



# 4-H Meat Goat Guide





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# 4-H Meat Goat Guide

Frank Craddock and Ross Stultz\*

**C**ompetition in the show arena is increasing every year as 4-H members are discovering that goats are an excellent choice as a club project. Because goats are small, easy to work with and demand a small amount of space, they provide a meaningful livestock experience in a relatively short amount of time.

If you have decided to have a club goat project, your first decision will be to determine which shows to attend. It is your responsibility, as an exhibitor, to read the general rules and regulations as well as special rules governing the shows you will attend. This will tell you the number of goats you may enter, weight limits, ownership dates and entry deadlines. Show schedules, rules and regulations may be obtained from your county Extension agent or directly from the shows.

Show dates are extremely important because they determine the age and size or weight of the goats to be entered, and at what time of year they should be purchased. Many shows require that goats have their milk teeth. Goats usually hold their milk teeth until they are 10 to 12 months of age. After this time, it is probable that a goat will lose its baby teeth and become ineligible for show. Some shows have removed the milk tooth rule, and goats with yearling teeth may compete.

Goat shows also have weight limit requirements that must be met. Under normal conditions, goats will gain approximately 2 to 3 pounds per week. Not all goats can be fed to the same final weight because there are differences in frame size. Large frame goats may be correctly finished at 120 pounds, while small frame goats may be correctly finished at 80 pounds. You must learn to look at indicators of frame size and growth (length of head, neck, cannon bone and body) and determine at what weight a goat will be correctly finished. If you know the approximate weight of a goat at the time of purchase and the length of time until a show, you can calculate feed requirements (light, moderate or heavy) needed to enable that goat to enter the show at its correct weight.

Remember that size does not make a good goat. There are good small goats and good big goats. Your management program is the key.

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## Facilities and Equipment

One of the major advantages of a club goat project is that expensive facilities are not needed. A barn or shed where goats can retreat from cold, wet conditions and a pen with outside exposure are essential. Adequate fencing, a feeder and a water container are required, yet other equipment may be considered optional.

### Barns/sheds

Goats need a living arrangement that combines access to a shed or barn and an area where they can get outside in the sunshine. The shed area should have at least 15 square feet of space for each goat. The outside pen needs to be as large as possible to permit the goats to exercise. The shed should be well drained and should open to the east or south. Barn temperature is critical. Structures should be well ventilated so goats will remain cool and continue to grow during the summer months. However, when club goats are slick shorn for shows, barns should be altered during the winter to keep goats as warm as possible. This can be done by closing the front with a tarp or plastic sheet and by using heat lamps. The illustration shows the recommended dimensions and layout for a goat feeding facility.

### Fences

Fence height should be at least 42 inches to keep goats from attempting to jump. Fences should be predator proof. If using net wire fences, 12-inch mesh should be used rather than 6-inch mesh to keep goats from hanging their heads in the wire. The most desirable pens are constructed from galvanized livestock panels that are 5 feet tall with 4-inch squares.

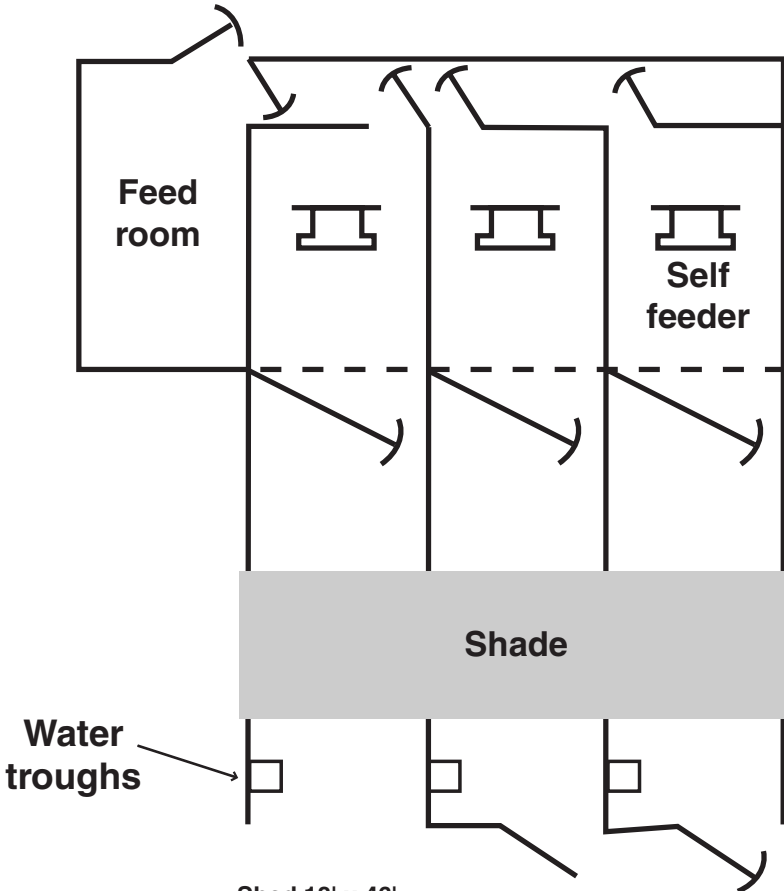
### Feeders

Self-feeders are often used in the feeding of goats. Self-feeders should be blocked at least 6 inches off the ground. If goats are hand fed, use movable troughs that hang on the fence at the appropriate height. Troughs should be hung at the same height as the top of the shoulder of the goat being fed. These movable troughs need to be taken down and cleaned regularly. Likewise, hay and mineral feeders need to be raised off the ground. This will help reduce the spread of disease. It also is important to make sure that goats are unable to stand in their feed troughs because they will urinate or defecate on the feed.

### Water containers

Fresh water is the most important ingredient in feeding club goats. Water should be checked daily. Water troughs should be small in size so they can be drained and cleaned on a regular basis. Troughs should be located in the shade to keep water cool. In the hot summer months, some goats tend to drink too much water and appear "full." Water should never be totally removed from the goat. However, rationing water prior to a show will help

# GOAT FEEDING FACILITY



Shed 18' x 46'  
Feeding alley 3'  
Feeding room 10' x 18'  
Pens under shed 12' x 15"  
Pens 12' x 27"

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remove the belly from the goat and improve its appearance in the show ring. Remember, do not dehydrate your goat. The proper amount of fluids is vital to the feel and condition of your goat.

## Equipment

To properly feed and exhibit a club goat, it is necessary to have the following additional equipment:

- stiff brush to clean water troughs;
- shovel to clean pens;
- scales to weigh goats;
- trimming table;
- electric clippers with 20- and 23-tooth combs and cutters
- small animal grooming clippers;
- syringes and needles;
- goat blankets and/or socks;
- halters, collars and/or show chains;
- hoof trimmers;
- drench gun;
- small portable feed troughs;
- soft brush for grooming;
- water bucket.

You may want the following optional equipment if you are exhibiting several goats at major shows:

- show box to hold equipment;
- hot air blower or dryer;
- portable livestock scales;
- extension cords;
- muzzles;
- electric fans.

## Selection

The selection of a goat for a project is one of the most important decisions you will make. The type of goat you select will have a major influence on the project's results. Remember that a winning goat is a combination of good selection, good nutritional management, proper grooming and outstanding showmanship.

People differ in their ability to select animals. Some have a natural eye for selecting young animals of high caliber, while others never develop this ability. Do not hesitate to ask for help from someone with these skills. It may be

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your county Extension agent, Future Farmers of America instructor, parent or another leader in the county. Also, many breeders are willing to assist you in your selection.

When selecting, you must know the animal's age. Remember that most shows require that goats have their milk teeth, therefore you need to know how old your goat is. It also is important to be aware of fat thickness. Young goats that are bloomy and fat always look good, while young, thin goats do not look as nice. Learn to look past fat and recognize muscle so that you can pick a genetically superior goat.

When purchasing a goat, it is important to know some information about the producer. Do not hesitate to ask questions about the goat's bloodline and age.

Consider the following when selecting a goat: structural correctness, muscle, volume and capacity, style and balance, and growth potential.

### **Structural correctness**

Structural correctness refers to the skeletal system or bone structure of an animal. A goat should hold its head erect 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, and the legs should be placed squarely under the body. A goat should have a strong level top, and a long rump with a slight slope from hooks to pins. Your goat should be heavy boned and be strong on its pasterns. Open-shouldered, weak-topped, weak-pasterned, steep-rumped goats should be avoided.

### **Muscle**

Generally, a goat that walks and stands wide is going to be heavier muscled. The goat should have a deep, heavily muscled leg 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 a prominent forearm muscle. The chest and forearm are the best indicators of muscling in thin goats.

### **Volume and capacity**

This 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. Avoid selecting goats that are short bodied, shallow bodied, narrow based and flat ribbed.

### **Style and balance**

Style and balance refer to the way all body parts blend together, how the neck blends into the shoulder, the shoulder into the rib cage, the rib cage into the loin, the loin into the rump, and how "eye-appealing" a goat is.

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When viewed from the side, a goat should have a smooth shoulder, level top, trim middle and straight legs. A goat that is balanced, pretty and holds up its head is the first one you notice when you walk in the pen.

## **Growth potential**

The ability of an animal to grow rapidly is very important. Generally, a larger 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.

## **Nutrition**

Contrary to popular belief, there is no such thing as a “magic” ration that will make your goat a champion. To implement a good feeding program, study the goat and use all available information to make judgments on when feed changes should be made. Since most 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: water, protein, fats and carbohydrates (or energy), minerals and vitamins.

### **Water**

Clean, fresh water is a daily necessity because water composes more than 70 percent of lean tissue and all body fluids must be replenished regularly. Never deprive your goat of water because water regulates the amount of feed a goat will consume. However, reduced water intake at certain periods during the program can reduce feed intake and reduce the size of the rumen for improved appearance.

### **Protein**

The primary constituent of the animal 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 for goats 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 percent protein are useful during many phases of the feeding program. Remember that goats have a daily requirement for protein. If more protein is fed than is required, the excess is used for energy. Using protein as an energy source is very expensive. When total feed intake is greatly reduced, protein supplementation may be necessary in order to provide the adequate daily requirements for your goat.



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## Carbohydrates and fats

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

## Minerals

The minerals of major concern in goat rations are salt (sodium and chlorine), calcium and phosphorus. Salt can be fed free-choice. However, many rations contain 1/2 to 1 percent salt.

Calcium and phosphorus are necessary for proper growth and development, and should be fed at a ratio of two parts of calcium to one part phosphorus. Rations that contain high levels of phosphorus in relation to calcium may cause urinary calculi. The addition of ammonium chloride at the rate of 10 to 15 pounds per ton of feed will help prevent urinary calculi. Roughages are generally high in calcium and low in phosphorus. Grains are generally low in calcium and intermediate in phosphorus. Most protein supplements are high in phosphorus and intermediate in calcium. A mineral supplement with a 25 to 30 percent protein content can be of benefit in a feeding program when used to top dress the ration. However, this will not work with a pelleted ration. Supplements must be used in the proper amounts because excesses will deplete the muscle mass of the goat.

## Vitamins

Vitamins are essential for proper body function and are required by goats in very small amounts. Only vitamin A is ever likely to be deficient. If goats are fed alfalfa hay or dehydrated alfalfa pellets in the ration, then vitamin A deficiency should not be a problem. It is a good practice to occasionally inoculate goats with a B complex vitamin. This promotes their health and helps them eat well.

## Health

The key to a healthy goat is the development of a preventive health program. Most goats purchased for club projects are on a health maintenance program and have had a variety of vaccinations. However, as you develop your preventive program, assume that the goat you have purchased has had no treatments. Vaccinations and treatments for certain common problems should be included in your program.

## Enterotoxemia

A major cause of death in club goats is enterotoxemia or overeating disease. Afflicted animals seldom exhibit symptoms and rapid death is usually

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the result. This disease is caused by a clostridial organism normally present in the intestine of most goats. Goats that have their feeding schedule abruptly changed or consume large amounts of grain are subject to enterotoxemia types C and D. Feeding changes can cause the clostridial organism to grow rapidly and produce a powerful toxin that causes death in a few hours. All club goats should be vaccinated with a combination (types C and D) vaccine immediately after purchase. At least one booster vaccination is recommended.

## **Internal parasites**

Internal parasites are a continual problem. Newly purchased goats should be drenched immediately for internal parasites and a second drenching should follow about 3 weeks later. Few drenches are approved for treating goats for internal parasites. Your veterinarian will have the best information on the most effective drenches. Because internal parasites develop resistance to a drench over time, it may be effective to rotate the use of products.

## **Urinary calculi**

Urinary calculi is a metabolic disease of male goats characterized by the formation of calculi or stones in the urinary tract. The first sign of calculi is a goat's inability to pass urine. The goat will be restless, kick at its belly, stretch and attempt to urinate.

The common cause of calculi formation in wether goats is feed rations with high phosphorus levels and an imbalance of calcium and phosphorus. Because grains are high in phosphorus and low in calcium, high concentrate rations may cause urinary calculi. A successful preventive is to provide a 2:1 calcium:phosphorus ratio in the ration and by adding 10 to 15 pounds of ammonium chloride per ton of feed. Provide plenty of clean, fresh drinking water also.

## **Coccidiosis**

Coccidiosis causes weight loss and continued inefficiency in goats. The disease is characterized by bloody diarrhea, dehydration, weight loss and weakness. Sick goats should be separated and given individual treatment as prescribed by a veterinarian. Most commercial show goat rations are medicated with a coccidiostat that should help control coccidiosis.

## **Soremouth**

Soremouth is a contagious, viral disease that causes the formation of scabs on the lips and around the mouths of goats. This virus can affect humans, so be careful when handling goats with soremouth. Iodine can be rubbed into lesions after the scabs are removed and this will help dry the area and reduce the infection. The Texas Agricultural Experiment Station manufactures an excellent soremouth vaccine. As with all live-virus vaccines, use extreme caution when administering the product.

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## Ringworm

Ringworm has become a serious problem in the lamb industry. Because most club goats are shown in the same barns and show rings as lambs, it is probable that ringworm will become a problem in goats as well. Ringworm is contagious and can be transmitted from goat to goat, from goat to human, or from infected equipment to goat. A good prevention program is necessary. The following products have been used with varying results:

- Fulvicin® - powder given as a bolus or used a top dress feed.
- Novasan® - 3 ounces per gallon of water sprayed on goats, equipment and premises.
- Bleach - 10 percent solution sprayed on goats, equipment and premises.

## Pinkeye

This contagious disease is characterized by excessive watering of the eye and clouding over of the pupil. 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. There are several medications on the market for pinkeye. If you do not notice improvement within a few days after treatment, contact your veterinarian.

## Illegal drugs

State and federal laws and regulations concerning the use of drugs for livestock and poultry are established to protect human and animal health. These laws and regulations state that instructions and restrictions on product labels must be strictly followed. The labels state the species or class of livestock or poultry for which the drug is to be used, the recommended route of administration, the approved dosage rate and specific conditions to be treated. When administering drugs, always follow label instructions.

The use of a drug in a manner other than stated on its label is regulated by the Food and Drug Administration and may be done only under the control of a licensed veterinarian. The veterinarian assumes the responsibility for making medical judgements and you, the client, agree to strictly follow the instructions.

Most Texas livestock shows have strict policies against the illegal use of drugs and will disqualify animals if such drugs have been used.

## Hoof trimming

A goat's hooves will grow long if they are not naturally worn down by traveling over rough terrain. Long 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, treat it by trimming the hoof closely and placing the foot in a zinc sulfate foot bath.

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## Dehorning or tipping

Some shows require that goats be dehorned. If you plan to dehorn, it is preferred to “disbud” goats at 14 to 28 days of age. The older the goat is and the larger the horn, the more stressful it will be on the goat. Other shows request only that goat horns be tipped for show. Tipping can be done easily without causing much stress to the goat. Horns should be tipped 4 to 6 weeks prior to the show to allow the horns to heal properly. Dehorning or tipping rules are made for the safety of the exhibitors.

## Management and Feeding

You have a choice of feeding a commercially prepared ration, mixing your own, or feeding a county ration that has been mixed and is sold by the local feed store. There are many complete commercial rations available. Goats are picky eaters, therefore, a pelleted ration is recommended over a textured or loose ration. Select a balanced ration, learn how to feed it and learn how your goat responds to it.

At the time of purchase, many young goats will not know how to eat pelleted feed from a trough. These goats should be started on good, leafy alfalfa hay that is top dressed with a preconditioning pellet. 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 eliminated at the later stages to prevent goats from developing large stomachs.

Most goats can be self fed for the entire feeding period. However, some goats will become fat and need to be hand fed. Fat deposition must be monitored throughout the feeding program. The feeding schedule can be adjusted to modify gain and body composition, but the goats must be continually monitored so changes can be made. Rations not producing enough finish can be bolstered by the addition of a high energy feed, such as corn, during the late stages of the feeding program. Remember, never make abrupt changes in your feeding program. Make gradual changes so your goat will stay on feed and continue to develop.

The feeding program will dictate how your goat develops and matures. A good program cannot make up for a lack of superior genetics, but it will allow your goat to reach its genetic potential. Feeding is a daily responsibility and the program should be changed as needed to maximize your results. To best monitor your results, weigh your goat on a regular basis. Know whether your goat is gaining or losing weight and know how much weight. Exercise can be very beneficial to your goat and to your success in the show ring. Goats are very active animals and, if given enough room, they will exercise themselves. Have objects 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.

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## Fitting

Most of the major shows in Texas enforce the shearing rule for goats. Because some differences in hair length are allowed at the time of show, it is important to read the show rules prior to clipping your goat for a particular show.

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 stiff brush on a regular basis. Brushing removes all of the dead hair and dirt.

Shear your goat according to show rules at least 2 to 7 days before the show. This will allow clipper tracks to even out and the pink skin to become less apparent. A pair of electric clippers equipped with either a 20- or 23-tooth comb should be used to ensure a smoother, more attractive goat. While shearing, the clippers should run parallel to the length of the body rather than vertically. Hair below the knees and hocks should not be shorn, and the hair on the end of the tail should be bobbed. Small animal clippers may be needed to clip closely around the eyes, ears, pasterns or delicate areas on the goat.

If shearing in cold weather, cover your goat with a lamb sock and/or blanket immediately after shearing. A clean, well-bedded pen should be provided to keep the goat clean and dry.

## Showing

Some people are natural showmen, but all exhibitors can learn techniques to improve their showmanship skills.

### Preshow preparation

The amount of time required to train a goat for show depends on the goat, the physical size and experience of the exhibitor, and the intensity of training. Some goats are easy to gentle and train for show, while others goats are difficult and nearly impossible to train. Most goats can be trained if enough time and effort are spent. Unlike lambs, goats are shown with a collar or chain.

Halter breaking is an excellent way to start the gentling process, especially if you have several goats. Collars, chains or inexpensive rope halters can be made or purchased from feed and livestock supply stores. Goats should be caught, haltered, chained or collared and tied to a fence. If using the collar or chain, snap them to the fence. Do not tie the goats where they can hurt themselves and do not leave tied goats unattended.

After your goat begins to gentle, you can start teaching it to lead. Use the collar, chain or halter to keep the goat's head up while you teach it to lead. Have someone assist you by pushing the goat from behind whenever it

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

The next step in the training process is to lead the goat and properly set it up. Set the front and hind legs squarely under the body, keeping the body and neck straight and the head in a high, proud position by using the chain or collar. Halters should never be used in the show ring; use only chains or collars. You should remain standing at all times. Do not squat or kneel.

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. Remember, in a major show, you may have only 5 seconds to actually show your goat. If the goat does not show properly when the judge handles it, you may get overlooked.

## Show ring

Your planning, selection, 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! It is often the difference between winning and losing.

You should be mentally and physically ready to enter the show ring for competition. By completing the preshow 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 in the show ring.

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

When the appropriate class is called, take your goat to the show ring. If the ring stewards do not line up the goats, find a place where your goat will look its best. 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, neck and head in a straight line with the goat's head up and alert. Always show with both hands. Do not put your free hand behind your back; use it to keep the goat's head and body straight.

A good showman must be alert and always know where the judge is at all times. Remember to keep your eye on the judge! Remain calm and concentrate on showing. Set up your goat and be ready before the judge gets to you. Be careful not to cover your goat with your body and block the judge's view. Always keep your goat between you and the judge. In large classes, it may take 20 minutes before the judge handles your goat. Be patient and let your goat relax.

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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. Keep one eye on the judge and one eye on your goat. It is your responsibility to watch the judge and not miss a decision.

If your goat is not pulled the first time, keep trying. Continue to keep it set up, remain alert and watch the judge. If your goat is pulled, circle it out of the line and follow the directions of the ring steward while continuing to keep an eye on the judge. Move your goat with style and at a steady, moderate pace.

Remember to keep showing at all times, because a class is not over until the ribbons are distributed. Be courteous to fellow exhibitors. A good showman will emphasize strong points and minimize weak points of a goat. Remain standing at all times and always display a pleasant facial expression. Be a good sport, a graceful loser and a humble winner.

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