

# Osceola County 4-H

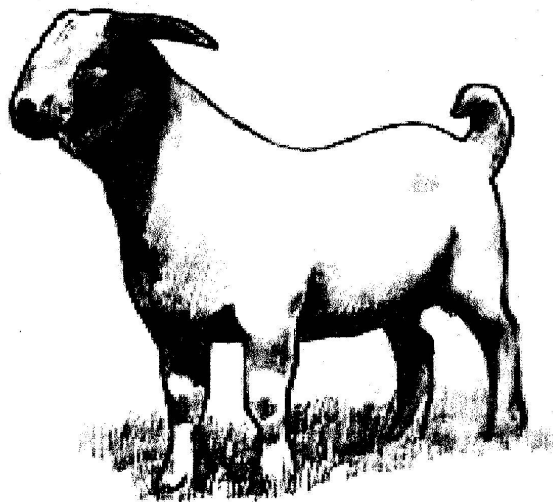
## Market Goat

**SKILL-A-THON REFERENCE BOOK**

**&**

**JUNIOR SKILL-A-THON ACTIVITIES**

**2023-2024**



**UF** | **IFAS Extension**  
UNIVERSITY of FLORIDA



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

# GOAT 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, Intermediate & Senior, Senior or Bonus** to help exhibitors and educators identify which materials are required for their age level. The topic for this year's Skill-a-thon is **Digestion**.

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

### **Juniors (age 8-10 as of September 1, 2023)**

Body parts  
Breeds  
Structure  
Digestive Anatomy  
Digestive Function  
Common Livestock Terms

### **Intermediates (age 11-13 as of September 1, 2023)**

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

### **Seniors (age 14 and over as of September 1, 2023)**

All of the above plus....  
Common Nutritional Disorders

### **Bonus**

Knots

The contest will be held on **January 24, 2024, from 2:00 p.m. until 6:00 p.m. in the KVLS Arena.**

**The contest will be held on January 24, 2024, from 2:00 p.m. until 6:00 p.m. in the KVLS Arena.**

## **KVLS Skill-a-thon Rules for 2023-2024**

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**

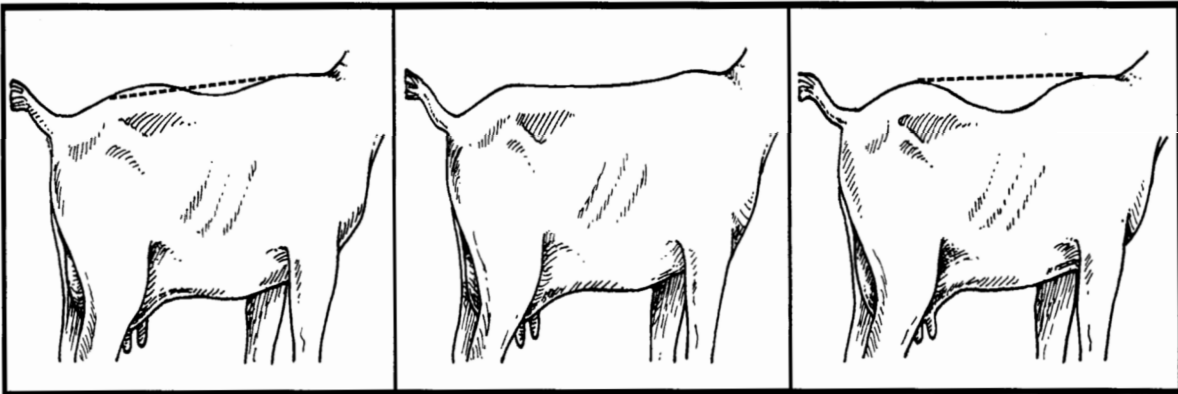
There will be a Junior (8-10), Intermediate (11-13), Senior (14 - graduate from High School) division for the contest. Within each division, 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> place will receive rosette ribbons and a monetary award.

### Training Show Animals

It is important your goats are well behaved and easy to handle at the shows. If your animal misbehaves or is easily spooked, it will be difficult for you to present it successfully.

- Halter breaking is a convenient way to begin the gentling process. It is best to teach your animal to lead by a chain. Halters are acceptable for small children. However, a chain is thought to maintain more control of the animal. Furthermore, it is more effective at showing off the animal. It is necessary for the animal to be comfortable with its chain. The goat must be caught and tied up with the halter or chain. Make sure to tie the goat where he/she can not get hurt. This should be repeated until the goat is calm and comfortable with the collar on.
- Once the goat is comfortable with the halter or collar, it is time to teach it to lead. Use the collar to hold the goat's head high. You will need someone to push the goat from behind. When a goat is leading properly, its shoulders will be even with your leg and its head will be in front of your body. The goat should lead freely without tension on the chain.
- As the goat learns to lead, you can begin training it to set up. This involves teaching the goat to stand properly when not moving in the show ring. While keeping the body and neck straight, set the front legs squarely beneath the chest. Then, place the hind legs so the goat is standing square and naturally. Make sure to keep the head held high and in alignment with the body.
- Proper training will teach the goat to set his/her legs up square each time the goat is Stopped
- Goats can be trained to respond to subtle cues for the more experienced showman
- After you have trained your goat, it will be helpful to practice often. Have a partner act like the judge. Your partner can move around the ring and handle the animal in order to give both you and your animal practice.
- By the time you take the goat to the show, the goat should stand squarely each time stopped, always lead freely and be accustomed to people.

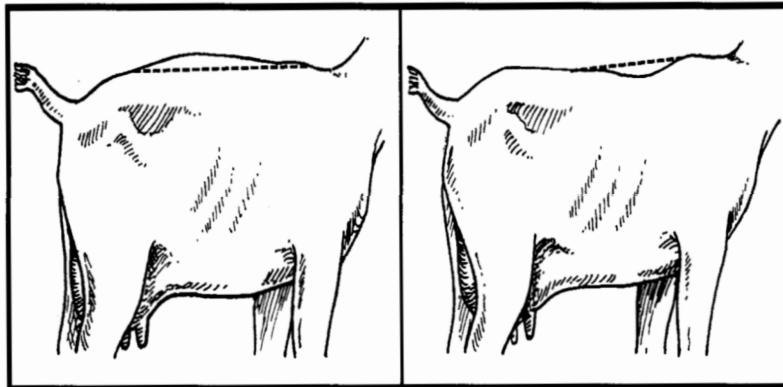
## Goat Topline Structure



Wavy Back

Ideal Back

Sway Back



Roached Back

Weak in the Chine

### Fitting and Grooming

As with training, fitting and grooming begins months before the show. Fitting your goat, is making sure the goat is healthy, properly cared for and in desired condition. Good condition means that the goat has good muscle tone and is not too thin or too fat. Through practice you will learn to evaluate the different degrees of fat cover and muscle tone. Fat feels soft and loose. Muscle feels shapely and firm. Both fat cover and muscle can be monitored and changed through diet and exercise. As discussed earlier, a balanced ration is important. However, as each goat is different it may be necessary to adjust the amount of feed the goat receives. Exercise may be a more effective and healthier method of keeping your goat in good shape.

The purpose of these goats is to produce meat, meat is muscle, and therefore a goat has to build muscle tone. Just like humans, goats build muscle through exercise. If a pen is big enough, a goat can get plenty of exercise on its own. However, it never hurts to provide additional exercise for your animals. Some facilities have the feed trough on one end of the pen and the water source on the other in order to ensure the goat must walk from one end of the pen to the other. Other people build circular tracks and exercise their goats around it.

There is no fool proof plan for an exercise program. It is important to develop a program that fits your situation. The main requirement for an exercise program is safety. It is most effective to exercise the goat intensely for a short amount of time. Therefore, whatever setup you choose to use, make sure that the obstacles are free of harmful edges and wires. It is helpful to make rounded corners in any tracks and to make the sides solid so the animals can only see forward. This will help keep them from trying to jump out and possibly hurting themselves.

Goat grooming can be divided into three different tasks: washing, clipping, and foot care. Each of these tasks need to be done close to show time. However, by brushing your goat's hair on a regular basis in the month prior to the show, you will keep the hair coat healthier.

To wash your goat, you will need:

- A collar for leading and tying the goat.
- A hose and a bucket
- Mild soap
- A scrub brush
- A couple of towels or some other way to dry the goat.

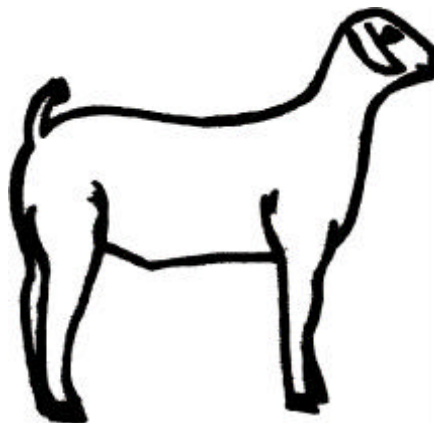
Wash your goat similar to how you wash a dog. Tie the goat to a post or fence. Make sure the goat will not be standing in a puddle and will stay clean while washing. Do not put the soap directly on the goat. Instead mix soapy water in the bucket and pour it on the wet goat. Once the goat is clean, finish your job by drying the animal.

To clip your goat, you will need:

- Livestock clippers and/or sheep shears
- 20 to 23 tooth combs
- Oil for clippers
- Scissors (for hard-to-reach places)
- A spray bottle (for wetting the hair)
- A trimming table
- An extension cord

Wash your goat immediately before clipping. After washing the goat, put it on the trimming table and towel dry. It is best to clip the goat while it is clean and slightly damp. Dirty hair is tough on your clippers. Damp hair is easier to clip smoothly. Clip all of the hair on the body except for the tail and below the hocks and knees. Use long, smooth strokes to clip your goat. Use vertical strokes on the legs and horizontal strokes on the body (see Figure 5).

**Figure 5: Goat Shearing Diagram**



*Source: The Wyoming 4-H Meat Goat Manual*

Only the top one third of the hair on the tail should be removed. The remaining hair should be blended into the clipped part and cut to about  $\frac{1}{2}$ ". The hair on the underside to the tail should then be clipped and blended with the rest.

The hair on the knees and hocks should also be blended with the clipped part of the goat's body. Use the scissors to trim long hairs and make the legs look smooth and well fit.

Use your clippers or small animal clippers to remove the hair from around the goat's eyes, ears and face. You can also use the scissors to get hard to reach places and



smooth out rough spots.

To trim your goat's feet you will need:

- Foot trimmers
- Foot care medication
- A collar
- Someone to help hold the goat

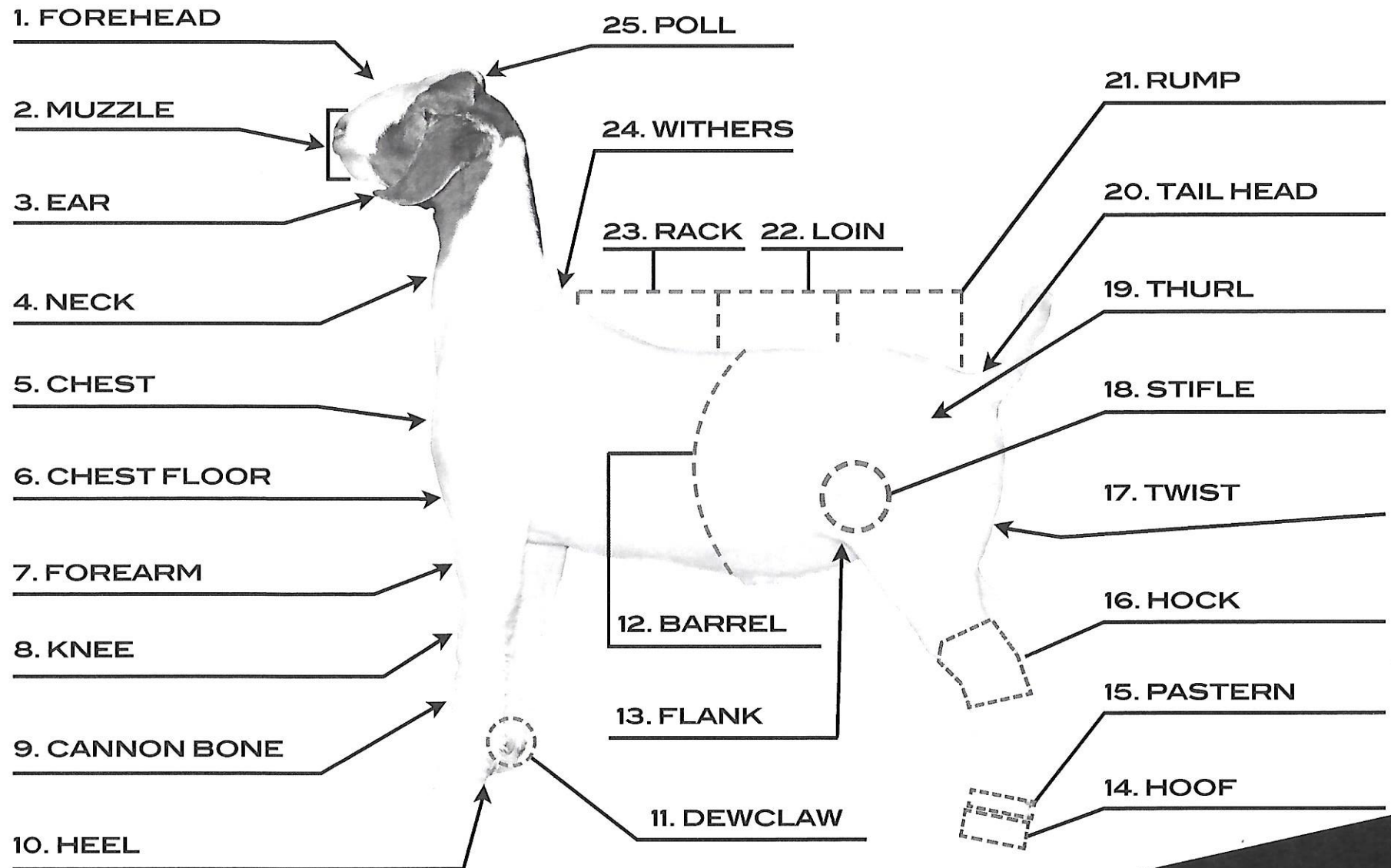
The wall of the foot should be trimmed so that it is level with the sole of the foot. See figure 6. The feet should be trimmed a couple of times before the final trimming. This is to give both you and the goat practice. The final trimming should be done at least 14 to 21 days before the show. This allows time for any healing.

**Figure 6: Diagram for trimming goat's feet**



# PARTS OF A GOAT

Juniors, Intermediates, & Seniors



## **Juniors, Intermediates, & Seniors**

### **BREED IDENTIFICATION**



#### **BOER**

This breed originated around the late 1950's and is characterized by excellent early growth rates, high weaning rates, and early maturity. These goats have exceptional maternal qualities, and kidding is possible every eight months. Their sturdy legs allow them to move easily through rugged terrain and to withstand a wide range of climatic conditions. They are best known for their production of low-fat meat.



#### **KIKO**

These goats were bred up on a base of feral goat stock in New Zealand. They were selected for survivability under range conditions. The Maori word "Kiko" means simply flesh or meat. Kiko's breed year round.



#### **SPANISH MEAT**

Also sometimes called brush goats, they are the descendants of goats first brought to North America by European explorers. They are a medium sized goat; short, stocky and heavily muscled. Spanish meat goats are very hardy and can come in a variety of colors. They breed year round.





### **SAVANNA**

The Savanna goat was developed in the 1950s from native goats of Southern Africa on the rugged harsh bush country where temperatures and rainfall can vary greatly. This breed was developed to thrive in a minimum-care, Savannah environment. The results are a goat that is fertile, heat- and pest-tolerant and drought resistant with good meat quality. They are year-round breeders.



### **MYOTONIC**

These are famously known as Tennessee Fainting goats or Stiff-Leg goats. The goats are myotonic—their muscles become stiff when they are frightened, and as a result, they fall. The Tennessee Wooden Leg is one of the very few goat breeds that originated in the United States. The goats are primarily used for meat, although they are also kept for milk and make one of the most popular pet breeds. They are medium-sized goats with broad, muscled body and short-medium coat. The face profile is straight with non-pendulous ears.

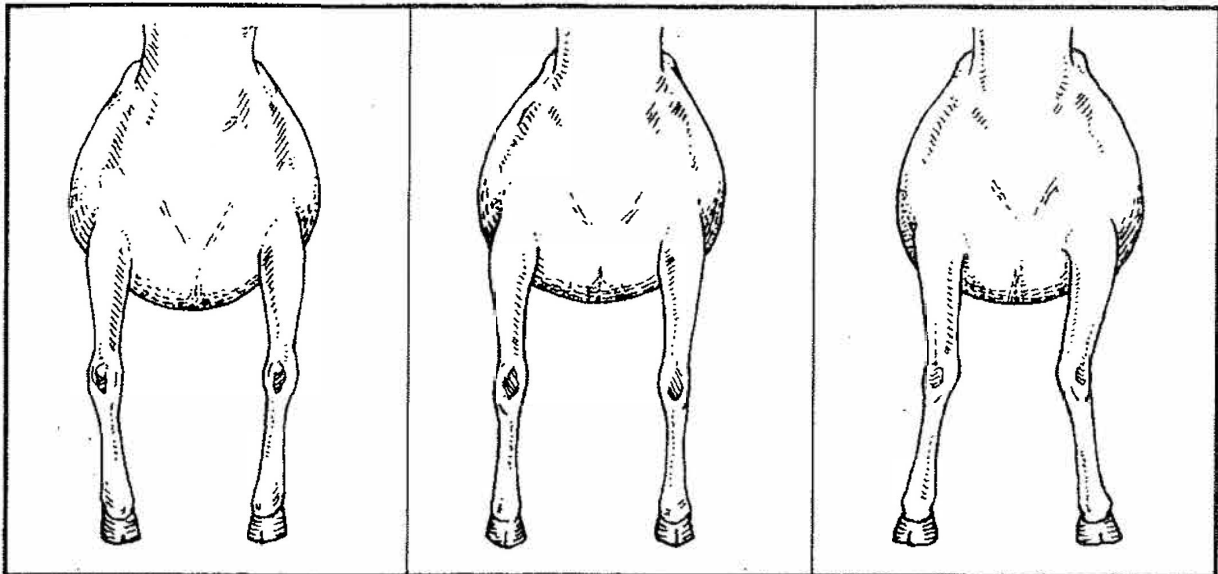


### **KALAHARI RED**

This breed originated in South Africa. Their name is derived from their red coat and the Kalahari Desert. They are generally used for meat production. Their long ears provide good heat resistance. These goats can give birth every eight months.

STRUCTURAL DIFFERENCES FRONT & REAR VIEW ACTIVITY

Front Legs

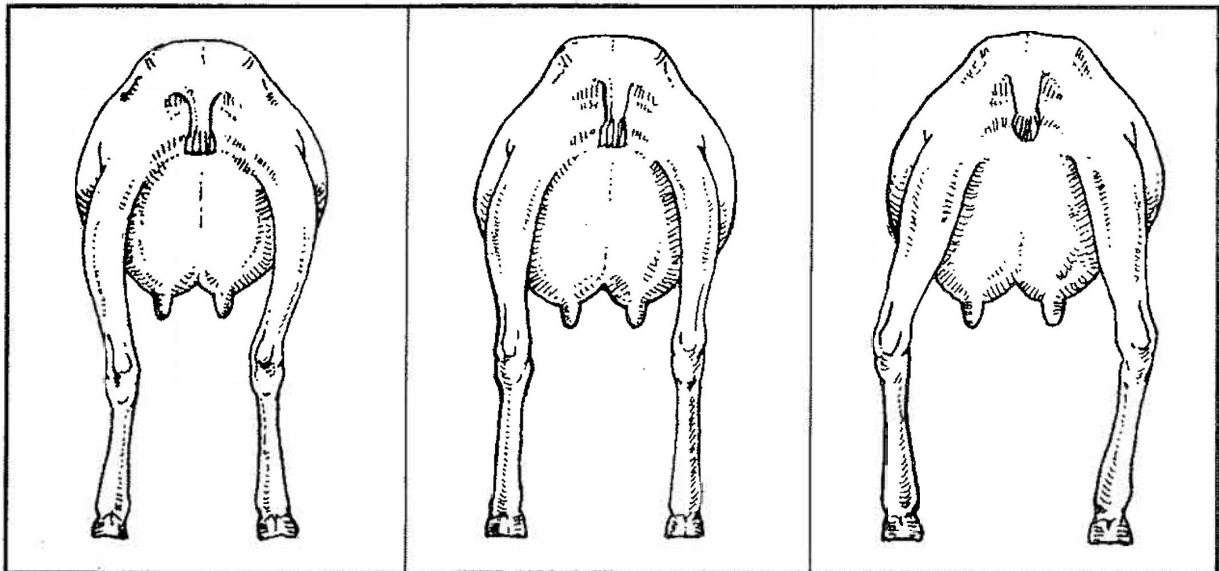


Buckled Knees

Ideal

Knock-Kneed

Rear Legs

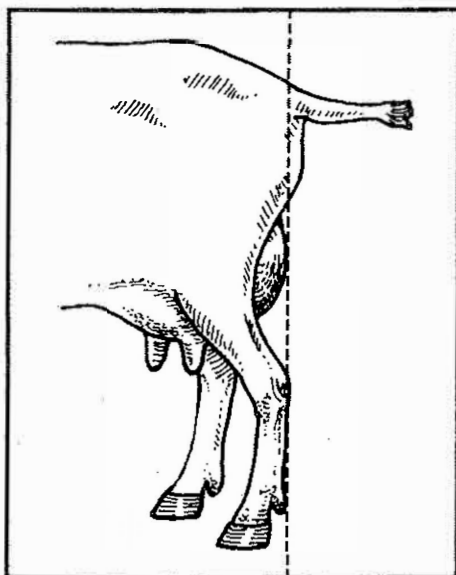


Cow-Hocked

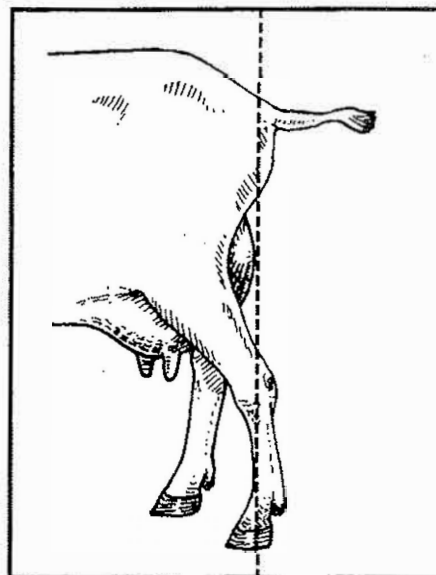
Ideal

Bowlegged

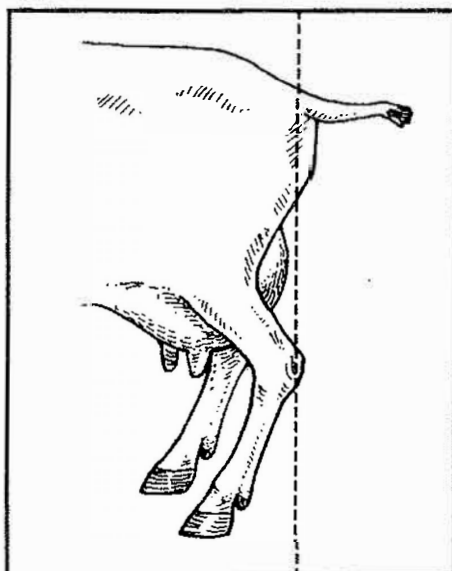
STRUCTURAL DIFFERENCES SIDE VIEWS ACTIVITY



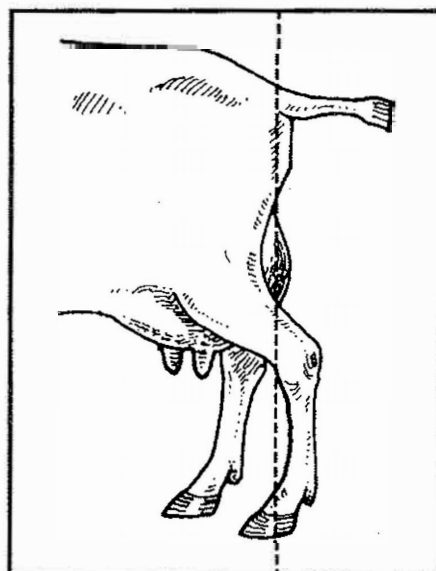
Ideal Rear Legs



Post-Legged



Sickle-Hocked



Weak Pasterns

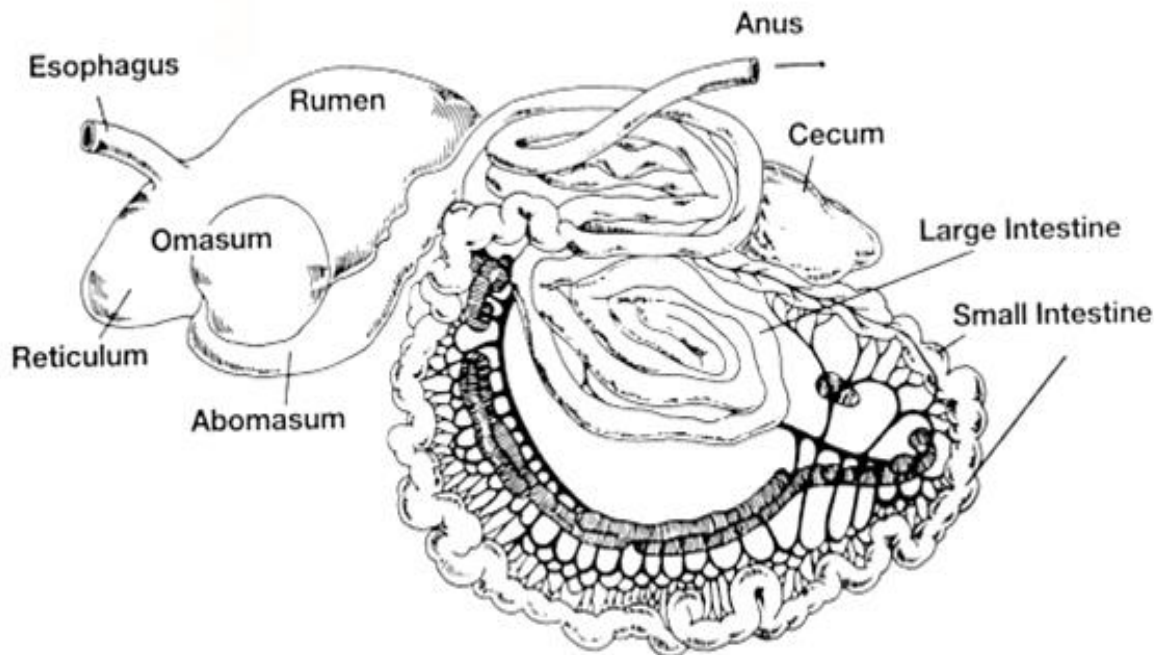
## **STRUCTURAL DIFFERENCES DESCRIPTIONS**

|                               |   |
|-------------------------------|---|
| <b>Buck-kneed</b>             | 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.   |
| <b>Calf-kneed</b>             | This is the other extreme, where the calf stands "back at the knees" when viewed from the side.   |
| <b>Weak Pastern</b>           | Having an angle greater than 45 degrees in the pastern/hoof alignment, putting too much pressure on the joint.  |
| <b>Postlegged</b>             | 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. |
| <b>Sickle-hocked</b>          | 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.  |
| <b>Bowlegged</b>              | When viewed from the front or rear, the knees set too far out.  |
| <b>Knock-kneed</b>            | When viewed from the front, the knees are close together.   |
| <b>Toed-out (splayfooted)</b> | 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.   |
| <b>Toed-in (pigeon-toed)</b>  | Toes turn in towards each other.  |
| <b>Cow-hocked</b>             | When viewing the rear legs from the rear, the hocks are turned in or placed too close together.   |

## Digestive Anatomy

The slogan “You are what you eat” sounds silly but is somewhat true. Farm animals are grouped by what they eat, which is based on the type of digestive system they possess. Herbivores are vegetarians (cattle, sheep, goats, rabbits). Carnivores are flesh eaters (dogs). Omnivores eat both plants and flesh (pigs, chickens, humans). Based on the digestive system, animals are grouped as **monogastric** or simple stomach (pig), polygastric or **ruminant** (cattle, sheep, goats), avian (chickens), or **pseudo-ruminants** with a functional cecum (rabbits). Understanding the digestive system is fundamental to selecting the proper feeds and feeding system for your animal.

After studying this manual, you should be able to identify the parts of the digestive tract of a sheep and tell the function of each part.



## Digestive Function

The physical and chemical changes of feed within the gastrointestinal tract that allow nutrients to be released and absorbed into the body are called digestion. There are significant differences in the digestive processes between species. The type of digestive system an animal has determines what the animal can successfully use as feed. Complicated feed (forage) requires a complicated digestive tract (ruminant). The steps in digestion include: prehension (gathering), mastication (chewing), salivation, deglutition (swallowing), microbial, enzymatic and chemical breakdown, absorption of nutrients, defecation, and micturition (urination). For a review of rumen anatomy visit: <http://mc050.k12.sd.us/Ruminant%20Digestive%20System.ppt>



## Digestive Function

**Digestion Definition:** The process of breaking down food by mechanical and enzymatic action in the stomach and intestines into substances that can be used by the body.

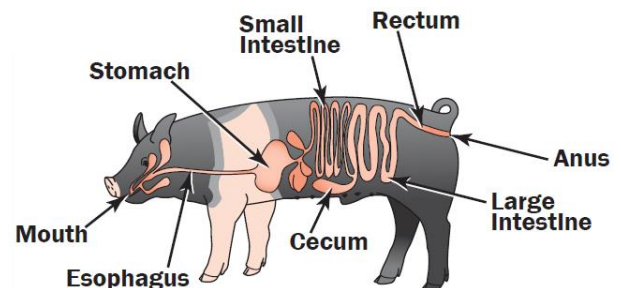
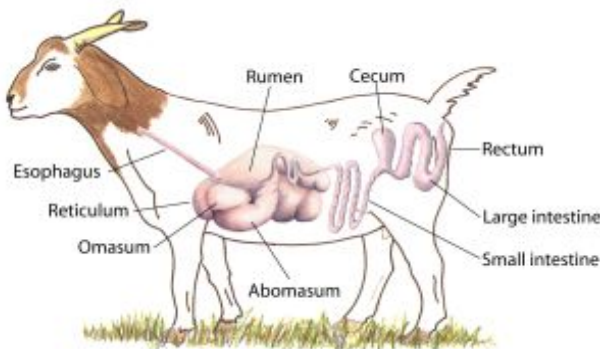
### What are the differences between the monogastric and ruminant systems?

There are two main differences between monogastric and ruminant animals:

1. **Monogastric** animals only have one compartment to their stomach. Ruminants have four compartments to their stomach.
2. **Ruminant** animals chew their food numerous times through a process called regurgitation or rumination. That means that food that travels first from the mouth to the esophagus to the rumen. From the rumen, the food then moves to the reticulum where it can then come back up the esophagus to the mouth to be chewed again and the process is repeated.

### Do the monogastric and ruminant digestive systems look different?

The systems look different in terms of their stomach compartments and the size of the organs.



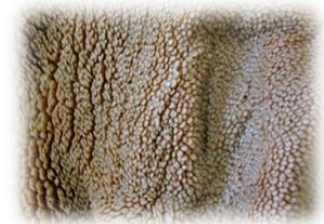
### What are the compartments of the ruminant stomach?

#### Taking a Closer Look at the Ruminant Digestive Systems:

The Ruminant stomach consists of four compartments that in order of food entering them go the rumen, reticulum, omasum, and abomasum. Each compartment has a different distinct function and appearance.

#### **Rumen**

Large, hollow, muscular compartment that almost entirely fills the left side of the abdomen, functions in storage, soaking, mixing and microbial fermentation, and acts to absorb some specific nutrients (volatile fatty acids, ammonia).(5-10 gallons)



## **Reticulum**

Nicknamed honeycomb, functions in moving ingested feed into the rumen or into the omasum and regurgitation of partially chewed food during rumination. Has very thick walls, traps foreign objects. (½ gallon)



## **Omasum**

Nicknamed “many plies” or butcher’s Bible, reduces particle size and removes water. It is located on the right side. (¼ gallon)



## **Abomasum**

This is the glandular portion of the stomach which produces acid and pepsin. It is located on the right, is called the true stomach and is where enzymatic digestion begins. (½ - 1 gallon)



## **What are the additional parts of the digestive tract?**

### **Mouth**

Upper dental pad, lower incisors, both upper and lower molar teeth, and tongue are used in prehension, mastication, and salivation.

### **Esophagus**

Hollow muscular tube that transports food from the mouth to the stomach

### **Sm. Intestine**

Pancreatic and intestinal juices break down proteins and carbohydrates while bile from the liver breaks down fats. The first section (duodenum) is involved in digestion, and the next two sections (jejunum & ileum) are actively involved in nutrient absorption. (2-2½ gallons and 80 feet)

### **Lg. Intestine**

Mainly absorbs water and end products of microbial digestion. The cecum has little function in ruminants. The colon is the site for water resorption and storage reservoir of undigested material which exits the rectum as feces. (½ - 1 gal.)

## **COMMON LIVESTOCK TERMS**

|                         |  |
|-------------------------|--|
| <b>BILLY:</b>           | Intact male Goat (Buck)  |
| <b>CARCASS:</b>         | The dressed body of slaughtered meat animal, offal having been removed             |
| <b>FINISH:</b>          | Refers to the amount of external fat covering on an animal.                        |
| <b>MARBLING:</b>        | Refers to flecks of fat distributed within the muscle.                             |
| <b>MILKING ABILITY:</b> | Refers to the amount of milk an animal can produce                                 |
| <b>STAG</b>             | Male castrated after developing secondary sexual characteristics.                  |
| <b>CUTABILITY:</b>      | Yield of closely trimmed retail cuts from major wholesale cuts                     |
| <b>PALATABILITY:</b>    | Agreeable to taste, tasty  |
| <b>POLLED:</b>          | Naturally hornless   |
| <b>PARASITES:</b>       | Organisms living on other organisms, doing harm.                                   |
| <b>DOE</b>              | A mature female goat.  |
| <b>ANIMAL WELFARE:</b>  | Refers to proper care and management of animals                                    |
| <b>RUMINANT:</b>        | An animal which has a four compartment stomach                                     |
| <b>FABRICATION:</b>     | Process of cutting Goat carcasses into wholesale cuts                              |
| <b>SUB-Q:</b>           | Subcutaneous injections (under the skin)   |
| <b>WETHER</b>           | A male goat that was castrated before becoming sexually mature;<br>Unable to breed |

## 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

## 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

Seniors

## Disorder

## Chief Cause

|                                       |   |
|---------------------------------------|---|
| 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<br>(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. |

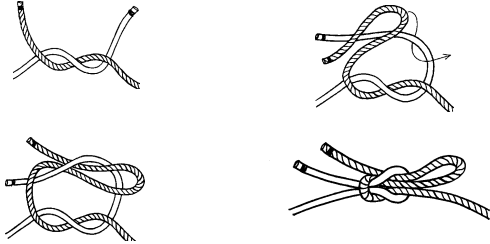
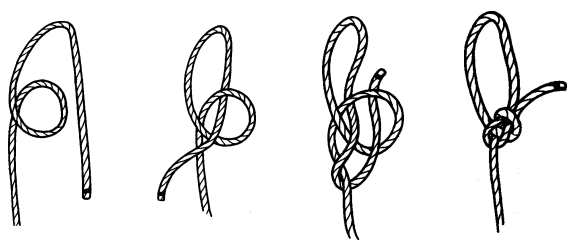
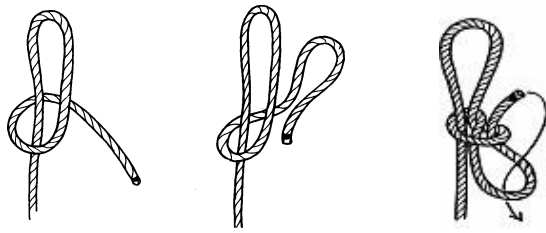
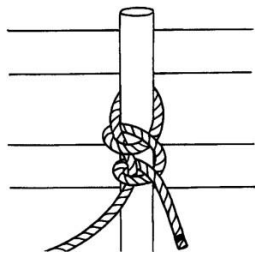
## Knots for Livestock Handling

There are many circumstances in cattle handling that will require you to tie knots. Take the time to learn to tie several types of knots and hitches so that you will have the right knot for the right circumstance. Practice often so that it becomes second nature. In an emergency situation, you do not want to have to think about which knot to choose and how to tie it.

**Knots** join ropes together, attach ropes to a post or rail, or attach ropes to an animal.

**Hitches** are used to attach a rope to a post or rail - only thing securing the rope to post is the pressure of one rope coil wrapping upon the others.

**Splices** are used to permanently join ropes to one another - individual strands from each rope are interwoven with strands from the other.

|   |  |
|---|--|
|   |   |
| <p><b>Reefer's Knot</b> (<i>Quick-Release Square Knot</i>)<br/>A good non-slip knot for tying ends of rope together and can easily be released. An advantage is that it can be tied under tension - an important feature for a knot used to restrain livestock.</p> | <p><b>Bowline Knot</b><br/>A non-slip knot used to form a loop that will not tighten or draw down when placed around an animal's body or a post.</p> |
|    |   |
| <p><b>Quick-Release Knot</b><br/>The standard way to tie an animal to a post. A variation of a slipknot that can be released very quickly, even when under tension. This knot should never be tied around the neck or body of an animal.</p>                        | <p><b>Double Half Hitch</b><br/>A quick and easy knot which acts like a slipknot and is a convenient way to tie up the end of a rope.</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 you should 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. Before turning into 4-H in May have your leader sign the Activity Page showing they have seen your six (6) completed Activities.

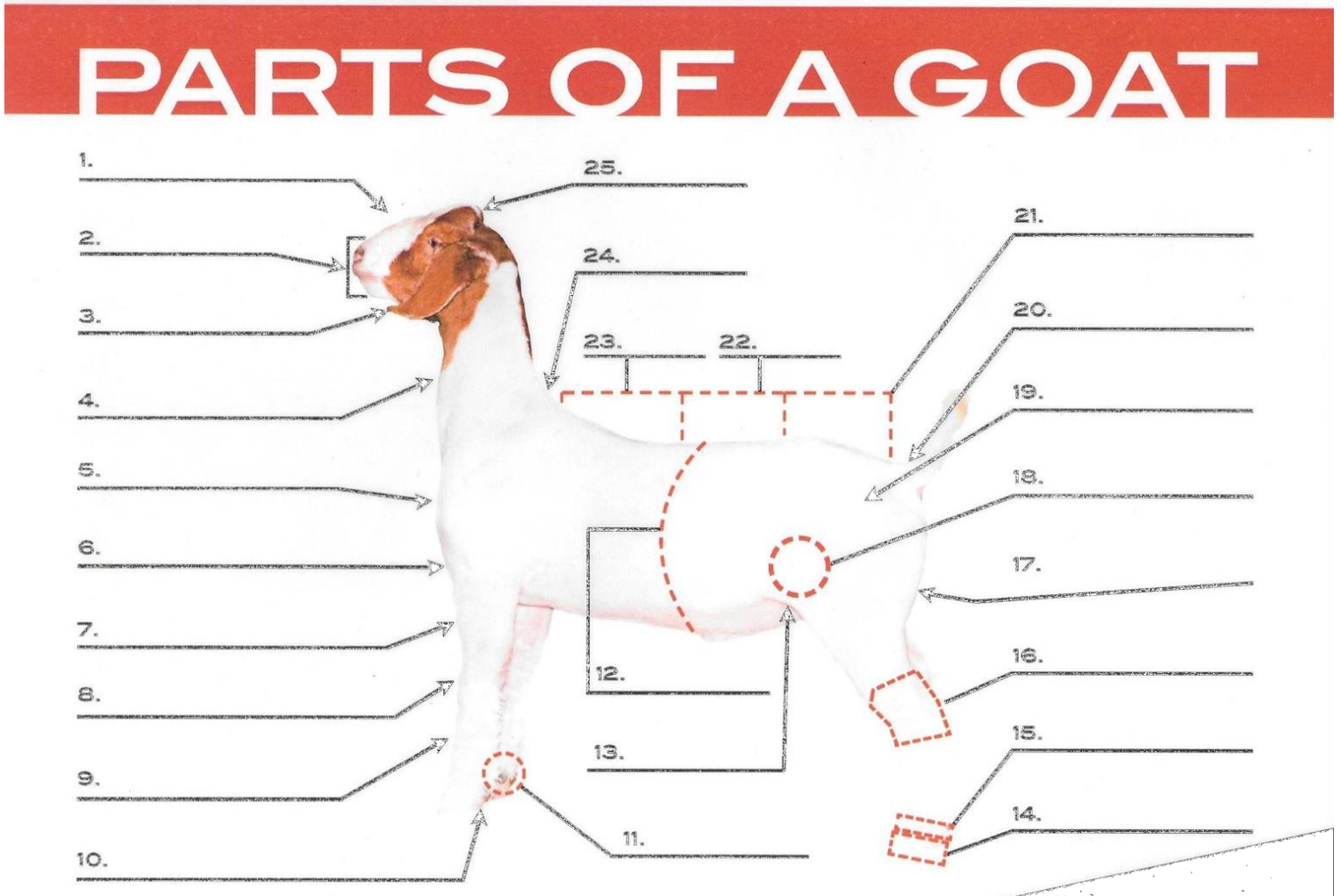


# JUNIOR GOAT BODY PARTS

## ACTIVITY #1

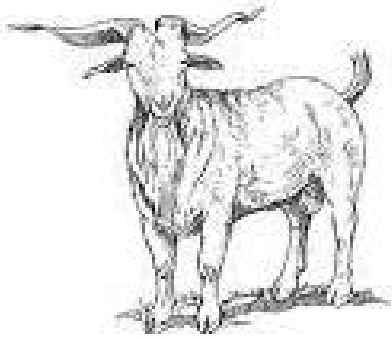
Write in the name below that corresponds to the correct part of the animal.

|           |         |
|-----------|---------|
| Ear       | Chest   |
| Poll      | Neck    |
| Muzzle    | Rump    |
| Tail Head | Barrel  |
| Hoof      | Withers |



## JUNIOR GOAT BREEDS ACTIVITY #2

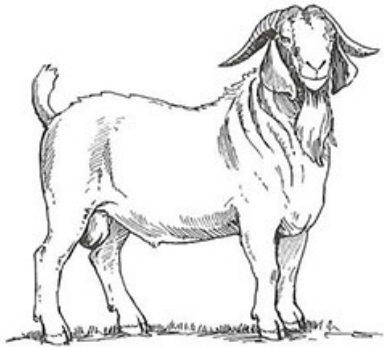
Use the breed pictures in the skill-a-thon book to color in each animal.  
List two interesting facts about each breed.



**Breed: Spanish**

\*

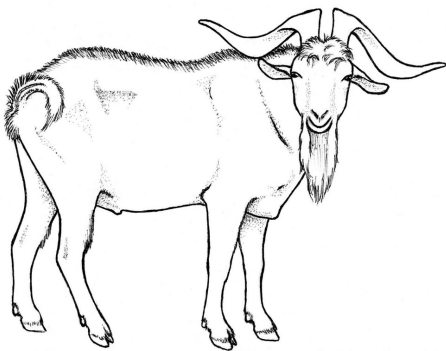
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**Breed: Boer**

\*

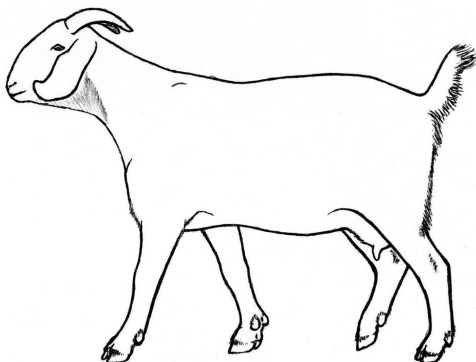
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**Breed: Kiko**

\*

\*



**Breed: Savanna**

\*

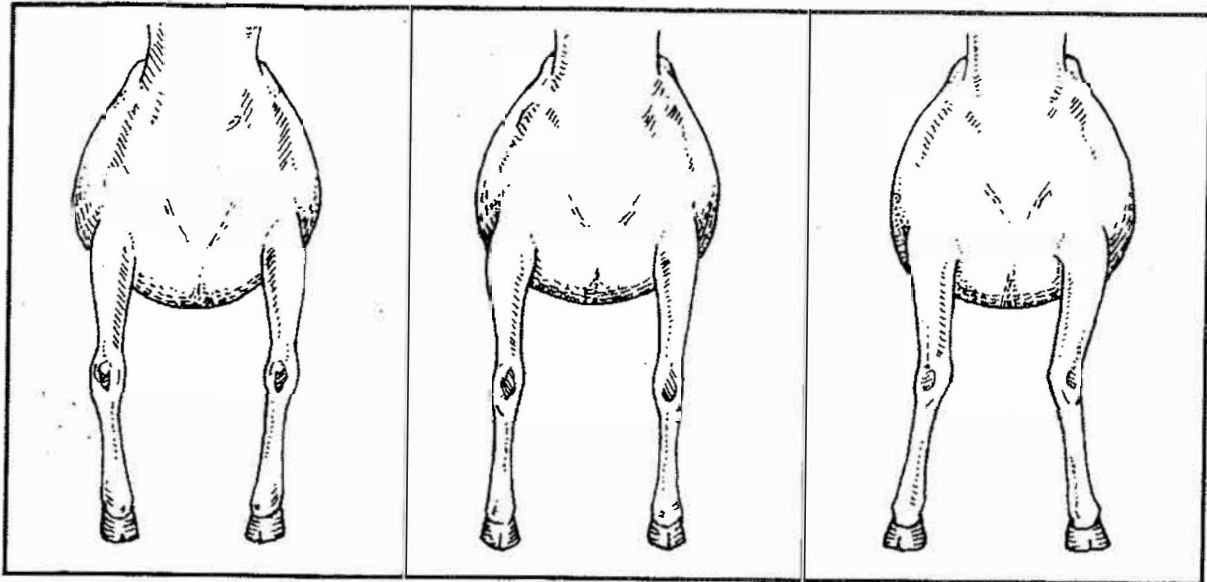
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## STRUCTURAL DIFFERENCES FRONT & REAR VIEW ACTIVITY #3

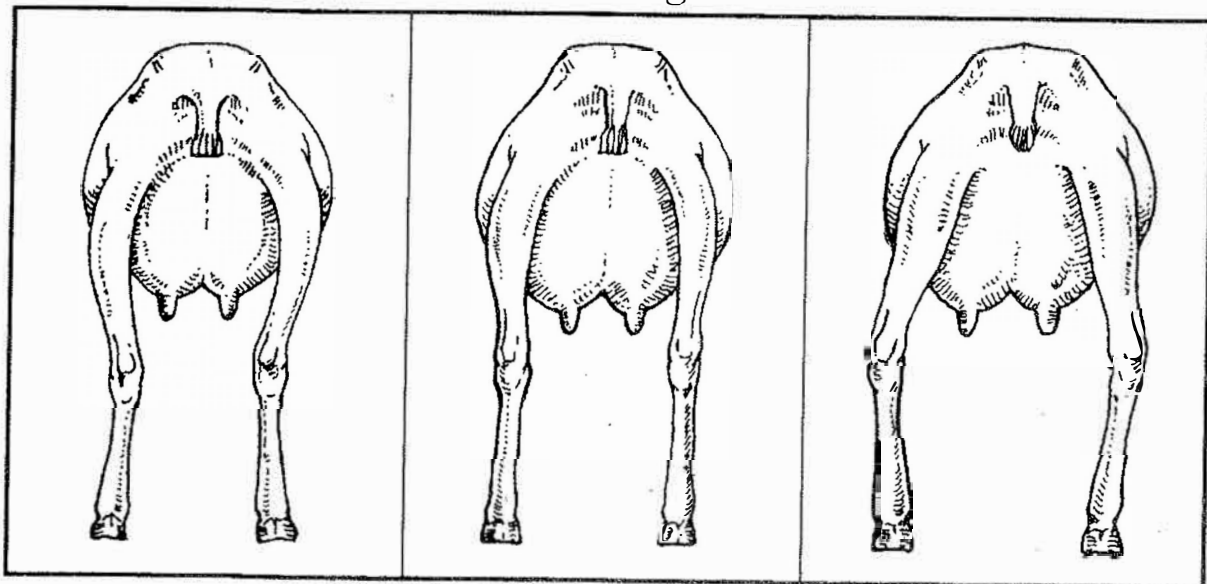
Fill in the blank with the correct LEG Structure

*IDEAL*      *KNOCK-KNEED*      *BOWLEGGED*  
*COW-HOCKED*      *BUCKLED KNEES*      *IDEAL*

Front Legs



Rear Legs



### STRUCTURAL DIFFERENCES SIDE VIEWS ACTIVITY#3

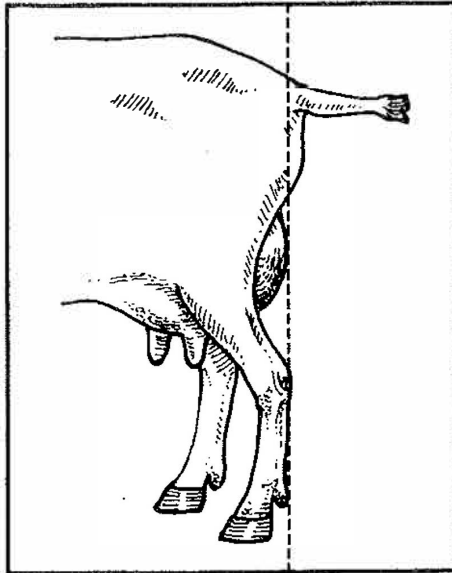
Fill in the blank with the correct Leg Structure

*POST-LEGGED*

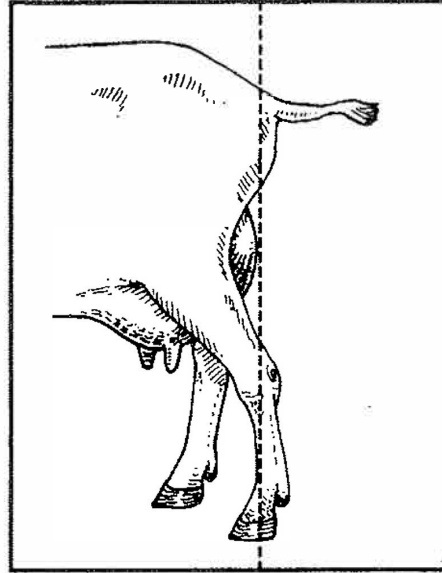
*IDEAL*

*WEAK PASTERNS*

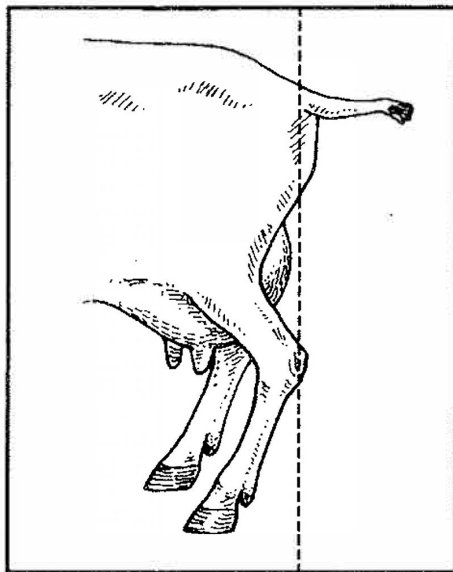
*SICKLE-HOCKED*



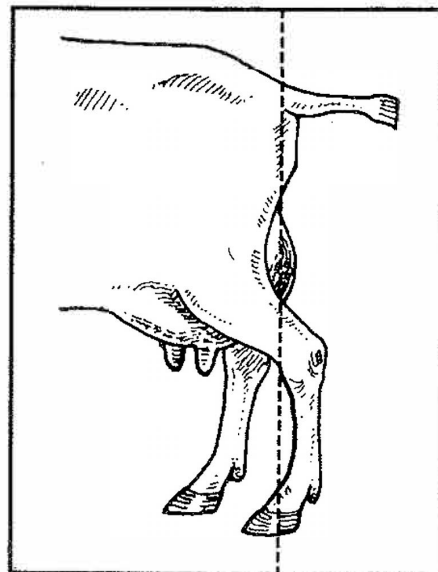
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\_\_\_\_\_



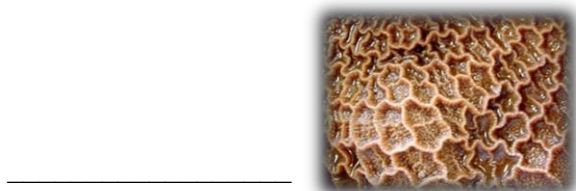
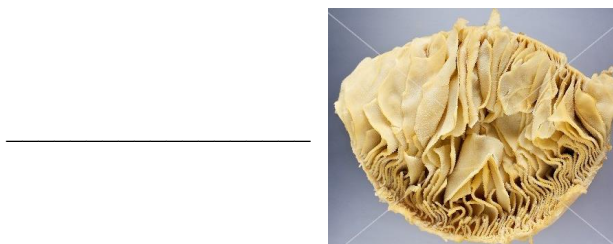
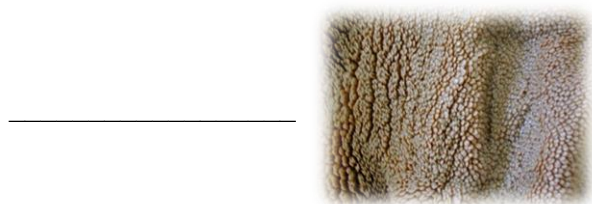
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# JUNIOR GOAT DIGESTIVE FUNCTION

## ACTIVITY #4

Write the correct number in the line for each compartment.

1. Omasum
2. Abomasum
3. Rumen
4. Reticulum



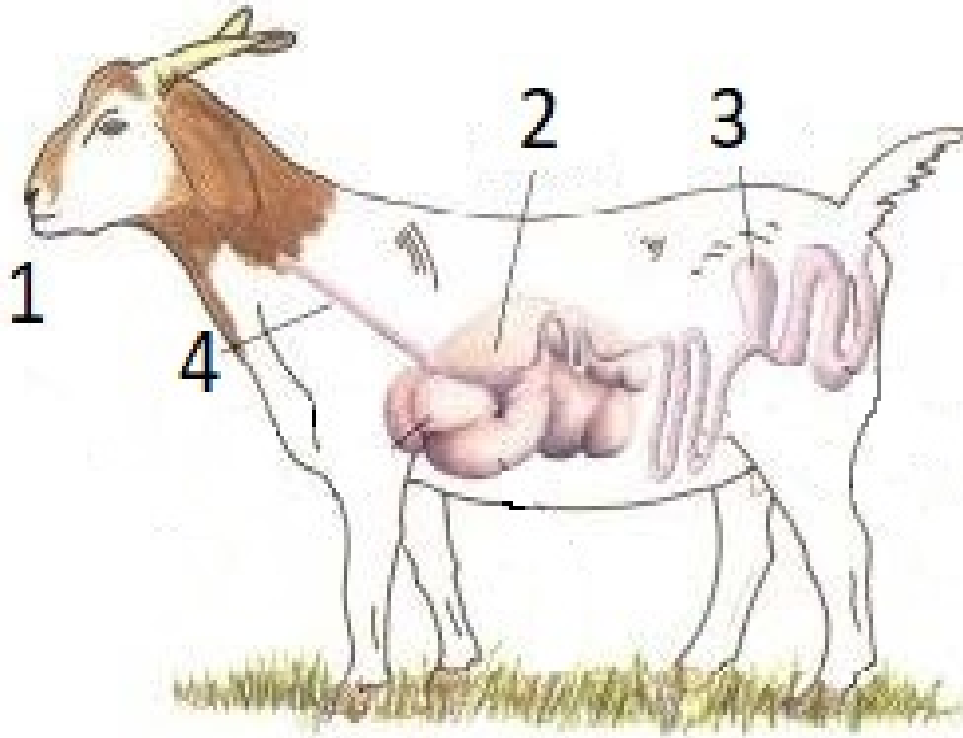
# **JUNIOR GOAT DIGESTIVE TRACT ACTIVITY #5**

## **DIGESTIVE TRACT ACTIVITY**

**Enter the correct organ by the corresponding number**

**MOUTH  
ESOPHAGUS**

**RUMEN  
CECUM**



1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

# JUNIOR MARKET GOAT

## GOAT DIGESTION – ACTIVITY #6

1. Goats have one stomach that consists of how many compartments?
  - a. 1
  - b. 4
  - c. 2
  - d. 3
  
2. What is the largest compartment of a ruminant's stomach?
  - a. Reticulum
  - b. Rumen
  - c. Abomasum
  - d. Omasum
  
3. Goats have a similar digestive system to what type of mammal?
  - a. Cattle
  - b. Rabbit
  - c. Humans
  - d. Hog

### **Word Search**

|           |   |   |   |   |   |   |   |   |   |   |
|-----------|---|---|---|---|---|---|---|---|---|---|
| Browser   | M | D | R | W | S | W | C | N | K | E |
| Cud       | U | O | L | E | Q | N | N | U | M | S |
| Esophagus | S | X | F | Y | S | E | B | U | D | O |
| Mouth     | A | J | A | C | M | W | L | Y | U | P |
| Intestine | M | W | M | U | F | U | O | V | I | H |
| Abomasum  | O | S | R | C | C | T | F | R | P | A |
| Omasum    | G | I | P | I | F | J | I | Y | B | G |
| Reticulum | I | N | T | E | S | T | I | N | E | U |
| Rumen     | K | E | M | O | U | T | H | A | T | S |
|           | R | M | U | S | A | M | O | B | A | S |