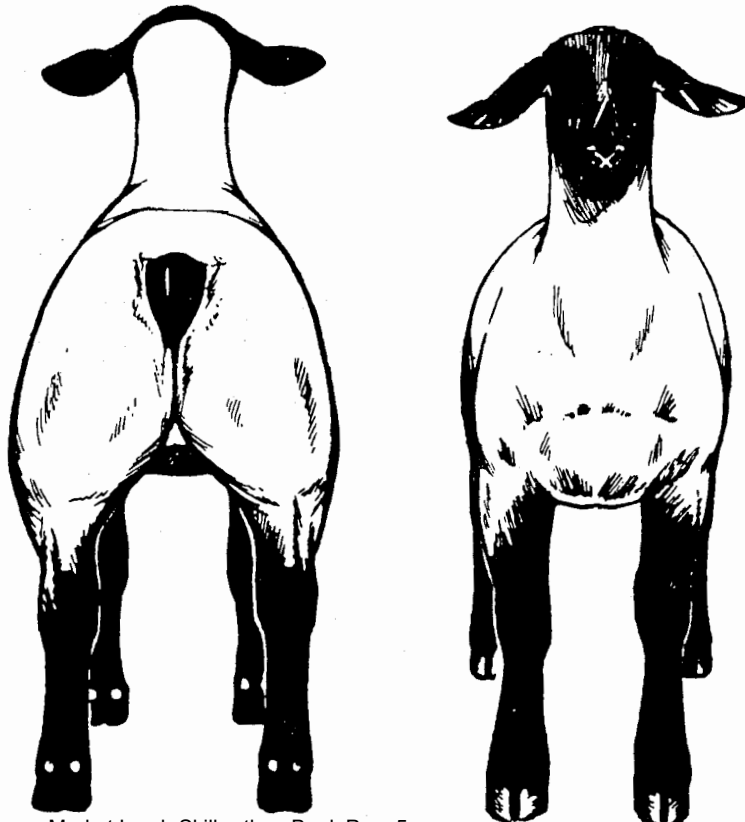
The Ideal Market Lamb



Ideal Market Lamb

- *110-130 pounds
- *has a fat thickness of .10-.20 inches
- *has a dressing percent of 50 percent
- *yields a 55 to 65 pound carcass
- *has a rib eye area of 2.5 to 2.7 inches

Ideal Lamb Views



Evaluation of Market Lambs

Consider these points when judging market lambs: A market lamb's function is for meat production. Therefore, muscling and finish are the two main factors used to evaluate market animals.

Conformation

- An ideal market lamb is one that combines weight and frame, straightness of lines and natural muscling and trimness. The ideal market lamb has adequate frame, is long bodied and is clean and trim throughout the front end and the middle. Look for a strong, level topline. The ideal market lamb should be especially long through the loin and rump (hindsaddle). Lambs should be level in the rump and stand on a sound, structurally correct set of feet and legs.

Finish

- Correct finish is important to determine the cutability (retail value) of a lamb. Finish is the amount of external fat on a lamb. To determine the amount of finish, handle the lamb over the backbone and ribs. Excessive prominence of the backbone and ribs shows a lack of finish. Too much finish is present when you cannot feel the backbone or ribs by normal handling methods. Correct finish is .10-.20 inches of back fat. Desirable traits in regard to finish include:
 - Smooth and uniform fat cover over ribs
 - No excessive fullness in breast
 - A uniform fat cover of .10 - .20 inches
 - Finish or condition is evaluated in the following:
 - Sternum
 - Lower forerib
 - Upper rear rib
 - Over backbone and loin
 - Flank
 - Twist

Muscling

- The ideal market lamb should exhibit extra muscling through its top, hindsaddle and leg. These are the areas from which the high-priced cuts come. Traits are found in a heavy muscled market lamb include:
 - Muscle expression in the forearm
 - Natural width down the top
 - Width, length and depth of loin
 - Width and length of rump
 - Fullness and meatiness through the leg

Handling Market Lambs

- Each lamb should be handled in the same manner. Start at the same point with your fingers extended and together. Check for the amount of finish using the balls of your fingers along the backbone, ribs and flank. Next determine the amount of muscle:
 - Measure the length of the loin from the last rib to the hip bone.
 - The width of the loin
 - The depth and thickness of the loin
 - The width and length of the rump from the hip bone to the dock
 - The length of the hindsaddle (the hindsaddle includes the loin and rump)
 - Determine the amount of muscling in the rear leg by grasping the middle of the leg firmly and slowly sliding your hands down
 - Check the amount of muscling in the forearm.

Expected Carcass Merit

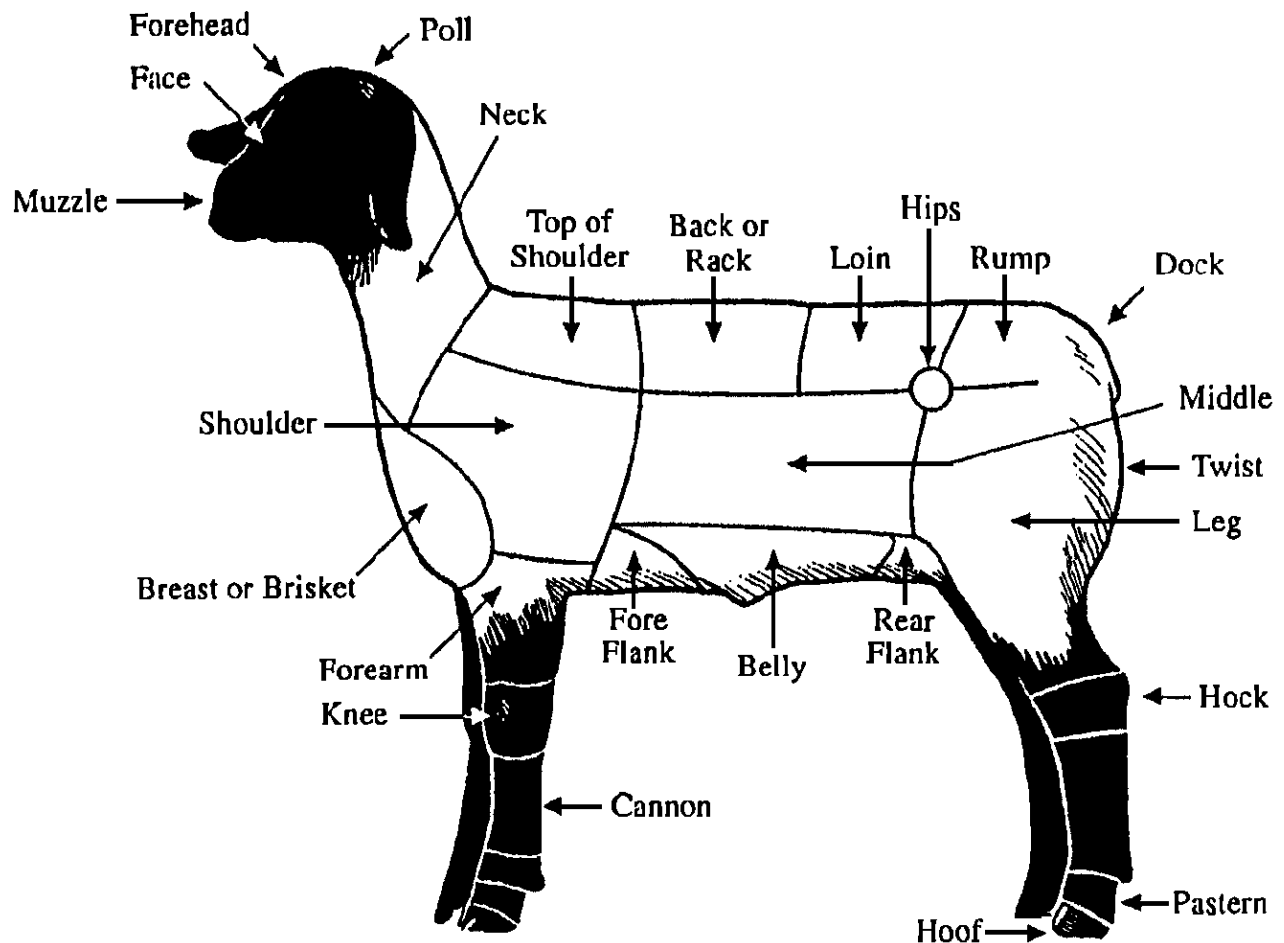
- More than 60 percent of the lamb's value comes from the leg, rump and loin, which are only about 25 percent of the lamb's live weight. The leg, rump and loin make up the hindsaddle. The hindsaddle, because of its value, should be heavily muscled and have the minimum of fat. The muscle is what makes the carcass more valuable.

Structural Correctness

- While it is not emphasized as greatly as it is with breeding sheep, structural correctness is an important selection criteria when evaluating market animals. Look for lambs that are:
 - Standing squarely on front and rear legs
 - Strong and straight in their pasterns
 - Heavier boned

Sheep Body Parts

It is important for livestock producers to share a common language. Using the correct names for various body parts is one way to be certain your message is understood. Study the pictures with the names of the body parts labeled so that you can communicate with other producers using correct terms.



Breeds



Finnsheep- This small to medium-sized fine-boned breed is open faced and produces medium grade, good staple length wool. Reaching sexual maturity early ewes have strong maternal instincts and are very prolific-producing 2 to 4 lambs each lambing.



Shropshire- Originating in England, this medium-sized, dark-faced, polled breed has wool on its head and face. It is prolific, matures early, milk well, and is heavily muscled. Lambs are hardy, fast-growing and produce lean, well-muscled carcasses.



Suffolk- This polled breed with black head and legs has the most number of purebred registrations in the U.S. It is known for its meatiness and high carcass quality. Lambs grow rapidly and produce high cutability carcasses.



Southdown- The oldest breed from England, this sheep is small to medium in size and known for producing meaty carcasses. It is polled, with a gray to mouse brown face and wool on its legs. Fleece from this breed are of medium-wool.



Cheviot- This breed, highly adaptable to a variety of climates, was developed in Scotland. These small-sized, white-faced sheep with bare heads and legs are moderately, prolific, easy lambers, good milkers, and possess excellent lamb vigor.



Dorset- Originating in Southern England, these sheep can be polled, scurred, or horned and are known for breeding out of season, being heavy milkers and producing more than one lamb crop per year. Hardy lambs yield heavy-muscled carcasses.



Corriedale- White-faced breed developed in New Zealand from Lincoln and Leicester x Merino crosses. These medium-sized sheep are prolific, good mothers that produce good market lambs and yield heavy, medium-wool fleeces with good staple length,



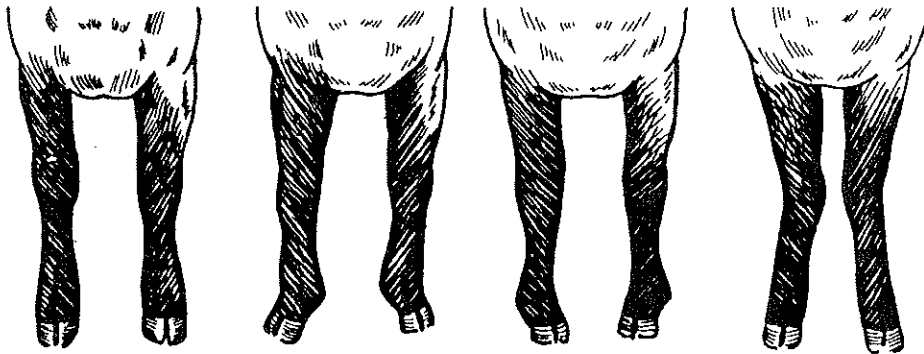
Columbia- Developed in the United States from Lincoln ram x Rambouillet ewe cross and known for its size, wool-producing ability, and productivity under range conditions. This breed is large, white-faced, polled and has wool on the legs.



Rambouillet- Developed in France, this long-lived rugged breed will breed out of season and has wool that is fine in fiber diameter. These sheep are large, white faced, with wool on the head and legs, and can be polled or horned.

STRUCTURAL DIFFERENCES FRONT & REAR VIEW ACTIVITY

Front View



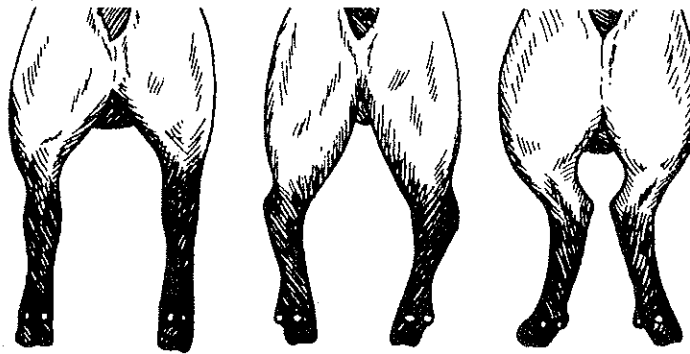
CORRECT

Splay-Footed

Pigeon-Toed

Knock-Kneed

Rear View



CORRECT

Bowlegged

Cow-Hocked

STRUCTURAL DIFFERENCES SIDE VIEWS ACTIVITY

Side View Front Legs



CORRECT



Calf-Kneed



Weak Pasterns



Buck-Kneed

Side View Rear Legs



CORRECT



Sickle-Hocked



Post-Legged

STRUCTURAL DIFFERENCES DESCRIPTIONS

Buck-kneed	When the calf is "over at the knees" or buck-kneed, full extension of the knee cannot occur when observed from the side. This is usually seen in cattle that are also too straight in their shoulder.
Calf-kneed	This is the other extreme, where the calf stands "back at the knees" when viewed from the side.
Weak Pastern	Having an angle greater than 45 degrees in the pastern/hoof alignment, putting too much pressure on the joint.
Postlegged	The hock has too little angle or set. The calf is too straight through the joint, resulting in very stiff, constricting movement because of the lack of flexibility. More cattle become unsound because of being postlegged than sickle hocked.
Sickle-hocked	When viewing the rear legs from the side, the hock has too much angle or set, causing the steer to stand too far underneath itself. Often these calves also will droop excessively from hooks to pins.
Bowlegged	When viewed from the front or rear, the knees set too far out.
Knock-kneed	When viewed from the front, the knees are close together.
Toed-out (splayfooted)	The feet toe out away from each other. This problem is often seen in extremely light-muscled, narrow-chested cattle, where the legs are naturally set too close together.
Toed-in (pigeon-toed)	Toes turn in towards each other.
Cow-hocked	When viewing the rear legs from the rear, the hocks are turned in or placed too close together.

Juniors, Intermediates, and Seniors

COMMON LIVESTOCK TERMS

RAM:	Intact male of Sheep
CARCASS:	The dressed body of a slaughtered meat animal, offal having been removed
FINISH:	Refers to the amount of external fat covering on an animal.
MARBLING:	Refers to flecks of fat distributed within the muscle.
MILKING ABILITY:	Refers to the amount of milk an animal can produce
STAG	Male castrated after developing secondary sexual characteristics.
CUTABILITY:	Yield of closely trimmed retail cuts from major wholesale cuts
PALATABILITY:	Agreeable to taste, tasty
POLLED:	Naturally hornless
PARASITES:	Organisms living on other organisms, doing harm.
EWE:	A female sheep
ANIMAL WELFARE:	Refers to proper care and management of animals
RUMINANT:	An animal which has a four compartment stomach
FABRICATION:	Process of cutting lamb carcasses into wholesale cuts
SUB-Q:	Subcutaneous injections (under the skin)

Sheep Nutrition

What an animal eats, how it is digested, absorbed, utilized and what is excreted is the essence of *nutrition*. Good nutrition is basic to good health and production. Proper feeding management requires knowledge of the nutrients in the feedstuffs available to the producer and the nutrient needs of their animals. It also includes an understanding of animal behavior and a management strategy that allows the animals to consume all that is required without causing digestive upset. Though general rules of thumb are helpful, each situation may require adjustments in order to optimize growth and production.

Nutrients are substances in the diet that support normal body functions. Some nutrients can be manufactured in the animal's body and are classified as *dietary non-essential*. *Dietary essential* nutrients must be provided in the ration. Nutrients can be classified into six groups: *water, carbohydrates, fats (lipids), proteins, vitamins and minerals*.

Water is the most essential nutrient and is involved in all body functions. It is the most abundant and therefore the cheapest nutrient. Animals receive water from drinking as well as from feeds that contain water. An animal that is not receiving enough water will not eat well. Factors which affect an animal's water consumption are the animal's size, feed intake environmental temperature, humidity, and water quality.

Proteins function as the basic structural unit of the animal body and in metabolism. Protein is the main component of the organs and soft structures of the animal body with the exception of water. The dietary requirement for protein is highest in young, growing animals. All proteins are composed of simple units called amino acids. The particular amino acids in a protein determine the quality of that protein. Protein is one of the most expensive portions of the diet.

Carbohydrates are organic compounds formed in plants by the process of photosynthesis. They make up about 75% of the dry weight of plants and grain. Carbohydrates serve as a source of energy in the body. A surplus of carbohydrates is transformed into fat and stored.

Fats function much like carbohydrates in that they serve as a source of energy. Fats produce 2 ¼ more energy than carbohydrates when digested; therefore a smaller amount is required to serve the same function. Some fats are essential for proper metabolism in the animal.

Vitamins are essential for the development of normal tissue and necessary for metabolic activity. They are effective in the animal body in small amounts. When not consumed in an adequate amount a specific deficiency disease can result, or toxicity may result if eaten in extremely high amounts. Vitamins are classified as being either fat soluble (A, D, E, K) or water soluble (B complex & C). Fat soluble vitamins must be consumed in the diet.

Minerals are inorganic, solid, crystalline chemical elements. They are classified as being either macro (Ca, P, Na, Cl, K, Mg & S) meaning required in high concentrations or micro (Cr, Co, Cu, F, Fe, I, Mn, Mo, Ni, Se, Si, & Zn) meaning required in trace amounts. Calcium makes up nearly 50% of the total body mineral, phosphorus composes 25%, and other minerals make up the remaining 25%. Minerals function in protein synthesis, oxygen transport, and in skeletal formation and maintenance.

Feed Classification and Identification

Though we generally group feeds into roughages (high fiber, >18% crude fiber, less digestible) and concentrates (low fiber, <18% crude fiber, more readily digestible). There are 8 international feed classes that are based on content and use.

1. Dry forages and roughages -cut and cured products with >18% CF like hay,, straw, corn cobs, shells and hulls, paper, wood by-products and stover.



Hay



Cottonseed Hulls

2. Pasture, range plants and forages fed fresh - all forages not cut or cut and fed fresh.



Grass Pasture

3. Silages and haylages - plant material preserved through the ensilin process, forages like corn, alfalfa and grass.



Baleage



Silage

4. **Energy feeds** – products with <20% CP, <18% CF and > 70% TDN, like cereal grains (corn, oats, barley, wheat), mill byproducts, beet and citrus pulp, molasses, animal, marine and vegetable fats, nuts, roots and tubers. Energy content of a feedstuff is expressed as percent total digestible nutrients (TDN) because it is strongly correlated with digestible energy.



Whole Corn



Cracked Corn



Wheat



Grain Sorghum (Milo)



Barley



Oats



Rye



Wheat Middlings



Distiller's Grain

5. **Protein supplements** – products with >20% CP or more; protein from non-ruminant animal origin, oilseed meals like soybean or cotton, legume seeds, milling by-products of grains, brewery and distillery by-products, yeast, non-protein nitrogen.



Soybean Meal



Fish Meal



Dried Wheat

6. **Mineral supplements**



Dicalcium Phosphate



White Salt



Trace Mineral Salt



Ground Limestone (Calcium Carbonate)

7. **Vitamin supplements**

8. **Non-nutritive additives** – supplements such as antimicrobials, antifungals, antibiotics, antioxidants, probiotics, buffers, coloring material, flavors, hormones and medicines.

Feed Label Information

A commercial law requires each bag or bulk load to be accompanied by a label showing several key items:

- Net weight
- Product name and brand name
- Drug additives
- Guaranteed analysis of the feed – crude protein, crude fat and crude fiber must be guaranteed on all feeds except straight mineral or vitamin supplements, molasses or drug compounds.
- Minimum percentage of crude protein, percentage of equivalent protein from non-protein nitrogen, if any. The amount of crude or total protein in a feed is guaranteed. Crude protein is determined by multiplying the nitrogen content of a feed by the factor 6.25.
- When non-protein nitrogen (NPN) is applied to feedstuffs, a statement “for ruminants only” must appear underneath the name of the feed. Additionally, it must also have a guarantee for crude protein which has been supplied from non-protein nitrogen.
- Minimum crude fat content – Fat has an energy value approximately 2.25 times the value of carbohydrate feedstuffs.
- Maximum crude fiber content – Crude fiber is a measure of the indigestible or non-useful portion of a feed. Feeds having low fiber values tend to be higher in digestible energy or total digestible nutrients than those feeds having high fiber values.
- Minerals – feeds containing 6.5 percent or more minerals must show a guarantee of: calcium – minimum and maximum; phosphorous- minimum; salt – minimum and maximum
- Vitamins, only if guaranteed
- Common and usual name of each ingredient or the collective term for each grouping of feed ingredients
- Directions for use and cautionary statements
- Name and principle mailing address of the manufacturer

50 lbs net weight

Brand Name Show Feed
(for ruminants only)

Medicated

Feed for 28 days as an aid in the maintenance of weight gains in the presence of respiratory diseases, such as shipping fever.

Caution: Use only as directed.
Discontinue use 14 days prior to slaughter.

Active Drug Ingredients:
Chlortetracycline 7.6 grams/ton

Guaranteed Analysis

CRUDE PROTEIN, not less than 12%

This includes not more than 1.00% equivalent crude protein from non-protein nitrogen.

CRUDE FAT, not less than 2.0%

CRUDE FIBER, not less than 19%

Ingredients: Grain products, roughage products, plant protein products, processed grain by-products, forage products, molasses products, calcium carbonate, salt, vitamin E supplement, vitamin A supplement, ferrous sulfate, potassium iodide, manganese oxide copper chloride, cobalt glucoheptonate, vitamin D3 supplement, sodium selenite.

RUMINANT MEAT AND BONE MEAL FREE

FEEDING DIRECTIONS: Feed at the rate of 12 pounds per head per day.

MANUFACTURED BY:
The Best Feed Company
P. O. Box 00000
Small Town, USA

Intermediates and Seniors

BASIC LIVESTOCK TERMS

1. Condition, Finish or Covering – All are used to denote fat. The terms “finish” and “covering” are used to describe fat on market animals, while “condition” is used when describing breeding stock.
2. Growthiness – The characteristics of having size and weight at a certain age.
3. Balance or Symmetry – A proper proportion and blending of parts of the animal. Balance or symmetry is evaluated from a side view.
4. Ruggedness, Stoutness – The quality of being heavy or large boned. This is usually determined by the size of the cannon bone (from the knee to the ankle).
5. Quality – A general term that combines smoothness and refinement. Refinement of hair coat, freedom of wrinkles in hogs and freedom of roughness, patchiness in cattle indicates quality.
6. Scale – The size of the animal as determined by skeletal structure, independent of weight. The height, length and width of the animal.
7. Style – The general eye-appeal or attractiveness of the animal (includes balance, structural correctness and quality).
8. Broodiness – Female breeding stock term that means she has a favorable combination of characteristics to be a good mother. Depth, capacity, prominence of teats and/or mammary system, stoutness and correctness of vulva.
9. Breed Character – Characteristics that separate breeding stock of one breed from other breeds, primarily by differences of the head: shape, length, dish of face, width of muzzle, shape of poll and ears, color markings and wool covering in sheep.
10. Trimness - Freedom from fat or finish.
11. Meatiness/Muscling – Having a high proportion of muscle in the areas of the high-priced cuts. This is shown primarily by the relative width, length and fullness of the quarter, leg or ham, and by the thickness and fullness through the rib, rack or loin.
12. Type – A combination of characteristics that make an animal useful for a specific purpose. Determined by the general shape and form of an animal. Desirable types are constantly changing.
13. Tight Framed - The ability of the animal to hold itself together. Indicated by a strong top (back), tightness of shoulder and squareness of feet and leg placements.
14. Structural Soundness – The desirability or correctness of the skeletal structure, with major emphasis on straightness of top and proper feet and leg structure.
15. Femininity – Characteristics that distinguish the female from the male. Indicated by refinement of the head, neck and shoulders.
16. Masculinity – Characteristics that distinguish the male from the female. Indicated by boldness or massiveness of head and chest, thickness of the neck and development of the forequarters.

Common Nutritional Disorders

<u>Disorder</u>	<u>Chief Cause</u>
Copper toxicity	Excess copper in blood is fatal by causing RBC to break down
Hardware disease	Wire or nails lodged in reticulum
Ketosis	Sudden need for extra energy
Milk fever	Sudden need for Ca (lactation)
Acidosis	Excess grain consumption
Nutritional muscular dystrophy	Se or vitamin E deficiency
Grass tetany	Mg deficiency
Night blindness	Vitamin A deficiency
Goiter	Iodine deficiency
Rickets	Ca, P, or vitamin D deficiency (young animals)
Anemia	Fe, Cu, vitamin B12, or folic acid deficiency
Enterotoxemia (overeating disease)	Rapid growth of Clostridium perfringens after overeating
Founder (laminitis)	Too rapid change in the ration.
Photosensitization	Some feeds or forages or accumulation of metabolites
Bloat	Legume, succulent forages causing slime producing bacteria to increase and slime causes trapping of gas.
Urinary calculi	“Water belly” in males; stones block urination. Caused by excess phosphorus and magnesium or imbalance of Ca and P.

Activities

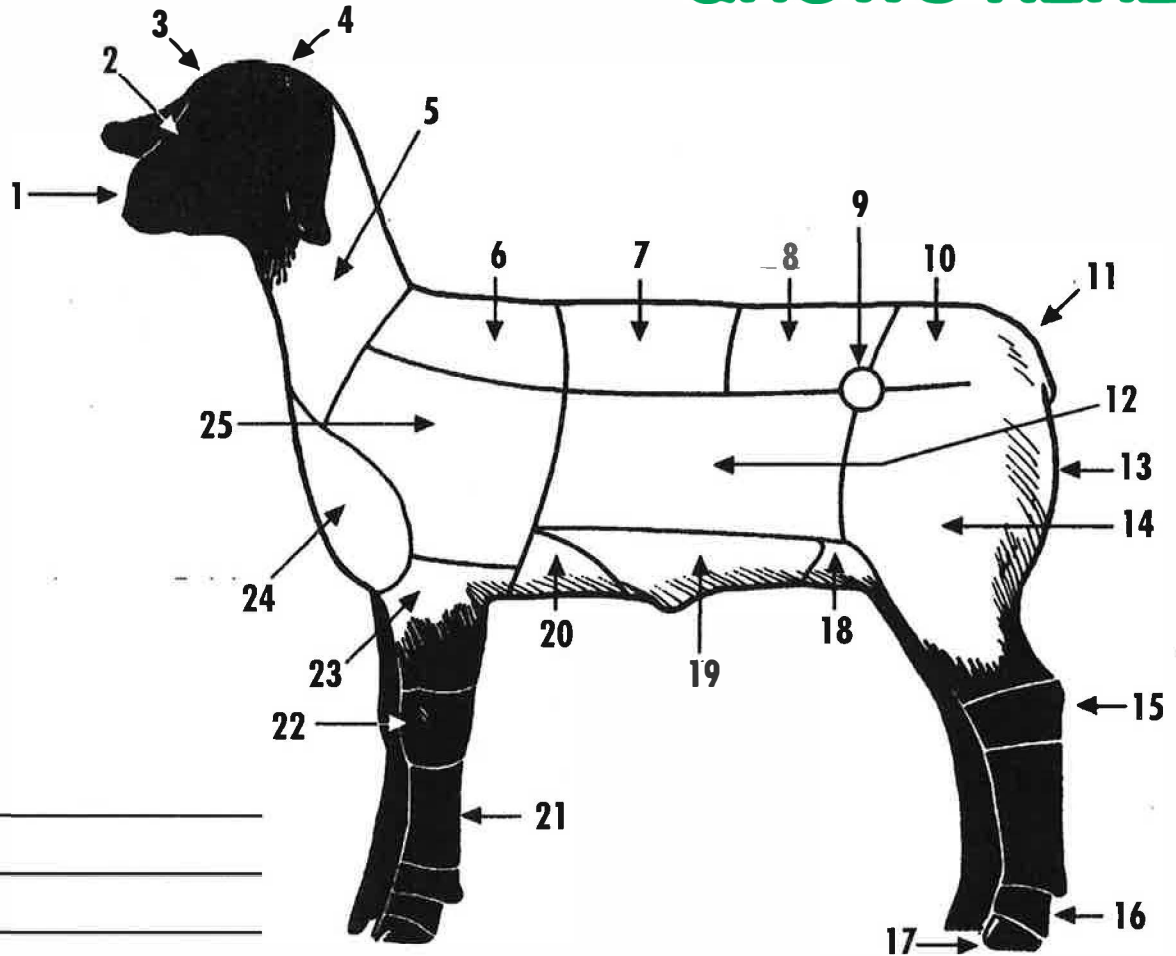
It is recommended that you complete the six activities provided in this Skill-a-thon book to help prepare you for the skill-a-thon. The activities are very similar to what to expect during the skill-a-thon and can be used for practice.

4-H Members Only: After you have completed an activity you should record it in your record book using the table on the 4-H Project Book/ Activities page. You do not need to attach the activity page you have completed in the record book.

Senior Sheep Parts Activity #1



Write in the name that corresponds to the correct part of the animal below.



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

12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____

19. _____
20. _____
21. _____
22. _____
23. _____
24. _____
25. _____

References: *Sheep Breeding and Market Lamb 4-H Resource Handbook*; *Sheep Livestock Learning Laboratory Kit*
Prepared By: Jodi Black, State Extension Associate, 4-H/Animal Sciences; Andrea Auker, Animal Sciences Student

SENIOR MARKET LAMB BREED IDENTIFICATION ACTIVITY #2

1. White-faced breed developed in New Zealand from Lincoln and Leicester x Merino crosses. These medium-sized sheep are prolific, good mothers that produce good market lambs and yield heavy, medium-wool fleeces with good staple length.
2. This breed, highly adaptable to a variety of climates, was developed in Scotland. These small-sized, white-faced sheep with bare heads and legs are moderately prolific, easy lambers, good milkers, and possess excellent lamb vigor.
3. This polled breed with black head and legs has the most number of purebred registrations in the U.S. It is known for its meatiness and high carcass quality. Lambs grow rapidly and produce high cutability carcasses.
4. Originating in Southern England, these sheep can be polled, scurred, or horned and are known for breeding out of season, being heavy milkers and producing more than one lamb crop per year. Hardy lambs yield heavy-muscled carcasses.
5. The oldest breed from England, this sheep is small to medium in size and known for producing meaty carcasses. It is polled, with a gray to mouse brown face and wool on its legs. Fleece from this breed are of medium-wool.
6. Developed in the United States from a Lincoln ram x Rambouillet ewe cross and known for its size, wool-producing ability, and productivity under range conditions. This breed is large, white-faced, polled and has wool on the legs.
7. Originating in England, this medium-sized, dark-faced, polled breed has wool on its head and face. It is prolific, matures early, milks well, and is heavily muscled. Lambs are hardy, fast-growing and produce lean, well-muscled carcasses.
8. Developed in France, this long-lived rugged breed will breed out of season and has wool that is fine in fiber diameter. These sheep are large, white-faced, with wool on the head and legs, and can be polled or horned.
9. Developed in Finland, this small to medium-sized, fine boned breed is open faced and produces medium grade, good staple length wool. Reaching sexual maturity early, ewes have strong maternal instincts and are very prolific—producing two or four lambs each lambing.

MATCH:

_____ Suffolk	_____ Southdown	_____ Cheviot	_____ Rambouillet
_____ Shropshire	_____ Finnsheep	_____ Columbia	_____ Dorset
_____ Corriedale			

SENIOR LAMB NUTRITION

ACTIVITY # 3

Please match the nutrient to the definition

A. Minerals

C. Carbohydrates

E. Water

B. Protein

D. Fats

F. Vitamins

1. _____ This is the most essential nutrient. It is needed for digestion, temperature control, waste removal, and many other purposes. Without this nutrient an animal will not eat well. It is the most abundant and cheapest nutrient
2. _____ The dietary requirement is highest in young, growing animals and is one of the most expensive portion of the animal's diet. Composed of amino acids.
3. _____ Essential for the development of normal tissue and necessary for metabolic activity. This nutrient is classified as fat soluble (A, D, E, K) or water soluble (B complex and C).
4. _____ Organic compounds formed in plants by the process of photosynthesis. Serve as a source of energy in the animal's body.
5. _____ Inorganic, solid, and crystalline chemical elements. This nutrient is needed for function in protein synthesis, oxygen transport, and in skeletal formation and maintenance. Macro (Ca, P, Na, Cl, K, Mg, & S) meaning required in high amounts or micro (CR, Co, Cu, F, Fe, I, Mn, Mo, Ni, Se, Si, & Zn) meaning required in trace amounts.
6. _____ Nutrient serves as a source of energy. Produces more energy than carbohydrates when digested; therefore a small amount is required to serve same function as carbohydrates.

**SENIOR LAMB
FEED CLASSIFICATION & IDENTIFICATION
ACTIVITY # 4**

Please write the feed class and feed identification for each picture below.



Example:

Feed Classification: Energy Feed

Feed Identification: Cracked Corn



Feed Classification: _____

Feed Identification: _____



Feed Classification: _____

Feed Identification: _____



Feed Classification: _____

Feed Identification: _____



Feed Classification: _____

Feed Identification: _____



Feed Classification _____

Feed Identification: _____



Feed Classification: _____

Feed Identification: _____

SENIOR MARKET LAMB FEED LABEL

ACTIVITY #5

PLACE NUMBER BY THE PROPER LABEL DESCRIPTION

- _____ Feeding Directions
- _____ Ingredients
- _____ Net Weight
- _____ Manufactured by
- _____ Guaranteed Analysis
- _____ Drug Additives
- _____ Product Name and Brand Name
- _____ Crude Fiber
- _____ Crude Protein
- _____ Caution
- _____ Crude Fat

1. _____

2. _____
(for ruminants only)

Medicated
Feed for 28 days as an aid in the maintenance of weight gains in the presence of respiratory diseases such as shipping fever.

3. _____ Use only as directed.
Discontinue use 14 days prior to slaughter.

4. _____
Chlortetracycline 7.6 grams/ton

5. _____

6. _____ not less than 12%
This includes not more than 1.00% equivalent crude protein from non-protein nitrogen

7. _____, not less than 2.0%

8. _____, not more than 19%

9. _____ Grain Products, roughage products, plant protein products, processed grain by-products, forage products, molasses products, calcium carbonate, salt, vitamin E supplement, vitamin A supplement, ferrous sulfate, potassium iodide, manganese oxide copper chloride, cobalt glucoheptonate, vitamin D3 supplement, sodium selenite.

RUMINANT MEAT AND BONE MEAL FREE

10. _____: Feed at the rate of 12 pounds per head per day.

11. _____:
The Best Feed Company
P.O. Box 00000
Small Town, USA

SENIOR LAMB COMMON NUTRITIONAL DISORDER
ACTIVITY #6

Write in the **Name** that corresponds with the cause of the common nutritional disorder.

Name:	
Cause:	Vitamin A deficiency

Name:	
Cause:	Excess grain consumption

Name:	
Cause:	Excess copper in blood is fatal by causing RBC to break down

Name:	
Cause:	Some feeds or forages or accumulation of metabolites

Name:	
Cause:	Iodine deficiency

Name:	
Cause:	Fe, Cu, vitamin B ₁₂ , or folic acid deficiency

Name:	
Cause:	Wire or nails lodged in reticulum

Name:	
Cause:	Ca, P, or vitamin D deficiency (young animals)

Name:	
Cause:	Mg deficiency caused by consumption of lush grass

Name:	
Cause:	Se or vitamin E deficiency

Name:	
Cause:	Too rapid change in the ration

Name:	
Cause:	“Water belly” in males; stones block urination. Caused by excess phosphorus and magnesium or imbalance of Ca and P.

Name:	
Cause:	Sudden need for extra energy

Name:	
Cause:	Legume, succulent forages causing slime producing bacteria to increase and slime causes trapping of gas.

Name:	
Cause:	Sudden need for Ca (lactation)

Name:	
Cause:	Rapid growth of Clostridium perfringens after overeating