

South Carolina 4-H/FFA
Meat Goat Project
CARE GUIDE

Updated on May 4, 2018

Information in this guide is for the use **only by the members of the South Carolina 4-H/FFA Meat Goat Project**. The members of the SC 4-H/FFA Meat Goat Project Advisory Committee and local meat goat producers created this guide. Members of the meat goat industry practice the deworming recommendations in this manual; however, these practices are “off-label.” Consult your veterinarian for off-label script (prescription) to administer these recommendations. **Disclosures and disclaimers:** remember we are not veterinarians, if you have any problem with your goats’ health call your veterinarian. They will diagnose and treat you goat. This book is only to help you with your goat.

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SOUTH CAROLINA MEAT GOAT PROJECT OVERVIEW

The SC Meat Goat Project gives 4-H and FFA members an opportunity to participate in a relatively inexpensive and short-term animal project. This project meat goat is to be shown at the local county shows, SC State Fair, and at the Final Meat Goat Show.

This **Care Guide** is a valuable resource, which includes instructions for raising a healthy goat. The project also has a **Project Guide** with detail information about how the meat goat project is conducted, expectations of the participants and much more. Lastly, a **Record Book** will be available at the beginning of the project that is to be filled out and returned at the Final Show to help kids keep accurate record of the project.

The objectives of the SC Meat Goat Project are to learn basic principles of animal science by owning and caring for a project goat. Youth have the opportunity to learn and demonstrate

- knowledge of feeding,
- management practices,
- identify types and grades of animals
- learn about marketing methods
- identify quality in wholesale and retail cuts of animal products
- and understand their relationship to management practices.

By participating in this project, youth will develop integrity, sportsmanship, decision-making capability, and public speaking skills through participation in demonstrations, tours, judging, and exhibits. Youth will learn the value of scientific research and its influence upon animals and the meat industry and will demonstrate budgeting and record-keeping skills when they return the Project Record Book. Youth will demonstrate proficiencies by participating in:

- Local and State Show Competitions and Activities
- State Meat Goat Project
- Meat Goat Project Record Book Competition
- State 4-H Communication Contest
- Local and State 4-H/FFA Livestock Judging Contest
- State Meat Goat Management Test
- State Meat Goat Project and State Fair Scholarship Contest

SC MEAT GOAT PROJECT GUIDE BASICS

Wether Goats make good project animals for young people, since goats are small, easy to work with, relatively inexpensive, and may be kept in a small amount of space. Young goats are fun to work with and watch as they grow up. **A wether goat is a castrated male goat.** It is very common to castrate males that will not be used as a herd sire. Most wethers are raised for meat production. The purpose of this project is to teach young people how to responsibly care for a goat and keep records on the goat's progress. Records on income and expenses will also be kept monitoring profitability.

Goats typically grow fast while they are young. Under normal conditions, goats will gain around 2 pounds per week. Your wether may gain more during one week and less during another. You should weigh your goat on a regular basis to monitor weight gain. There is a chart in your record book to record your weights. Your goat may weigh over 100 pounds by the end of the project.

Not all goats in the project will gain to the same final weight. Remember that size does not make a good goat. There are good small goats and good large goats. The management program is the key.

Remember, the project is about having fun and learning about your goat. Relax, have fun, and enjoy showing your wether goat.

FACILITIES AND EQUIPMENT

One of the major advantages of a goat project is that expensive facilities are not needed. Goats will adapt well to most environments. However, there are a few essentials to properly care for your goat.

Housing

A Barn or Shed is needed so goats can retreat from the sun and rain. The shed area should have at least 15 square feet of space for each goat. The shed should also be well drained and well ventilated so goats will remain cool during the summer months. Everyday make sure to remove any loose nails, wire, boards.

A Pen with outside exposure is important. The outside pen needs to be at least 100 square feet per goat. Gates should have strong latches that a goat cannot open. Make sure the ground will not hold water, drainage is important. Pens need to be cleaned often.

Make sure your pen is goat proof (a goat will eat things it shouldn't). Goat proofing a pen is hard work. It's hard to think like a goat! Goats will also get their heads stuck and will get their legs caught. Keep an eye on your goat for a while once you get it home, just in case it out-thinks you.

Good pastures give your goat a good place to exercise. Letting your goat eat on pastures can lower your feed bill but make sure you can catch your goat and that he cannot escape. It is also important to be careful before turning your goat out with other animals such as horse, cow, etc.

Fencing

Fencing is of course very important, Fence height should be a least 48 inches. If you use wire fencing, make sure the wire has 12 inch mesh. Fences should also keep out predators. Good fences can keep out dogs. Dogs like to chase goats and may end up killing your goat. The most desirable pens are constructed from galvanized livestock panels that are 5 feet tall with 4 inch squares.

Protection

Goats are natural browsers. They will eat grass but actually prefer broadleaf weeds such as honeysuckle, privet hedge, and blackberry briars. Some plants in SC are poisonous and toxic to your goat. Some will only make the goat sick if he doesn't eat too much, others will kill him. Here is a list of some poisonous plants: Japanese yew, Poison Hemlock, Water Hemlock, Oleander, Rhododendrons Azaleas, Locoweed, Boxwoods, Tansy and Cherry Trees. Please make sure your goat is pen is clear of these plants. If your goat escapes your pen he may decide to eat something that is not good for him. Hay that has mold should not be fed to goats and this can kill them.

If you can provide a "safe pasture" for your goat, then grazing your goat is a good choice. A safe pasture means a pasture that your goat cannot escape from and is free from your family dog, your neighbors' dog, or wild dogs and coyotes. Remember dogs are often a vicious enemy of goats. If you do not have a safe pasture available you can feed good quality grass hay. To prevent goats from wasting hay you can make a hay rack to keep the hay off the ground and keep goats from walking all over the hay as long as the hay rack is goat proof.

Additional Equipment

Feed Containers are essential. Self-feeders are often used in feeding of goats. Self feeders should be at least 6 inches off the ground. It is important that when using a self-feeder that you continue to daily monitor your goat feed intake. Self-feeders can become troublesome when feeding more than one goat due to your lack of ability to monitor each goats feed intake.

If goats are hand fed, use moveable troughs that hang on the fence at the appropriate height. Troughs should be hung at the shoulder height of the goat being fed. All troughs should be cleaned regularly. Likewise, hay and mineral feeders need to be raised off the ground. This will help reduce the spread of disease and parasites. It's also important to make sure that goats are not able to stand in their feed troughs because they will urinate or defecate on the feed.

Water Containers are the most important of all. Fresh water is the most important ingredient in properly caring for your goats. Water should be checked daily. If you

would not drink the water than your goat will not drink it. Water troughs should be small in size so they can be cleaned on a regular basis. Troughs should be located in the shade to keep the water cool and available. Never let the water container go dry!

Hay Bag Or Hay Nets should not be left with goats when they are alone. Your goat could get tangled and be hanged!

Useful Equipment For Goat Facilities

- Stiff brush to clean water and feed troughs
- Shovel, rake, pitch fork to clean pen
- Scales or weight tape to weigh goat
- Collar and leads to move animals
- Small portable feed troughs or buckets
- Water bucket and water hose

FEED MANAGEMENT

Introduction to Feeding

Obviously, how you manage your goat's feeding program will dictate a lot about your goat. You have a choice of feeding a commercially prepared ration, mixing your own, or feeding a ration that has been mixed by the local feed store. There are many commercial rations available. Goats are picky eaters; therefore, a pellet ration is recommended over a textured loose ration. Select a balanced ration, learn how to feed it, and learn how your goat responds to it. It is recommended that you use a goat ration that contains a coccidian stat medication for coccidian parasite.

Never feed your goats: chicken, dog, horse or pig feed!

At the time of purchase many young goats will not know how to eat pellet feed from a trough. These goats should be started on good, leafy hay that has a goat ration pellet sprinkled on top in the trough. After 3 or 4 days, the selected ration may be introduced slowly. Hay can be fed during the first part of the feeding program, but should be limited at the later stages to prevent goats from developing a large stomach.

As stated earlier, most goats can be self-fed for the entire feeding period. In a self feeding program you should work to have feed for your goats at all times. **This is called free choice.**

However, some goats will become fat and need to be hand fed. Many producers chose to feed their goat daily or twice daily. When using this feeding schedule it is important to gradually increase feed intake only when the goat has completely eaten the previous feeding. Any feed left over from previous feedings should be removed from the feeding trough. Left over feed can mold and become unhealthy for the goat.

Fat deposition must be monitored throughout the feeding program. The feeding schedule can be adjusted to modify gain and body composition, but the goat must be continually monitored so changes can be made.

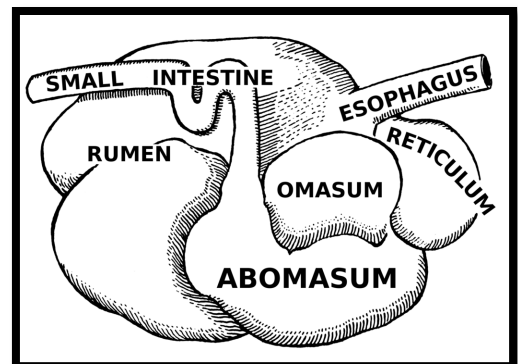
Any changes in your feeding program should be done gradually. This includes changing the amount and/or changing the brand of feed. If you change the feed too quickly it can cause diarrhea. This will cause the microbes to die. Your goat needs these microbes; you can use Probiotics to replace the microbes. Giving your goat a little of the new feed with the old for a few days (increasing the amount of the new feed each day) until they are being feed all new feed is the best method. **Rapid changes in your feeding program can result in your goat refusing to eat or getting sick.**

As your goat grows, offer him more each more each day. It may be best to hand your goat to keep him from getting too fat, giving $\frac{1}{2}$ of the feed in the morning and $\frac{1}{2}$ in the evening. Use a coffee can to measure the feed. You can add marking on the can at $\frac{1}{2}$ lb intervals to measure the feed and add more feed as he grows. The hand feeding also means you are able to check on your goat in the morning and the afternoons or evenings.

The feeding program will dictate how your goat develops and matures. A good program cannot make up for the lack of superior genetics, but will allow your goat to reach its genetic potential. To best monitor your results, weigh your goat on a regular basis to know if your goat is gaining or losing weight and record this weight change.

Goat Nutrition

The goat is a member of the class of animals called **ruminants**. Ruminants are mammals that are able to eat plant-based food by fermenting it in a four-compartmented stomach prior to digestion. These four compartments of the stomach are called **rumen, reticulum, omasum, and abomasum** (or true stomach). This is possible due to microbial action. The



process requires the cud to be regurgitated and chewed again. When the animal chews their cud, they break down the plant-based food and stimulate digestion.

There are almost 150 species of wild and domestic ruminants. These include cattle, goat, sheep, deer, giraffe, and antelope. Several of these we have living at our homes or on our farms. It is important to understand how they digest food so that we can properly care for them.

The digestive system functions are:

- Ingestion- eating
- Mastication- chewing
- Deglutition- swallowing
- Eructation- belching
- Absorption of nutrients
- Defecation- elimination of solid wastes

Food nutrients are changed into material that is easily absorbed into the bloodstream through the process of digestion.

The following are the steps of digestion:

1. The **Mouth** grabs food
2. The **Teeth** assist the mouth of the animal to grab and swallow the food. Ruminants have only one set of teeth in the front and two sets in the back of the mouth. The front set are called incisors. The back set are called molars.
3. The **Tongue** is covered with finger-like projections, called papillae, which contain taste buds. The tongue helps to move the food directly to the pharynx.
4. The **Salivary glands** secrete saliva that moistens the food and is mixed with the food material to aid in swallowing.
5. The **Pharynx** aids in swallowing by funneling the food into the esophagus, preventing food from entering the lungs.
6. The **Esophagus** leads the food from the mouth to the first part of the ruminant's four-compartment stomach called the rumen.
7. The **Rumen** is the largest of the four compartments and is divided into several sacs. It is where fermentation occurs, which allows for the digestion of fiber and other feeds. It is not the cow that digests the feed, but the bacteria in the rumen that does the most work.





8. The **Reticulum** is attached to the rumen and has a honeycomb structure to its wall. The main function is to trap large objects. These large objects are regurgitated back into the mouth while the animal is resting to be chewed down further. The process of regurgitating and chewing of food is called “chewing their cud.” Saliva also continues to help moisten the food. This will continue until the food particles are small enough to pass through the reticulum to the omasum.

9. The **Omasum** acts like a filter. The many folds of the omasum serve to squeeze out the water from the feed, so that it doesn't go into the rest of the digestive system.



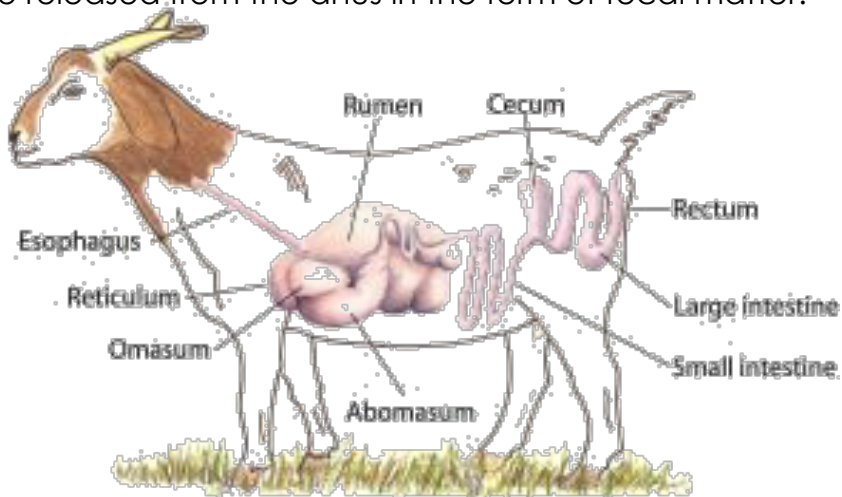
10. The **Abomasum** is the final compartment and is often considered the true stomach. It has a low pH and enzymes that digest the protein in the feed.

11. The **Small Intestine's** first part, called duodenum, takes the partially digested food and continues to break down the food using enzymes produced and secreted by the pancreas and the Brunner's glands. The food is broken down into simple compounds that can be easily absorbed into the bloodstream or lymph by an active process carried out by the jejunum and ileum (the second and third part of the small intestine). The small intestine wall is covered with fingerlike projections called villi, which increase the absorption area of the small intestine.

12. The **Cecum** is a simple tubular structure, also known as the blind gut, located at the junction of the small and large intestine. The food materials entering this compartment are digested by inhabiting microorganisms.

13. The **Large Intestine** takes the undigested food and unabsorbed nutrients leaving the cecum. It absorbs water and further digests food materials by microorganisms. The large intestine is comprised of the colon and rectum. Fecal matter (manure) is formed in the end of the spiral colon.

14. The **Rectum and Anus** are the final stops of the food material. Anything left over will be released from the anus in the form of fecal matter.



A young goat's digestive system changes from drinking milk when they are very young, to eating forages as they get older. That is, the rumen gets larger and changes to fermentation compartment as they grow. The rumen has many bacteria and protozoa which produce enzymes that help digest the high fiber feeds. The adult ruminant regurgitates the cud to continue digesting the feed at a later time. This is called "cud chewing". When the food particles are small enough they pass into the reticulum. Next the feed passes in the omasum where water is removed from the feed and nutrients, such as the volatile fatty acids, are absorbed through the wall of the omasum and become the energy source for the goat. The fermentation process continues in the abomasum or true stomach where the stomach acid, hydrochloric acid (HCL), continues the digestion before feed that passes into the small intestine.

You should study your goat and use all available information to make decisions on when feed changes should be made. Since goats do not deposit external fat as rapidly as other species of livestock, a self-feeding program can be effective. However, some goats will become too fat during the feeding period and should be hand fed twice daily to control the amount of feed consumed.

All livestock require five basic nutrients:

1. Water

Clean, fresh water is a daily necessity because water composes more than 70% of lean tissue and body fluids must be replenished regularly. Never deprive your goat of water because water regulates the amount of feed a goat will consume. Also the more water a wether drinks the more he will urinate which will help keep down the chances of urinary calculi.

2. Protein

The primary constituent of the animal's body is protein. Dietary protein serves to maintain or replace protein in body tissues, provides for carriers of other nutrients and is a major component of various products such as meat, milk, and fiber. Protein requirements of goats will vary according to their size, age and maturity. Young fast growing goats need higher protein diets to allow them to grow and develop their muscle potential. Rations that contain 16% to 18% protein are useful during this phase of the feeding program. It is very important to remember that meat goats receive goat feed, a ration that's especially for goats. Goats will perform much better on goat feed than on horse feed in formulated nutritionally for the goat. Contact your local feed store for goat feed that includes a coccidian stat medicine in the feed.

Feed to goat the right amount. **Do not over feed!** Remember that goats have a daily requirement for protein. Try not to give more protein than is required since the extra is used for energy. Using protein as an energy source is more expensive. When total feed intake is greatly reduced, protein supplementation may be necessary to provide adequate daily requirements for your goat. Make sure the feed you are feeding your wether is for ruminant animals. **Never feed ruminants any feed that is**

labeled with this statement: “do not feed to cattle or ruminants.” This is a violation of a federal law!

As a general rule of thumb, goats will consume 2 to 4 percent of their body weight on a dry matter basis in feed. The exact percentage varies according to the size (weight) of the animal, with smaller goats needing a higher intake (percentage-wise) to maintain their weight.

For example: Your goat weighs 35lbs, $35\text{lbs} \times 0.04 = 1.4\text{lbs}$ of dry matter/day.

If the feed you buy is 90% dry matter (which is a common percentage) your goat $1.4/.9 = 1.6$ total pounds of feed per day.

3. Fat and 4. Carbohydrates

The most common limited nutrient in goat rations are energy producing carbohydrates and fats. (Grains and protein supplements are high in energy), an adequate supply of energy is necessary for efficient nutrient utilization. Inadequate energy intake will result in slow growth and weight loss. However, in goat rations, too much energy intake can be just as bad as not enough.

5. Minerals and Vitamins

The minerals of major importance in goat rations are salt (sodium and chloride), calcium and phosphorus. Minerals are necessary and very important for proper growth of your wether and all goats. Make sure your minerals are for goats. Provide salt in a free choice form or sprinkle 1 Tablespoon of table salt over goat rations at each feeding. Calcium and phosphorus are necessary for proper growth and development, and should be fed in a **ratio of two parts calcium to one part phosphorus**. Rations that contain high levels of phosphorus in relation to calcium may cause urinary calculi. Urinary calculi are stones that form in the urinary tract and are painful and could cause your animal to die. This is found in mostly wethers and bucks. The additions of ammonium chloride at the rate of 10 to 15 pounds per ton of feed or the addition of two Tablespoons of Acid Pac per 5 gallons of drinking water can help prevent urinary calculi. Some rations list ammonium chloride on the feed tag.

Some points to remember are:

- Roughage is generally high in calcium and low in phosphorus.
- Grains are generally low in calcium with moderate levels of phosphorus.
- Most protein supplements are high in phosphorus with moderate levels of calcium.

Vitamins are essential for proper body function and are required by goats in very small amount. Only vitamin A is likely to be deficient. If you think this is a problem add a small amount of Alfalfa hay or Alfalfa Calculi. It is good practice to occasionally inoculate goats with B complex Vitamin. This promotes good health and helps them to eat well.

Measuring Your Success

Math can really help you figure out how well your project goat is growing. As you weigh your goat either with a scale or with tape measure (at least every 2 weeks). You can compare this to others in the project or to the Growth Chart in the Appendix at the back of this book. Your goat should gain $\frac{1}{3}$ to $\frac{1}{2}$ pound per day over the project but may not gain very much at first. It will take some time to become adjusted to a new area and to new feed. If it gets really hot your goat may not gain also.

Examples of Math for the Data Book

Let's say you have two weights on your record sheet. Calculate how many days there were between the weights and how much the goat gained. TO calculate Average Daily Gain (ADG)

Starting Date Weight: June 11 35lbs.
Two Week Weight: June 25 42lbs.
6/11 to 6/25 = 14 days
42lbs - 35lbs = 7lbs
Daily change: 7lbs in 14 days
ADG: 7lbs/14days = 0.5 lb/day

You can also do the math to calculate how much feed it took to add weight on your goat.

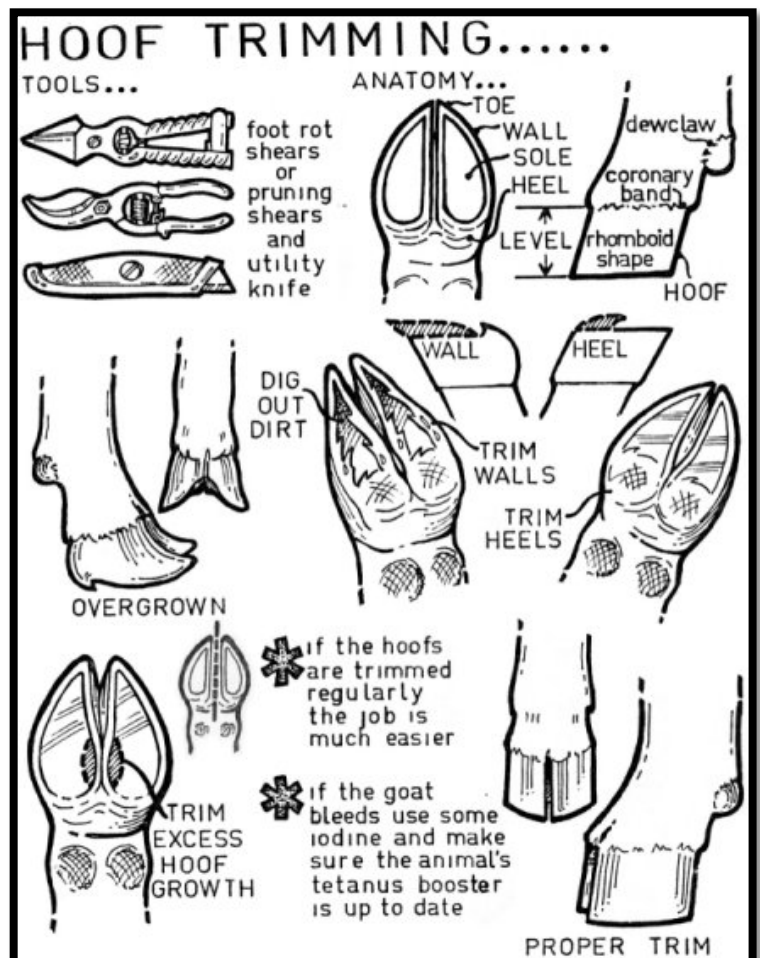
CARE OF THE GOAT

Hoof Trimming

A goat's hooves will grow long if they are not naturally worn down by walking over rough terrain. Hooves should be trimmed about every 6 weeks. Always trim hooves 1 to 2 weeks before a show in case you accidentally cut into the quick and temporarily cripple the goat. This will allow the goat time to heal before the show.

If foot rot develops, (foot smells really bad) have your parent treat it by trimming the hoof closely and placing the foot in zinc sulfate foot-bath and be careful.

(Picture provide Nancy Peach with the National Pygmy Goat Association.)



Dehorning or Tipping

Your project goat will most likely have horns. You need to work carefully with your goat so that the horns do not hurt you. Horns can be sharp and the goats will jump when you try to catch them. You can either tip the horn, which means cutting the tips off and rounding the ends, or tape something over the horns (tennis balls work great). Tipping can be done easily without causing much stress to the goat. Horns should be tipped 4-6 weeks prior to the show to allow the horns to heal properly. Dehorning is more expensive and needs to be done by a vet or someone who is experienced in this procedure. You can actually lose a goat from dehorning at the age of 4 months old. Dehorning or tipping rules are made for the safety of the exhibitor.

Goat Health

The key to a healthy goat is the development of a preventive health program. Most goats purchased for the project are on a health maintenance program and have had the clostridium C & D and a tetanus vaccine. Vaccinations and treatment for internal parasites are recommended. Use a veterinarian for health and medical advice and follow label directions for any medication or de-wormer. Withdrawal time means the number of days needed for the medicine to clear the body. Remember these are meat goats!

Is Your Goat Healthy or Sick?		
	Healthy	Sick
Appearance	Active, Alert, Playful and Shiny Coat	Depressed, Standing Alone, Lying Down, Head Down and/or Dull Rough Coat
Eyes	Bright and Moist	Dull, Sunken, Runny and/or Glazed
Nose	Dry	Water and/or Snotty
Stomach	Normal Shape	Bloated or Sunken in
Feet and Legs	Normal Shape and Walking Good	Lame, Limping, Swollen, Smelly Hooves and/or Stiff When Walking

Healthy Goat Vitals

Heart Rate: 70-90 beats per minute
(a young kid can be doubled)

Respiration Rate: 10-30 breaths per minute
(a young kids can be 20-40)

Temperature: 101.5-104

Disclosures and Disclaimers:

Remember we are not veterinarians, if you have any problem with your goat's health call your vet. They will diagnose and treat your goat. This book is only to help you with your goat.

Enterotoxaemia is a major cause of death in goats is enterotoxaemia or overeating disease. Cause: Goats that have their feeding schedule abruptly changed or consume large amounts of grain.

Symptoms: not any to say of.

Treatment: None by the time you have found out what is wrong, the goat is already dead.

Urinary Calculi is the number one killer of wether goats! This is stones in the kidneys and in the urinary tract. This will block the urine from leaving the body and will kill your goat! If not treated quickly the goat will not make it.

Prevention is the best:

Add ½ cup of Apple Cider Vinegar to water each day. You will have to dump out the old and make new each day, or add 1 Tablespoon of Acid Pac to 2 gallons of water (this should be done at least twice a week.) Make sure your goat is drinking water. The more water they drink the less chance the stones will form. One way to make sure he is drinking is to add 1 Tablespoon of table salt to each daily feed ration.

Do not feed your goat CORN of any type! Make sure your feed is for goats and is 2:1 in Calcium to Phosphorus. Too much Alfalfa hay can also cause this problem. If you have to call your vet this will be very expensive. Prevention is easier, less expensive, and better for you and your goat.

Symptoms:

- Standing with feet apart while trying to urinate and cannot.
- Kicking at belly and hollering
- Not eating or drinking

Treatment:

- Drenching goat with Apple Cider Vinegar and water (20cc ACV to 10cc water every hour)
- Acid Pac if you have one
- Call vet or your advisor.

Your goat must have plenty of fresh water at all times!!!

Coccidiosis is intestinal protozoa that live in the lining of the intestines and destroy these cells. This is very contagious to your herd. Most commercial goat rations are medicated with a coccidian stat that should help control coccidiosis.

Symptoms:

- Sticky black diarrhea
- Dehydrated
- Weight loss
- Weakness

Treatment:

Treat water with Corrid, you may use this with all your goats. Any sick goat should be separated from herd and treated.

Internal Parasites are stomach or round worms (nematodes), flukes (flat worms), Protozoa, Lungworms, Pinworms and Tapeworms, The most serious are the stomach worms, these will kill your goat if not treated quickly. Prevention is having feed off the ground and cleaning the pen area of your goat. Also keeping your goat pen free of manure and cleaning any feed that has fallen on the ground. Rotation of your goat pen every month and keeping the pen dry.

Symptoms of Internal parasites:

Rough coat, gums and eyelids are pale. Your goat may look bloated and depressed. Goat is not gaining weight.

Treatment:

De-wormer as soon as possible. We will be selling these goats at the end of the show season. Therefore you will have to watch the withdrawal time on the de-wormer you use. If you have any questions please ask your vet or your county advisor.

External Parasites are ticks, fleas, flies, lice, ear mites and bots.

Symptoms:

Missing hair, rough coat

Treatment:

Some de-wormers will treat both internal and external parasites. You can find sprays at the local feed stores that will help.

Acidosis occurs when the ph in the rumen and body is low. This is usually caused by too many carbohydrates such as grain and molasses.

Symptoms:

- Goats quit eating
- Bloated
- Quit chewing their cud
- May have diarrhea
- Depressed

Treatment:

- Give lots of hay
- Probiotics and baking soda

After the goat improves start back with a rationed feed little at first until the goat is much better.

Sore mouth is also known as Contagious Ecthyma is a viral disease. This virus can affect humans, so be careful handling an infected goat. Once a goat has this it will not have it again.

Symptoms:

Formation of scabs on the lips and mouth area

Treatment:

Softening ointments or diluted iodine may be rubbed into the lesions TO HELP THE HEALING

Ringworm is a contagious fungus. Goats can pass it one to another and can also pass it to you. It can be rubbed on skin or equipment.

Symptoms:

Red ring area that itches

Treatment:

- You will have to see a doctor if you get it.
- Antibiotic from the vet will be needed for your goat.
- A good sanitation program is necessary to control the spread.
- Novasan – 3 ounces per gallon of water or 10% bleach solution may be sprayed on affected equipment and premises.

Pinkeye is a contagious disease. It can be passed to other animals and humans. Goats are susceptible to pinkeye especially after they have been transported to a new location. Dry, dusty pens and constant exposure to sunlight can be contributing factors.

Symptoms:

- Excessive watering of the eye
- Clouding of the pupil

Treatment:

There are several medications on the market for pinkeye. Penicillin is used most. If you do not notice improvement within a few days after treatment, contact your vet.

Pneumonia

This is an infection of the lungs.

Symptoms:

- Snotty or runny nose.
- Stands around with head down, sounds congested, elevated temperature and coughs.
- Breathes rapidly or with difficulty.

Treatment:

Call your vet; they have several antibiotics that work quickly. Pneumonia will kill a goat is not treated quickly!

Illegal Drugs

State and Federal laws have regulations concerning the use of drugs for livestock and are established to protect human and animal health. These instructions and restrictions on product labels must be strictly followed. The labels state the species or class of livestock for which the drug is to be used, the recommended ways to treat the animal with the drug, the approved dosage rate and the specific condition to be treated. Therefore, when treating animals with drugs, you should always follow label instructions and consult your veterinarian for proper health care.

Controlling Parasites

Your goat will grow and gain weight best when he is kept free of both internal and external parasites. Parasites, while stealing nutrition from your goat, cause severe stress. Goats with parasites spend more time trying to rid themselves of their discomfort than they do eating and growing, It is essential that you wether goat is monitor closely for parasites and treated appropriately for him to be healthy. The most common parasite problems in goats include stomach worms, coccidian and lice. "Wormy" goats will eat continually and still lose weight, because all the nutrients are going to feed the worms. Soft stool is common as well as diarrhea and "bottle jaw" (sagging skin under the chin) can result when an animal is seriously "wormy". If not treated immediately when you find bottle jaw you will lose your goat. Your goat's coat may also look dull and unthrifty.

A veterinarian can perform a fecal test to determine worm infestation. However, you can use a fairly reliable field test to check for worms yourself. Pull the lower eyelid down. The inside of the lower eyelid should be red to bright pink in color if the goat is healthy. Wormy goats have inside lower eyelids that are light pink, and severely infected goats (who are probably on the verge of dying) display white eye lings. It is very difficult to bring an extremely anemic goat back to health.

If you believe your goat has worms, you should treat him by drenching (giving oral de-wormer medicine) to him immediately. The following are a few of the de-wormers available at your local feed store, and their dosages. You must dose your animal as instructed based on their current weight. Improper dosing will result in a poor kill of the parasites and may lead to resistance to the de-wormer.

Ivermectin (Ivomec) injectable product for use in cattle and swine. Give orally at the dosage of 1cc per 50 pounds of body weight.

Example: a 60 pound wether will need 1.25ccs by mouth. This de-wormer will also help with external parasites.

Cydectin (Moxidectin) a purple pour-on for cattle. The dosage for goats is 1cc per 15 pounds of body weight given orally. Do not pour on your goat!!!!

Example: a 60 pound goat would need 4ccs.

This de-wormer is a favorite of many goat producers and result in a quick and efficient kill of most parasites.

Safeguard (panacur) one of the “white” de-wormers. To be given orally at the dose of 2ccs per 50 pounds of body weight. This amount can be doubled without fear of overdose to treat tapeworms. (If you are seeing worms in your goat’s droppings, it is tapeworms.)

Example: a 50 pound goat would receive 2ccs orally normally, or 4ccs orally if you were treating tapeworms.

WARNING: Many parasites common to goats have developed a resistance to a particular de-wormer. If your dew-wormer does not seem to be working for you, change immediately to a different de-wormer. If your goat continues to be “wormy”, consult a veterinarian for a fecal test.

Lice

Lice can also cause major health problems for goats. Lice come in two basic varieties: bloodsucking and non-blood-sucking. Viewing the parasite under a microscope is the only way to determine the difference. Blood sucking lice can cause anemia and death.

Many times you may think your goat is “wormy”, and then you treat for worms and still have ragged-looking animals. Their coats are rough and continue to lose weight. At his point, TREAT FOR LICE. Don’t worry which type they are (bloodsucking or non-blood-sucking); just treat for them. Synergized DE Lice is a product which is inexpensive, can be bought over the counter in gallon bottles, and is easy to apply. A squeeze bottle with a small applicator tip is desirable. An old mustard bottle will work wonderfully. Only a small amount of DE Lice (approx. 1-2 ccs for a goat under 100 pounds) is required and is applied along the back of the goat from the base of the neck to base of tail. Results should be visible within seven days. Goats should be treated for lice every 4 weeks.

Another parasite threat to your goat comes in the form of coccidian. Coccidian is the most common cause of diarrhea in kids between three weeks and five months of age. Coccidian can be found everywhere in the environment and otherwise healthy goats do not show clinical signs when exposed to it. However, coccidian is opportunistic. It affects goats that are under stress or have otherwise weak immune systems. Goats kept in crowded, dirty conditions, who are sick, or who are not properly fed and watered are susceptible to coccidiosis. You should suspect

coccidiosis if your kids show poor growth rates, weight loss or abnormal stools. Coccidian destroys the lining in the gut. The signs of coccidian are colic (belly ache) and diarrhea. These result from destruction and inflammation of the intestinal lining (mucosa). Massive infections can lead to bloody diarrhea and death from blood clots. If the kid survives, the damage to the gut can be so severe it leaves you a “runty” kid. This “ill thrift” results when the damage to the gut prevents proper absorption of nutrition. It is important that you feed a goat ration that is medicated with a “coccidiostat” to help prevent a coccidian infection. However, if you suspect coccidian, the following is the preferred treatment method by goat producers.

Albon Concentrated Solution 12.5% or DiMethox Concentrated Solution 12.5% straight from the bottle; do not mix with water. Given Orally Administer straight into the mouth using a syringe (remove the needle). Do not just add it to the kid's water because you will not know if he receives the correct dose.

Five day treatment- you must treat for the full five days.

Day one: 1cc per 5 pounds-given orally.
Example: 60 pound goat will need 12ccs.

Day 2-5: 1cc per 10 pounds-given orally.
Example: 60 pound goat will need 6ccs.

TRAINING AND PREPARING TO SHOW

Exercise can be very beneficial to your goat and to your success in the show ring. Goats are very active animals. If given enough room, they will exercise themselves. Have object like big rocks or wooden spools in your pen for climbing and jumping. This will provide your goat with an excellent opportunity to exercise itself. A goat that exercises will handle harder and firmer, and will give you an advantage in the show ring.

Washing and Grooming- It is not always necessary to wash your goat, but it can be beneficial. Use a mild soap sparingly, rinse the animal thoroughly and dry the goat completely. Then, brush your goat with a brush on a regular basis. Brushing removes all the dead hair and dirt. Grooming also can enhance the look of your goat in the show ring. Grooming refers to trimming uneven lengths of hair and generally cleaning up the overall appearance of your goat. Most youth that show will cut the hair of the goat and tail.

Halter Breaking is an excellent way to start the gentling process. Collars, chains or inexpensive rope halters can be made or purchased from feed and livestock supply stores. Goats should be caught, and worked with on a regular basis. Once your goat begins to calm down and become gentler, you can start teaching him to lead. Have someone assist you by pushing the goat from behind whenever it stops.

Teach the goat to lead with its front should even with your leg. The goat's head should be in front of your body and should be held high.

Training Your Goat to Show Some people are natural showmen, but all exhibitors can learn techniques to improve their showmanship skills. Pre-show preparation is the amount of time required to train a goat for showing. Pre-show preparation depends on the goat, the physical size and experience of the exhibitor, and the intensity of training. Some goats are gentle and easy to train for showing: and other goats are more difficult or nearly impossible to train. Most goats can be trained if enough time and effort is spent with them. Don't give up!!!!

Setting up your Goat The next step in the training process is to lead the goat and properly set it up. Setting up refers to the way the goat stands in the show ring. Set the legs up square under the goat. First, set up the front legs, and then place the hind legs, keeping the body and neck straight and the head in a high, proud position with the halter, chain or collar. You should stand next to your goat at all times. After the training is complete, you may wish to practice showing. Set up your goat and show it while someone else handles it. You must make sure the goat looks good at all times. If the goat responds properly, return it to the pen and do not overwork it. If the goat does not show properly when the judge handles it, you may get overlooked. Most of the judges will touch the goats' legs and back, it takes lots of practice for a goat to get use to that.

Sportsmanship We all want to win the blue ribbon for 1st place. However, there can only be one. Good sportsmanship doesn't start in the ring. It starts when you get out of the truck or car and will last until you get back into the truck or car. Everyone will not remember the number of blue ribbons you win, but they will remember your sportsmanship and character.

Good Sportsmanship

- Follow the rules
- Be ethical and honest
- Do not cheat
- Treat your goat with kindness
- Treat others with kindness, courtesy and respect
- Accept the ruling of a judge without complaining
- Exhibit your own work

Ethics will be a part of your entire life. Don't let your desire to win outlast your ethics. There are ways to make your goat better than it really is, Some of these are unethical and not what we want you to do. Remember you and your family are being watched by others. There are groups who do not want us to show goats and are waiting for someone to treat a goat unethically so they can use it to end goat shows. If you always act as if someone is using a camera to record what you are doing maybe you will think before you act. Try this, are you doing something that you would not want others to know, if the answer is yes then maybe you shouldn't do it. So please treat your goat and others the way they should be treated.

PREPARING FOR A SHOW

- Carefully read over the show's rules and requirements.
- Send in registration papers to show officials by due date!
- Keep dates and times for shows and directions to fairgrounds.
- Train your goat for showing.
- Practice good showmanship techniques.
- Study questions judge may ask.
- Have a way to transport your goat to and from show.
- LEAVE IN PLENTY OF TIME, THE SHOW WILL NOT WAIT FOR YOU!

BEFORE LEAVING FOR THE SHOW

- Trim feet of your goat.
- Groom your goat (wash, trim, etc.).
- Check on health papers if need by the show.
- Take only the amount of feed you think you will need or a little extra.
- Bring hay if you think your goat will eat it.
- Take water for your goat (some fairs have city water, goat won't drink).
- Bring extra clothes for showing and towels to clean your goat.
- Check your show grooming box and see if you need to replace or add anything.
- Bring feed and water buckets (make sure your name is on them).
- Bring a water hose.

SHOWTIME

Your planning, feeding, fitting, training, and grooming have brought you and your goat this far-to the show ring. Now, your skill in exhibiting your goat-showmanship-cannot be emphasized too strongly.

You should be mentally and physical ready to enter the show ring for competitions. By completing the pre-show activities, you should have confidence that you can do

an effective job showing your goat. You should be neat in appearance, but not overdressed. Do not wear a hat or cap, sunglasses or open toed shoes.

Before the show begins, become familiar with the show ring. When the judging begins, watch to see how the judge works the goats. You will feel more comfortable and confident if you know what he judge will want you to do. Each judge is different and does things differently.

When the appropriate class is called, take your goat to the show ring. Lead the goat from the left side with the right hand when possible. Keep the goat between you and the judge. Keep the goat's front shoulder even with your leg and the goat's head in front of your body. Showmen should hold the collar using their right hand palm facing upward and toward the goat's head (See picture). Showmen should let their left arm relax at their side. There is no need for the showmen to place their left arm behind their back.



Picture provided by Jeffers Pet Website

When leading your goat in the show ring, it is always best to avoid corners of the ring and leave plenty of space between your goat and others. Set your goat up, making sure the legs are set properly, and keep the body and head in a straight line with the goat's head up and alert. If you must encourage the goat to lead by pulling its tail, change hands and hold the collar with the left hand, lightly pull the tip of the goat's tail with the right. As the goat begins moving, change your hands to their original position.



If the judge pulls you into line, your goat's shoulder should line up with the shoulder of the first goat in line. Keep your goat parallel to the other goats. If the judge lines you up head-to-tail, always line up straight behind the goat at the front of the line. **KEEP THE LINES STRAIGHT---** this will make it easier for the judge to evaluate and compare goats.

As soon as you have secured your spot in the line, it will be time for you to set your goat up. A goat's feet should be placed on the four corners of its body, and the goat should not stand too wide or narrow on either the front or back legs. On the profile, goats should not have their hind legs



pulled forward too far underneath them or stretched backward too far behind them. Keep the goat's head straight over its body. The goat should look eye appealing.



Picture provide by Randy Williams,
Washington State University Extension

The judge may then come to handle your goat at any time during your class. Before the judge approaches you, you should brace your goat. To properly brace an animal, the showman's hands, knees, and feet must be positioned correctly. This may differ based on the showman's size and what feels natural (Figure 5). Use the combination of hand, knee, and foot positioning that works best for you and your goat, Techniques may change as the showman becomes taller and stronger. The most effective way to brace a goat is to use what feels most comfortable to the showman while getting the best possible brace from the goat. The goat's front feet can be lifted slightly off the ground to set them or cue the beginning of the brace. All four feet should remain on the ground while bracing. Holding and animal off the ground can be uncomfortable for the goat. In addition this technique often makes a goat look worse structurally because the animal will usually have a "dip" in front of its hip causing it to lose loin shape.

Know where the judge is and stay alert. The judge may handle your goat at any moment or ask you to move to another place in the show ring. Moving goats from one point to another is just as important as correct positioning of their feet and bracing. When a judge asks a showman to move to another location, take the most direct path available. Goats should be turned slightly and pushed out of line if on a rear-view or pushed out of line before proceeding to the desired location with the goat between the showman and judge. Do not push the goat straight back or it will think you are signaling it to brace, and it will not move backward as desired. The showman should maintain eye contact with the judge while occasionally looking at the desired destination. When the showman is required to change sides, he/she must move around the front of the goat always facing the animal. Never change hands behind your back. Do not step behind the goat.



In large classes, it may take 20 minutes before the judge handles your goat. After handling your goat, the judge usually will step back and look at it. Be sure to keep the goat's head up and body, neck and head in a straight line. Also it is very important to watch the judge and your goat at all times while in the show ring. It is your responsibility to watch the judge so you will not miss any of his or her directions. If your goat is not pulled the first time, keep trying.

In the showmanship class a judge will ask you questions. The older you are the harder the questions will be. Read all you can about goats, in this book and others. Look up websites that have goat health. Here are two that will be helpful:

Tennesseemeatgoats.com

or

Jackmauldin.com

Be courteous to fellow exhibitors. A good showman will emphasize strong points and minimize weak points of a goat. Be alert at all times and always display a pleasant facial expression (smile). Remember to use good manners and always remember to:

SHOW GOAT QUALITIES

The following are important qualities in show goats:

- Structural Correctness
- Muscle
- Volume and Capacity
- Style and Balance
- Growth Potential

Structural Correctness refers to the skeletal system of bone structure of an animal. A goat should hold its head up and the neck should extend out of the top of the shoulders. A goat should travel and stand wide and straight on both front and rear legs with the legs placed squarely under the body. A goat should have a strong, level back, and a long rump with slight slope from hooks to pins. Your goat should be heavy boned and strong on its pasterns. Open shouldered, weak backed, weak-pasterned, steep-rumped goats should be avoided. Generally, a goat that walks and stands wide is going to be heavier muscled.

Muscle refers to the amount of muscling the goat possesses. The goat should have deep, heavily muscled legs and rump. When viewed from behind, the widest part of the leg should be the stifle area. The goat should have a broad, thick back and loin that is naturally firm and hard handling. A good goat should be wide through its chest floor, with bold shoulders and prominent forearm muscle. The chest and forearm are the best indicators of muscling in thin goats.

Volume and Capacity refers to the relationship of body length to body depth and body width. Goats should be long-bodied, with adequate depth and spring of rib. A goat that is short-bodied, shallow-bodied, narrow-based and/or flat-ribbed show lack of volume and capacity.

Style and Balance refers to the way all of the body parts blend together. This means how the neck blends in the shoulders, the shoulders blend into the ribcage,

the ribcage into the loin, the loin into the rump, and the overall “eye appeal” of a goat. When viewed from the side a goat should have a smooth shoulder, level back, trim middle, and straight legs. A goat that is balanced and holds its head up will be the first you notice when you walk into the pen.

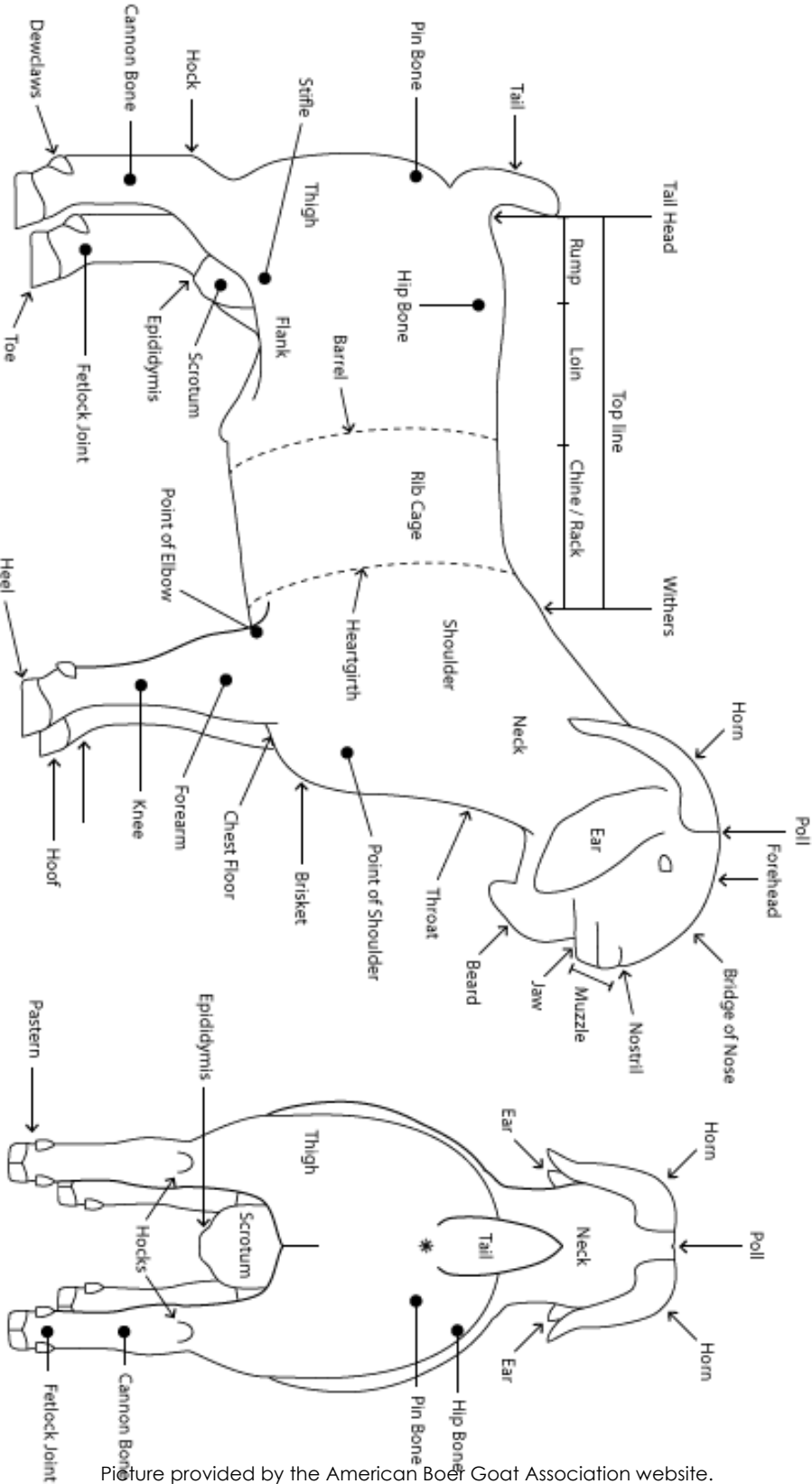
Growth Potential refers to the ability of the animal to grow rapidly. Growth potential of an animal is very important. Generally, a large framed goat that shows a long head, neck, cannon bone and body, will grow faster, be larger, and be more competitive in the show ring.

These are meat goats. At the end of this project we will try to have a buyer there to purchase your goat. To be able to sale your wether you will have to remember to keep it healthy and free from chemical residues (De-wormer and other medications). All medications have a withdrawal date and you must follow it to be able to sale your goat.

OTHER HELPFUL INFORMATION

Goat Anatomy

Picture provide by the American Boer Goat Association.

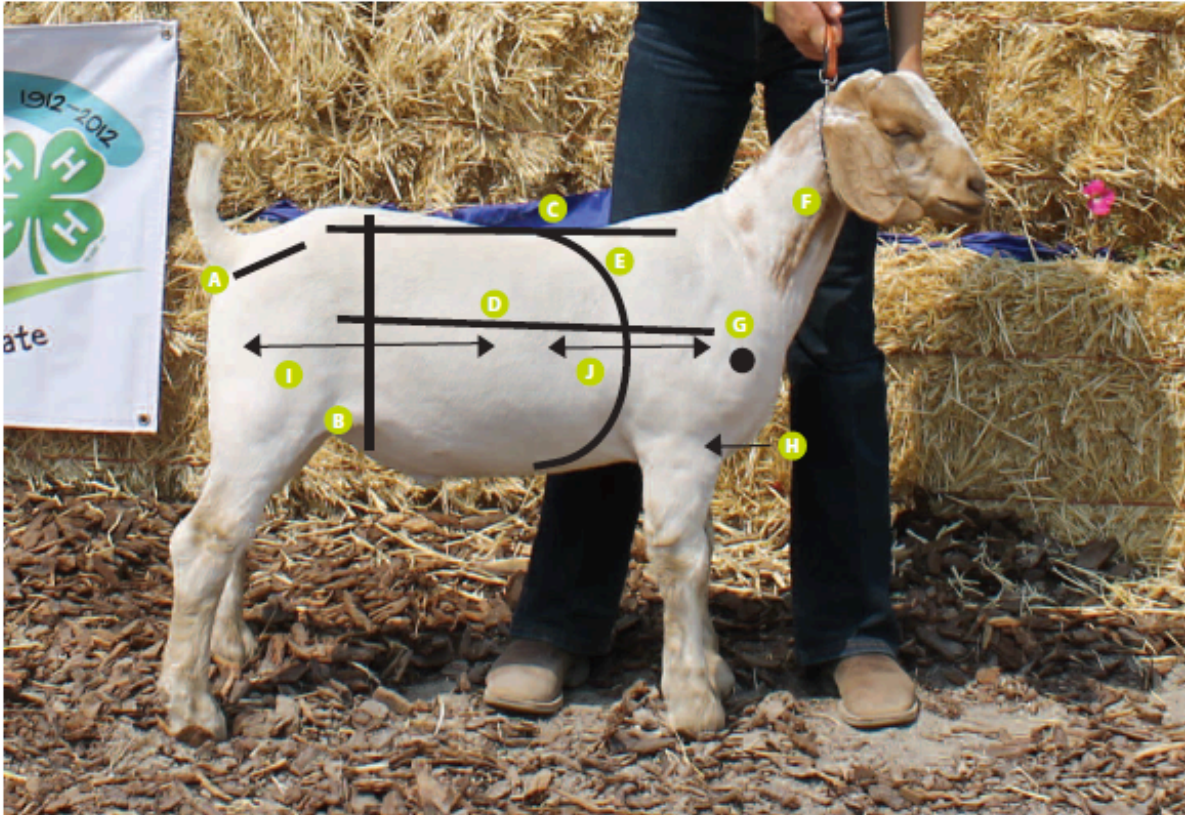


Picture provided by the American Boer Goat Association website.

Term Used to Describe Meat Goats

(Picture and information provided by Judging Meat Goats and Oral Reason 101 by University of Idaho Extension)

Knowing the parts of an animal is important, and so is knowing the terms that are associated with those parts. You can build confidence and portray competence when you talk the same terminology as other producers.



- A. Hooks to Pins
- B. Depth of Flank
- C. Top of Topline
- D. Length of Body
- E. Spring of Rib/Barrel

- F. Thin Necked
- G. Point of Shoulder
- H. Chest Floor
- I. Hind Saddle
- J. Front Saddle

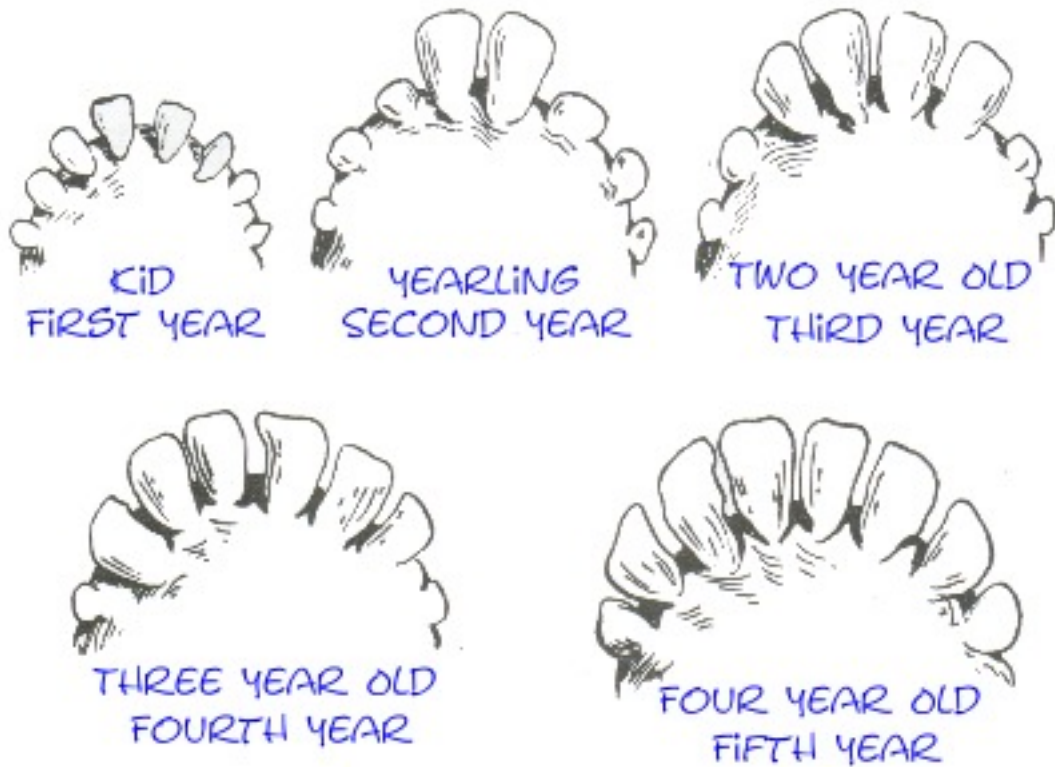
Goat Teeth

(Information Goat Lady's webpage)

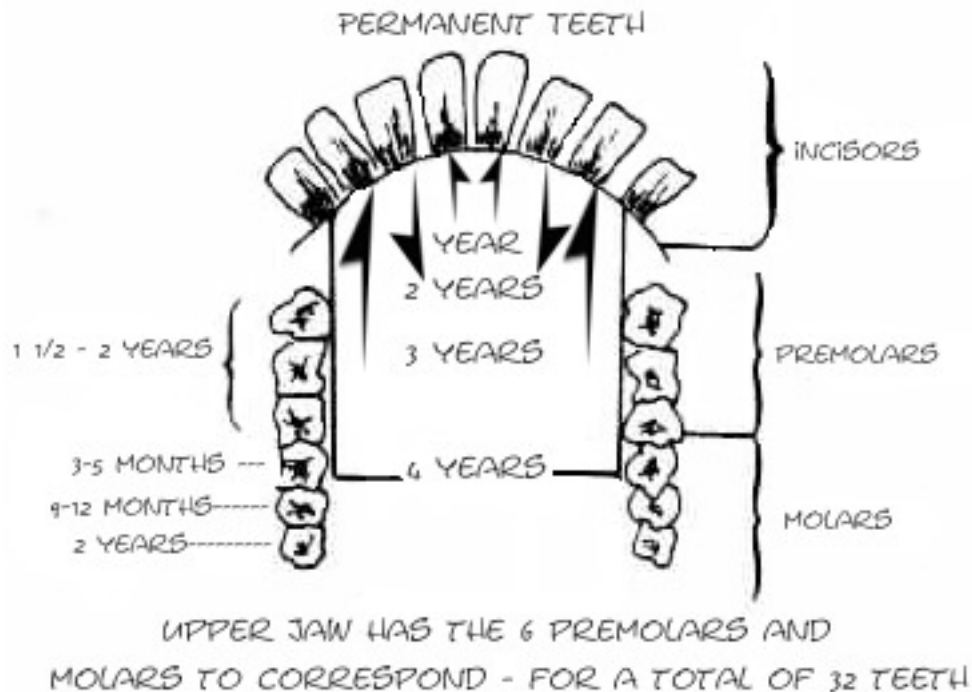
Healthy teeth are important to the goat, enabling her to chew properly and digest her food. Goats do not have top front teeth. They have as adults 8 bottom front teeth and a set of molars and incisors- 32 teeth in all. Baby kids are born with teeth although they are sometimes covered with a thin layer of tissue.

A goat will loose it's teeth in sets of 2; starting with the middle 2 front bottom teeth at around 1 1/2 yrs old. The rest to go are the next in line at 2 /12 yrs old until all 8 front

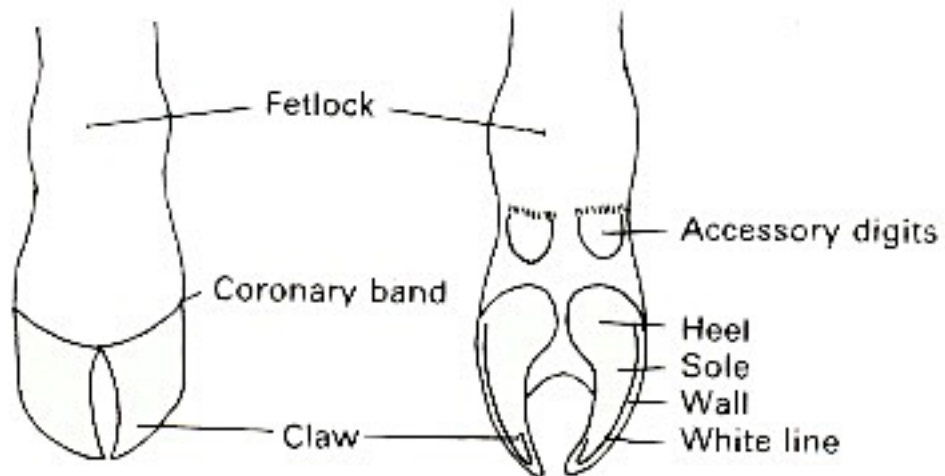
teeth are replaced with adult teeth. If you are looking to buy a goat and it is under 5 years of age you should be able to determine the age by which teeth it has.



This is a diagram of the entire set of teeth. Goats do NOT like to have their mouths opened so this may be the only chance you get to see this.



Parts of a Goat Hoof



Growth Chart: Determinations of Goat Weight Utilizing a Weight Tape

Hearth Girth (inches)	Goat's Weight (pounds)	Hearth Girth (inches)	Goat's Weight (pounds)
17 ¾	21	25 ¼	57
18 ¼	23	25 ¾	60
18 ¾	25	26 ¼	63
19 ¼	27	26 ¾	66
19 ¾	29	27 ¼	69
20 ¼	31	27 ¾	72
20 ¾	33	28 ¼	75
21 ¼	35	28 ¾	78
21 ¾	37	29 ¼	81
22 ¼	39	29 ¾	84
22 ¾	42	30 ¼	87
23 ¼	45	30 ¾	90
23 ¾	48	31 ¼	93
24 ¼	51	31 ¾	96
24 ¾	54	34 ¼	99

A glossary of commonly used meat goat industry terms and definitions are available on the project website. You may request a copy of this glossary book by contacting the SC 4-H/FFA Meat Goat Project Advisory Committee.

For more information about the SC 4-H/FFA Meat Goat Project, please contact your local Clemson University Extension Office.

Visit our website: www.sc4hffameatgoatproject.com

Find us on Facebook: www.facebook.com/sc.meatgoatproject

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