



Mid-Atlantic 4-H Market Goat Project Guide



Virginia Cooperative Extension

Knowledge for the Commonwealth



VIRGINIA POLYTECHNIC INSTITUTE
AND STATE UNIVERSITY



VIRGINIA STATE UNIVERSITY



2006

www.ext.vt.edu

PUBLICATION 380-310

Produced by Agriculture and Extension Communications, Virginia Tech

Virginia Cooperative Extension programs and employment are open to all, regardless of race, color, national origin, sex, religion, age, disability, political beliefs, sexual orientation, or marital or family status. An equal opportunity/affirmative action employer. Issued in furtherance of Cooperative Extension work, Virginia Polytechnic Institute and State University, Virginia State University, and the U.S. Department of Agriculture cooperating. Mark A. McCann, Interim Director, Virginia Cooperative Extension, Virginia Tech, Blacksburg; Alma C. Hobbs, Administrator, 1890 Extension Program, Virginia State, Petersburg.
VT/0206/W/380310

Mid-Atlantic 4-H Market Goat Project Guide

*Cynthia Estienne, Virginia Cooperative Extension 4-H Youth Development Agent
Susan G. Schoenian, Maryland Cooperative Extension Sheep and Goats Area Agent
Susan Truehart Garey, Delaware Cooperative Extension Animal Science Agent*

Requirements for Show Goats	1
Goat Selection	2
Facilities and Equipment	4
Health	5
Feeding	10
Preparing Your Goats for Show	14
Showing Your Market Goat	16
Record Keeping	17
Market Goat Project Calendar	17
The Experiential Learning Model	18

Introduction



According to USDA statistics, the meat goat industry is growing at a rate of 10 percent to 15 percent a year. Yet, U.S. farmers do not produce enough goats to meet the domestic demand for goat meat. The growing demand for goat meat is due to the increasing immigration from regions of the world where goat meat is a preferred protein source. Among the largest consumers of goat meat are those from the Middle East, Latin America, and the Caribbean islands. The demand for goat meat is strongest on the East Coast and in urban areas with large ethnic populations.

The introduction of the (South African) Boer goat breed in 1990 brought the first true "meat breed" to the United States. It was followed several years later by the (New Zealand) Kiko. Before the introduction of these breeds, meat production was mostly a by-product of the mohair (fiber) and dairy-goat industries.

Market, or meat, goats make ideal 4-H project animals for many reasons. Generally, the purchase price of goats is small and the facilities needed to maintain goats are minimal. Goats are not that large and can be handled by 4-H'ers of all ages, even if they do not have a great deal of previous livestock experience.

The market goat project will help you gain knowledge of the livestock industry in general and the meat goat industry in particular. By participating in the market goat project you will learn responsibility and money management, record keeping, livestock handling, and livestock selection skills.

In order to successfully complete the market goat project, you will need the support and encouragement of your parents and 4-H leaders. However, the responsibility for the daily care, training, and grooming should be yours.

Requirements for Show Goats



Before you begin selecting your goats, you should carefully review the rules and regulations governing the show(s) you plan to enter. In various programs, a market goat can be a purebred or crossbred doe (nanny), buck (billy), or wether (castrated male). Many shows restrict the sex of the animals and sometimes the breed.

Most shows require the males to be castrated. Your project animal should be less than one year of age. Some shows require that your animal be disbudded (dehorned). This procedure and castration are best done at a very young age. You should make every effort to obtain an animal that is already dehorned and castrated if this is a show requirement. However, if you must purchase a weanling goat and need to dehorn or castrate, you should consult a veterinarian.



Goat Selection



Once you know the specific requirements of the market goat program in which you are participating, it is time to locate your project animals. Your project leader or local Extension agent can direct you to breeders in your area.

The care and feeding you give your market goat will have a large influence on the outcome of your project animal. However, your goat can never be better than its genetics. In other words, it is essential that you select a well-muscled, adequately framed, healthy goat to start your project.

Goats typically are born in late winter or early spring and weaned at approximately three months of age. Although you may not need your animal until much later, you may want to visit goat breeders to see their herds and let them know what type of animal you are looking for, particularly if there are show requirements concerning dehorning and castration.

Goats differ from most market species in that there is a demand for every size of goat. You should review your show's rules to determine what an acceptable weight range is for your goat(s). There are usually minimum and sometimes maximum weights (e.g. 40 to 110 pounds).

Healthy goats typically gain 0.3 pound per day. Some will gain more and some will gain less. By determining the number of days you will be feeding your project animal you can determine approximately how much weight it will gain and what size animal you should start with in order to reach a certain weight (see Table 1). Extremes in frame size, either large or small, are not desirable.



Table 1. Determining the Purchase Weight of Goats

Final Weight (lbs)	Length of Project (days)	Weight to purchase (lbs)
80	60	62
80	90	53
80	120	44
80	150	35

Meat goat breeds include, but are not limited to Boer, Kiko, Spanish, and Myotonic (Tennessee Fainting Goat). The Boer is the most readily available breed for market projects. There are financial advantages in purchasing crossbred goats. They will be less expensive than purebreds, and the "hybrid vigor" from crossbreeding can allow the animals to excel in growth and efficiency. Hybrid vigor means that, usually, the kid is better than the average of its parents. However, whatever breeding you choose, the goat's muscling should be your major concern. A well-muscled goat will carry thickness down the leg and through the loin. It will stand wide between the legs. The goat you select should be healthy. Avoid purchasing a goat with runny eyes or nose, abscesses, or evidence of scouring (diarrhea).

Finally, it is best to purchase and feed more than one goat for your project. Goats are herd animals and do not do as well when they are alone. They can also make a significant amount of noise if they are alone.

Facilities and Equipment



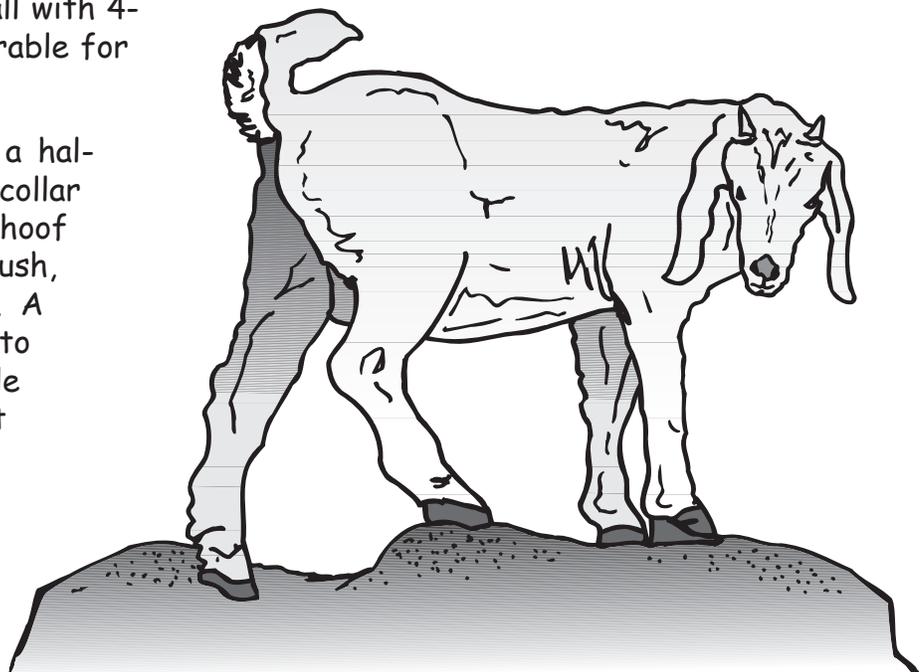
Goats are excellent 4-H project animals because of their limited requirements for space, facilities, and equipment. A goat's primary needs are feed, water, and protection from bad weather. A goat requires 25 square feet of space, so you can make a small pen to hold your project animals. You should provide shelter (about 15 square feet per goat) to shade your animals and for them to take cover under in bad weather. Goats do not like to get wet!

Animals should not be fed on the ground, so you will need a feeder and water tub/bucket for your animals. To ensure that each animal is getting adequate feed, provide 12 inches of feeder space per goat. All feeders should be raised off the ground to prevent the spread of disease. Self-feeders should be at least 6 inches off the ground.

If you hand feed your goats, you should use movable feeders that are at shoulder height of the goats being fed. Always keep feeders and waterers clean and free from mud, urine, and manure. Goats should not be allowed to stand in their feeders. Water containers should be small in size so you can drain and clean them on a regular basis. They should be located in the shade to keep the water cool. Water should always be available to the goat.

Fences and gates should be at least 42 inches, and preferably 48 inches, high to keep goats from trying to jump. Fences should be predator-proof. Net-wire or high-tensile electric wire fences may be used to contain goats. Pens constructed from galvanized livestock panels that are 5 feet tall with 4-inch squares are desirable for pens/lots.

You will also need a halter or nylon dog-type collar to lead your goats, hoof trimmers, a stiff brush, and electric clippers. A fitting stand is useful to hold your animals while you work on them, but you also can tie goats while you groom them.



Health



It is important to provide healthy living conditions for your goats. When you acquire your goats, you should put them in a clean, dry pen with hay and plenty of fresh, clean water. Once your goats are penned, you should treat them for stomach worms and coccidia and vaccinate them for overeating disease. If you have other livestock, keep new goats away from the rest of your herd (quarantine them), with no fence-line (nose-to-nose) contact for at least 30 days. You should extend this period of time if your new goats have any health problems.

The most important thing you can do to keep your goats healthy is to observe them and be able to recognize the difference between an unhealthy and a healthy goat. When you notice symptoms early and treat your goat, the chance for complete recovery can be very high. When a goat stops eating or appears lethargic (sluggish), you should take action immediately. You can gain valuable information by taking the goat's temperature and looking at its mucous membrane color and fecal consistency. Give this information to your veterinarian so he or she can make a diagnosis. You should collect fecal samples from a sick goat and have them checked for the number of parasite eggs. A goat's normal vital signs are listed in Table 2.

Table 2. Goat's Normal Vital Signs

Age	Rectal Temperature	Pulse	Respiratory Rate
Kid	101.5-104.0°F	70-180 beats/min	10-30 breaths/min
Adult	101.5-104.0°F	70-90 beats/min	20-40 breaths/min

Internal parasites (worms) are usually the major health problem affecting goats. Worms can decrease your goat's average daily weight gain (pounds per day) and feed efficiency (feed required per pound of weight gain). If left untreated, worms can kill your goats. The worm that usually causes the most problems is *haemonchus contortus*, more commonly called the "barber pole" worm. It is a blood-sucking worm that causes anemia (loss of blood volume and proteins) in the goat.

Goats that have large numbers of barber pole worms in their stomachs are unthrifty and have a rough hair coat. They will have pale mucous membranes and may develop "bottle jaw," an accumulation of fluid under their jaws. An easy way to check for anemia is to look at the color of the goat's lower eyelid. The eyelid of a healthy goat will have a healthy pinkish-red color with lots of blood vessels. Goats with lots of barber pole worms will have pinkish-white or white eyelids. There are other stomach worms that can cause digestive problems, such as diarrhea, in your goats.

Dewormers, also called "anthelmintics," are used to treat animals for worms. They are available in several forms:

- drench (a liquid that you put down the goat's throat)
- bolus (a big pill)
- pour-on (goes on a cow's back, but should be put down the goat's throat)
- paste (oral)
- injectable (a shot)
- feed additive

The Food and Drug Administration (FDA) has approved only two anthelmintics for goats. They are fenbendazole (SafeGuard®, Panacur®) and morantel (Rumatel®, Positive Goat Pellet).

The use of extra label drugs, such as ivermectin (Ivomec®), albendazole (Valbazan®), and moxidectin (Cydectin®, Quest®) requires a veterinary prescription. You should also consult a veterinarian to determine the proper doses for anthelmintics because goats use dewormers differently than sheep or cattle and typically need a higher dose than what is listed on the label. If your goats do not have access to pasture (grass) or are in a woodland area or large pasture, one treatment for parasites may be enough for the entire length of the project. Goats raised on pasture where they are grazing close to the ground may require more frequent treatment for worms.



Coccidia are another kind of internal parasite that can cause health problems in goats. Coccidia are single-celled protozoa that attack the lining of the goat's small intestine. They can cause death or permanently stunt a goat's growth by not allowing nutrients to be absorbed from the small intestine. Normally, all goats carry a low level of coccidia infection. Disease outbreaks occur during periods of high stress and/or when kids are kept in overcrowded or unsanitary conditions. Goats with high levels of coccidia may have diarrhea that is bloody or smeared with mucous. This condition is called coccidiosis. When young kids have diarrhea, coccidiosis is the most likely cause. The drugs that kill stomach worms have no effect on coccidia. Coccidiosis is treated with sulfa drugs (Albon®) or amprolium (Corid®). You will need to consult a veterinarian for advice on how to treat your goats if they have coccidiosis.

It is much better to prevent coccidiosis in your goats than to treat them for it. This can be done by adding monensin (Rumensin®) or decoquinate (Deccox®) to the feed or by purchasing feed containing one of these ingredients. The normal dosage rate is about 20 grams to one complete ton of feed. It is important to note that Rumensin® is poisonous to equines. You need to make sure that horses, donkeys, and mules do not eat goat feed that contains Rumensin® or Bovatec® (lasalocid) (a similar product that is fed to lambs). You also can add amprolium (Corid®) to the drinking water for periodic control of coccidia.

Overeating disease is caused by the bacteria ***Clostridium Perfringens***, and can be a big health problem in goats that are fed grain. The disease is also called enterotoxemia or pulpy kidney disease. It is a common problem in goats. It occurs most frequently when goats are eating a lot of grain (so they will grow fast) or when sudden changes have been made to their diet. The bacteria that causes overeating disease normally lives in the goat's digestive system. Under certain conditions, it will multiply and produce a toxic substance that can kill goats.

Overeating disease can be best prevented by vaccination. The vaccine for overeating disease protects against the bacteria that causes disease: ***Clostridium Perfringens*** type D. It is common to use a vaccine that includes a tetanus toxoid to also protect against tetanus ("lock-jaw"). Kids should be vaccinated twice - on the day you receive them and then again three to four weeks later. The vaccine is given subcutaneously, which means between the skin and muscle. A good place to vaccinate kids is underneath the front leg. Since the vaccine takes at least ten days to take effect, it is important not to give your goats too much grain until they have had a chance to build up immunity against overeating disease. Tetanus anti-toxin should be used if you are castrating or dehorning (disbudding) kids and you don't know if they have been vaccinated. Anti-toxins provide immediate, short-term protection.

Another problem that can affect male meat goats, especially those eating a lot of grain, is urinary calculi. Urinary calculi is also called "water belly" or kidney stones. Urinary calculi can occur when the proportion of calcium to phosphorus in the diet is improper. The proper proportion of calcium to phosphorus in the diet is at least two parts calcium to one part phosphorus (2 : 1). When the ratio is too low (such as only

1 : 1), kidney stones may form in the goat's urinary tract and prevent the kid from urinating.

Wethers are most likely to get urinary calculi, though bucks are also susceptible. Unless the condition is recognized very quickly, it is difficult to treat and may result in the death or euthanasia of the goat. Urinary calculi can be prevented by adding 1 percent limestone to the ration or by including ammonium chloride in the ration at a rate of 0.5 percent to 1.5 percent of the ration. Leafy legume hays (alfalfa, clover, peanut, and soybean) are good sources of calcium. Grain and soybean meal contain high amounts of phosphorus and are poor sources of calcium. Commercial goat feeds and vitamin/mineral premixes should contain the proper balance of calcium and phosphorus.

When medications, including dewormers and antibiotics, are used to treat your goats, you need to follow the instructions included on their labels or the instructions provided by your veterinarian. Many medications have a withdrawal period listed on the labels. This is the period of time you must allow between giving the medication and marketing the animal (for meat) or consuming its milk. If your veterinarian prescribes a dose higher than that on the medication label, be sure to ask about an adequate withdrawal time. It is extremely important to maintain accurate records so that meat and dairy products entering the human food chain are wholesome and free of drug residues.



Table 3. Drugs that have been used to treat internal parasites in goats

Trade name	Ingredient	Route	Approved species	Specificity	Labeled Dosage for Approved Species	Withdrawal Period for Approved Species
Albon	sulfadimethoxine	Oral	Cattle Poultry	Coccidia	2.5 g/100 lbs.	7 days
Bovatec	lasalocid	Feed additive	Cattle Poultry Rabbits Sheep	Coccidia	20-30 g/ton feed	0 days
Corid	amprolium	Oral	Cattle Poultry	Coccidia	10 mg/100 lbs.	1 day
Cydectin Quest	moxidectin	Pour-on Paste	Cattle Horses	Roundworms Lungworms Lice Ticks Mice Bot Flies	5 ml/110 lbs. 0.4 mg/2.2 lbs.	0 days n/a
Deccox®	decoquinat	Medicated feed	Cattle Poultry Sheep Goats	Coccidia	0.5 mg/2.2 lbs. 0.5 mg/2.2 lbs.	0 days
Ivomec	ivermectin	Injectable Drench	Cattle, swine Sheep	Roundworms Lungworms Lice Ticks Mice Bot Flies	1 ml/110 lbs. 3 ml/26 lbs.	35 days 11 days
Rumensin	monensin	Medicated feed	Cattle Goats	Coccidia	20 g/ton feed	0 days 0 days
Tramisol Levasol Prohibit	levamisole	Drench Oblets	Cattle, sheep Sheep	Roundworms Lungworms	1 ml/50 lbs. 1 oblet/50 lbs.	3days
Valbazan	albendazole	Drench	Cattle, sheep	Roundworms Lungworms Tapeworms Liver flukes	3 ml/100 lbs. (restricted during pregnancy)	7 days
Safeguard Panacur	fenbendazole	Drench	Cattle, goats	Roundworms Lungworms Tapeworms	2.3 ml/100 lbs.	6 days
Rumatel Positive Goat Pellet	morantel	Premix	Cattle, goats	Roundworms	0.44 g/100 lbs.	30 days

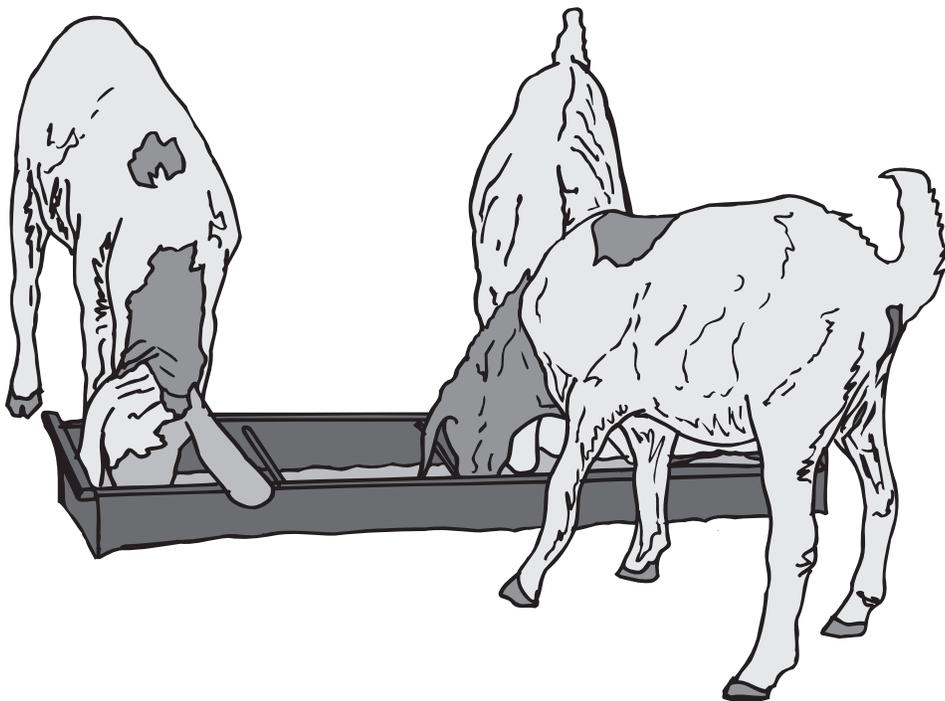
Feeding

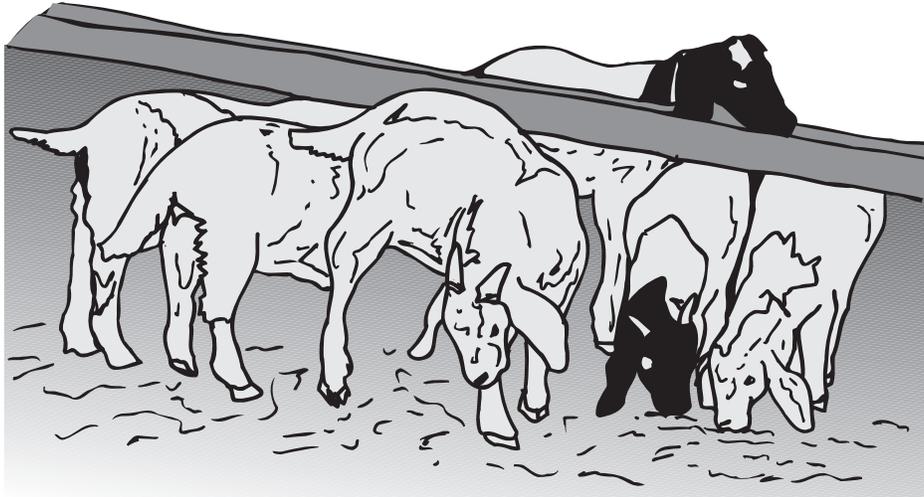


Feed is the second biggest expense of your goat project. You must take care to ensure that your ration is properly balanced with protein, energy, vitamins, and minerals to allow your goats to grow as quickly and efficiently as possible. A goat will require approximately 5 to 7 pounds of feed for each pound of weight it gains. For a goat gaining 0.3 pound per day, this is 1.8 pound of feed per day. A goat will perform better if the ration includes hay or the goat has access to pasture for roughage.

The nutritional needs of market goats can be met by feeding different feeds. The feeds can be categorized into two groups: forages (roughages) and grains (concentrates). Forages are high in fiber. Fiber adds bulk to the goats' diet and keeps their digestive tracts functioning properly. Forages tend to be average sources of energy. They include grass, browse (shrubs and vines), forbs (weeds), hay, and silage. Goats will eat a variety of plants and prefer to eat browse plants when given a choice.

Concentrates tend to be low in fiber and high in energy and/or protein. There are two types of concentrates: energy concentrates and protein concentrates. As the names tell us, energy concentrates are high in energy and protein concentrates are high in protein. Energy (calories) should make up the largest portion of the goats' ration. Higher-energy feeds allow animals to gain weight faster. Corn is the most widely used energy feed. Other energy feeds include barley, oats, and milo (grain sorghum).





Protein is essential for the growth of muscle in your goats. It is the most expensive part of the ration. Protein is made up of amino-acid building blocks. Growing kids require certain amino acids that are supplied by the protein component of the ration. As your goats grow, their protein requirements decrease. The most common source of protein for goats is soybean meal. Hay, pasture, and browse in a vegetative (growing) state are also excellent sources of protein.

There are vitamins and minerals that your goats require for bone growth and essential bodily functions. Calcium and phosphorus are the most important. Your goats also need salt. It is not very practical to buy individual vitamins and minerals to add to your goats' ration. Instead, you can buy vitamin and mineral premixes to add to your ration or you can buy a ration that contains all of the nutrients that your goats need.

Water is one of the most critical nutrients in a feeding program because it regulates the amount of feed a goat will consume. Clean, fresh water is necessary on a daily basis. Water intake should never be restricted.

There are three options for feeding your goats.

1. You can purchase a complete feed from your local feed store or mill. This feed should be specifically formulated for growing and finishing meat goat kids. Most goat feeds are pelleted. Pelleted feeds are good because they prevent goats from sorting feed ingredients. If you cannot find goat feeds, it is okay to feed a ration that has been formulated for lambs or cattle.
2. You can prepare your own ration by mixing farm-raised grains with a pelleted protein, vitamin, and mineral supplement. You can mix whole grain, such as corn, oats, or barley with a pelleted protein supplement (35 percent to 40 percent protein) that contains vitamins and minerals. It is not necessary to grind the grain for goats that are over 6 weeks old. The proper proportion of grain and supplement can be mixed at the time of feeding. This option may be cheaper

than feeding a pelleted complete feed. However, this ration should be hand-fed to prevent the goats from sorting feed ingredients. Hand-feeding is when you feed goats only the amount of feed they will eat in about 20 minutes.

3. You can prepare your own ration by mixing farm-raised grain with soybean meal (or other protein meal) and adding a vitamin and mineral premix. This option requires the most time and effort. You will need to partially grind the grain so that the soybean meal and vitamin and mineral premix will not sift to the bottom of the storage container or feed trough. Hand feeding will prevent ingredient sorting.

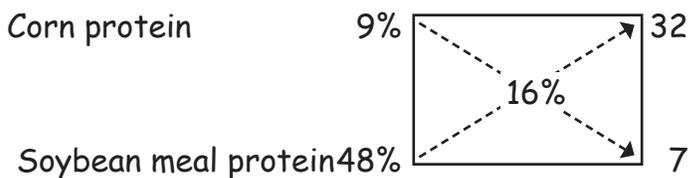
Balancing your own concentrate ration for goats

Since corn (or barley) will be the primary energy source in a concentrate ration, the ration will need to be balanced for protein because corn is low in protein. After balancing the ration, the energy level of the ration will still be at a desirable level. A recommended level of vitamin and mineral premix is then added to make the ration complete.

Below are two examples of how to balance a ration using corn and two different sources of protein. One source is soybean meal which is 48 percent protein and will require that vitamins and minerals be added. The other source of protein is a 40 percent pelleted protein supplement that already contains the necessary vitamins and minerals.

Market goats require 16 percent protein in their ration. We can calculate the proper pounds of corn and soybean meal by using a Pearson Square.

Using soybean meal



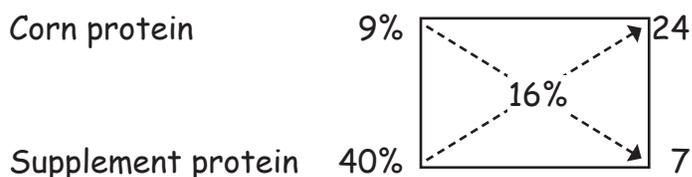
Total = 39

Take the difference between 9 percent and 16 percent and put it in the lower right hand corner. Take the difference between 48 percent and 16 percent and put it in the upper right hand corner. Add the two right hand values together, and then divide the total by the two individual values and multiply by 100.

$$32/39 \times 100 = 82 \text{ lbs. corn} = \sim 4 \text{ lbs. corn}$$

$$7/39 \times 100 = 18 \text{ lbs. soybean meal} = \sim 1 \text{ lb. soybean meal}$$

Using pelleted protein supplement with vitamins and minerals



Total = 31

$24/31 \times 100 = 77$ lbs. corn = ~ 3 lbs. corn

$7/31 \times 100 = 23$ lbs. protein supplement = ~ 1 lb. protein supplement

There is no need to add vitamins and minerals to this ration.

How to feed goats

Goats do not deposit external fat as rapidly as other species of livestock. Some goats will become too fat on high-energy diets and/or a self-feeding (all they can eat) program. Fat deposition should be monitored throughout the feeding program. Rations not producing enough finish can be bolstered by feeding more grain during the later stages of the feeding program.

You can control the amount of feed that your goats eat by hand by feeding them twice daily. After adjusting them to full feed, feed them all the grain that they will eat in 20 to 30 minutes. Then, remove excess feed. This will reduce feed wastage (goats will often reject damp or dirty feed) and allow you to observe their eating behavior to monitor their health.

Goats are ruminants and require forage (or roughage) in their diets in order for their rumens to function properly. Pasture, browse, and/or hay will also keep your goats happy and prevent most serious health problems. Goats should be fed at the same time each day. You should never make abrupt changes in your feeding program. Make gradual changes so that your goats will stay on feed and continue to develop.

Table 4. Sample rations

1 - complete meat goat ration 16% CP				
2 - Whole grain + 40% CP pelleted supplement				
3 - Whole grain + 48% soybean meal (vitamins and minerals must also be added)				
Ration #	Complete ration	Whole grain	Protein	Hay
1	3 lbs.			1 lb.
2		2.25 lbs.	0.75 lbs.	1 lb.
3		2.40 lbs.	0.60 lbs.	1 lb.

Preparing Your Goats for Show



Preparing your meat goat for show begins several weeks before the event. In order to avoid frustration on your part and unnecessary stress on your goat, you should work with your animal several times a week beginning at least a month before the show. Your goat can be halter broken or trained to lead with a collar. To halter break your goat, use a simple rope halter (like a lamb halter). When the halter is placed on the animal correctly, the part of the halter that tightens when you pull will be under the goat's chin, and the lead will extend from the animal's left side. Since goats are typically shown on nylon, dog-type collars, you may prefer to train your goat using a collar.

Patiently work with your goat to teach it to walk when you pull on the halter or collar. In the beginning, you may need some help from a parent or friend who can push the goat from behind when it stops. Try to work with your goat early in the morning or in the evening after dinner when the temperatures are a bit cooler.

In addition to practicing walking your goat, you should also get your goat used to having its feet and legs touched and moved while you are holding it at its head. This will train the goat to let you set it up squarely and correctly during the show. Once your goat has learned to lead and lets you place its feet, you may want to practice "showing" it at home. You can get a parent or adult project leader to play judge. This will be very beneficial to you and your goat so you know what to expect when you get into the real show ring.

About a week to ten days before your show, you should wash your goat using a mild soap and a scrub brush on any really dirty parts. Be careful not to get water in your goat's ears. Make sure that you clean underneath the flanks very well. Goats have glands there and the secretions from the glands attract dirt. This is also a good time to trim your goat's hooves. You will need a good pair of hoof trimmers to complete this task. Trim off any hoof material that has folded over the sole of the hoof and trim off a bit of the point. You should never wait until show day to trim your goat's feet in case you accidentally trim them too short and make them sore. After you have washed your goat, you can take a damp rag or some



mineral oil and remove the wax and dirt from the inside of your goat's ears. Again, be careful not to get any water in its ears and do not dig too deeply, either.

After your goat has dried, you can begin clipping it. However, read the rules of your particular meat goat show before you start. Different shows may require different hair lengths. If you clip your goat a week to ten days before your show, there is time for the clipper marks to even out and the pink skin to become less visible. A pair of electric clippers equipped with either a 20- or 23-tooth comb and a four-point cutter will let you clip a smoother coat and have a more attractive goat. Small animal clippers with detachable blades also work well, especially for younger children.

If you run your clippers in long, parallel lines along the sides of the goat, it may help give your goat a smoother appearance. Do not try and remove the hair below the knees and hocks of your goat. This area is very bony and you could injure your goat. It is also not necessary for meat goats. Your goat's tail may be bobbed or "fanned." This means that the hair on the sides of the tail is removed, and the hair on the tip is left on. If you use the larger electric clippers, you may need a smaller pair to clip around your goat's head and ears. Small clippers also work well to clip around the tail and remove long hairs around the hooves.

Some shows require that meat-goat exhibitors tip their goat's horns blunt. This simply means that you should take your hoof trimmers and cut straight across your goat's horns just to take the pointy tips off. You don't need to remove much horn material in order to accomplish this. This is done to protect exhibitors from the sometimes sharp points of goats' horns. Again, you need to read the rules specific to your show, as different shows have different rules.

You should return your goat to a clean, well-bedded pen in order to help keep it clean. Expect to wash your goat again the day before or day of your show.



Showing Your Market Goat



If you have spent time practicing with your goat and preparing it for show, you should have a fun and rewarding experience. Make sure that you are neatly dressed in clean clothes. Long pants such as jeans or khakis are appropriate for the show ring along with a sleeved shirt and hard-soled shoes or boots. Hats are not appropriate in 4-H shows.

Check your show's rules to make sure you have the proper attire. Your goat should be wearing a nylon, dog-type collar. Make sure that your animal is clean and does not have any bedding left under its belly or on its flanks before you go in the show ring. Before entering the ring, be sure to review pertinent information on your goat such as age, weight, average daily gain, breed, and your management practices. The judge may test your knowledge in fitting and showing classes or wish to use the information to help place a market class.

If you have the opportunity, you should watch some classes before your class to become familiar with how the judge works the ring. You should be ready to enter the show ring when your class is called. Be alert for instructions from the judge or ring steward on how you should line up. Be sure to leave plenty of space between you and the goats on either side of you. Avoid lining your goat up in a low spot if the show ring is not level. Market goats are shown much like market lambs and not like dairy goats. When you stop your goat, set your goat's legs squarely, but make sure to keep its head and neck up at the same time. You also need to be constantly aware of where the judge is located in the show ring. Your goat should always be between you and the judge. You never want to block the judge's view of your goat.

The judge will probably move you around the ring several times. You need to pay close attention so you do not miss any directions or cues. When the judge approaches to handle your goat, you need to move in front of it and put your knee against the goat's chest. At the same time, make sure you keep its head up and the neck straight. By putting your knee against its chest, you can keep your goat from jumping forward when the judge handles it. This can also help you keep your goat under better control. However, some judges may not allow "bracing" with your knee.

Always move slowly and smoothly around your goat and the ring. Never rest your hand on the top of your goat. Sometimes goats are uncooperative, but you cannot let your frustration show. No matter what happens, remain calm and patient. Keep concentrating on showing, and your hard work will pay off. You should constantly be watching to make sure your goat's legs stay set squarely, and also pay attention to the judge. A class is not over until the ribbons are handed out and you leave the ring.

Above all, exhibit the good sportsmanship that the 4-H program values and encourages. Always be polite and respectful of the judge and fellow exhibitors, even if you do not agree with the judge's opinion. Remember, this 4-H livestock show may be the only opportunity for some spectators to see livestock and how they are handled. Never lose your patience and never stress or drag your animal at home or on the fairgrounds.

Record Keeping



Record keeping is an important aspect of any 4-H project. It is especially important with livestock projects because you will want to know if your project made any money. The records you should keep include weight and gain records, management and feeding practices, feed and other costs, and income that you received from your project. If you will be keeping does for breeding, you will want to keep breeding and kidding records. Your local Extension office may have record sheets or you can find sample record sheets for meat goat projects on the Internet (see Resources).

Market Goat Project Calendar

Day 1

- Get your goats used to their new home.
- Treat them for internal parasites (worms) and vaccinate them for *Clostridium Perfringens* C and D (overeating disease), unless this was done twice at the farm where you purchased them.
- Provide plenty of fresh water and a free-choice supply of good-quality hay.
- Feed your goats 0.25 pound of a complete meat-goat ration.

Days 2-13

- Begin feeding your goats twice each day - once in the morning and once in the afternoon or early evening. Always feed them the same time each day.
- Increase the amount of the complete meat goat ration until your goats are on full feed. Full feed will be 1.5 to 2.5 pounds per day for each goat. You should increase the amount you feed by no more than 0.25 pound per head per day, and the amount should only be increased if the goats ate all of their feed the last time. It will take several weeks to get your goats on full feed.
- Once on full feed, cut the amount of hay you are feeding to about 0.5 to 1 pound per head per day.
- Start handling your goats to get them used to you.
- Check your goats' hooves and trim them, if necessary.

Day 14

- Re-vaccinate your goats for overeating disease, if necessary.

One month before the show

- Begin training your goats to lead with a collar or halter. Once they are broken to a halter or collar, practice setting up your goats so that their feet stand squarely under their bodies.
- Periodically, check the weights of your goats. If you do not have a set of livestock scales, use a bathroom scale. Weigh yourself and record your weight. Then pick up your goat and weigh you and your goat together. The difference between your weight and the second weight is the weight of the goat.

One to two weeks before the show

- Wash and clip your goats. Other than long hairs around the hooves, do not clip below the hocks or knees of your goats.
- Trim their hooves evenly.

One to three days before the show

- Wash your goats with mild soap and water. Dish washing liquid or bar soap works well. Be sure to rinse out all the soap. The day of the show you may only need to spot clean your goats. Make sure your goats are dry for the show.

Resources



Web

North Carolina 4-H Meat Goat Record, http://www.cals.ncsu.edu/an_sci/extension/animal/4hyouth/goat/meat-goatrecord.pdf

New York State 4-H Market Kid Record Book, <http://www.ansci.cornell.edu/4H/meatgoats/mgnotebook.htm>

National 4-H Cooperative Curriculum System, Inc., <http://www.n4hccs.org/>. Click on projects A-Z, then meat goat.

4-H Meat Goat Guide, Texas A&M University, <http://animalscience.tamu.edu/ansc/publications/youthpubs/AS34060-meatgoatguide.pdf>

Goat Page, North Carolina 4-H Youth Livestock, http://www.cals.ncsu.edu/an_sci/extension/animal/4hyouth/goat/goatpage.html

4-H Meat Goat Projects, New York State 4-H Youth Extension Programs in Animal Science, Cornell University Cooperative Extension, <http://www.ansci.cornell.edu/4H/meatgoats/meatgoat4H.htm>

4-H Market Goat Project Reference Guide, Pennsylvania 4-H, Penn State, <http://pa4h.cas.psu.edu/Projects/goat/default.html>

Market Goat: Showmanship, Mississippi State University Extension Service <http://msucares.com/pubs/publications/p2263.htm>

Premier Services, Feeding and Showing 4-H Market Goats, <http://www.premier-services.org/library/CLUBGOATGUIDE.htm>

Meat Goat Monthly News (subscription magazine), <http://www.ranchmagazine.com/mgn.html>

American Meat Goat Association, <http://www.meatgoats.com/>

Goat Rancher, Free Access Area (subscription magazine), <http://www.goatrancher.com/>

Langston University Goat Research page, Newsletter, <http://www2.luresext.edu/goats/library/newsletter.htm>

SheepGoatMarketing.info, <http://www.sheepgoatmarketing.info/>

Maryland Small Ruminant Page, <http://www.sheepandgoat.com/>

Informative personal website with some good links to goat information, <http://www.geocities.com/bowieffa/goats.html>

Show Goat Page, <http://www.showgoatpage.com/>

ShowWethers.com, <http://www.showwethers.com/>

Show Wether Information Center, <http://www.showwethers.net/>

Books

Bowman, Gail. 1999. *Raising Meat Goats for Profit*. Bowman Communications Press, Twin Falls, Idaho 83303.

Sar Emond, Animal Industry Division, Alberta, Canada. Agriculture, Food and Rural Development. 1994. *Meat Goats*.

Smith, Mary, and Sherman, David. 1994. *Goat Medicine*. Lee & Febiger, Philadelphia, Pa.