

Choosing an Animal

Starting Your Project

There are several ways to start your goat project. First, you need to decide what type of goat project that you want to do—meat, dairy, fiber, pygmy, or utility (harness or pack). You can select an animal or animals from your parents or your own herd, or you can purchase from an established goat producer in your area.

When purchasing an animal, decide the goals for your project before you make your final decision. Selection of an animal depends on your project goals, as well as on what breed, size, and quality of animals you would like. For more information on breeds, read the section Breeds of Goats later in this chapter.

Once you have chosen the breed, you need to select either registered or grade animals. Registered animals are usually purebred and cost more than grade. Dairy goat breeds can also be “recorded grade.” If you want to get involved with showing goats, then a registered or recorded-grade animal may be the right choice. If you are more interested in production than in showing, a grade animal (whether it is meat, dairy, fiber, pygmy, or utility) with correct body type and high production may produce better with good nutrition and management than a registered or recorded-grade goat. For the beginner who is learning about feeding, management, health, etc., good quality goats bought at a modest price may be the wisest investment. Purchasing livestock at high

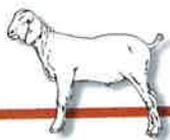
prices does not guarantee success, nor does it mean easier management.

This handbook provides the information you need to select good quality goats. In this chapter, you will learn the characteristics of size and conformation that indicate good quality. But first, it is helpful to learn some history, to be able to identify the most common breeds of goats, and to learn the parts of a goat.

History of Goats

The goat or *Capra hircus* is thought to be one of the first domesticated animals. Goat skeletal remains have been found at archeological sites dating back 10,000 years. These goats were thought to have been a source of meat and milk. Today’s European goats descended from the Bezoar goat, which currently lives in the Greek Islands, Turkey, and Pakistan. Goats are found on every continent and in all parts of the world, except for the Arctic. They are a very important part of some cultures. There are more than 300 breeds of goats, although not all of those are recognized as registered breeds. The Toggenburg, a dairy goat breed, is the oldest known registered breed in the world.

Goats were often taken on early voyages as a meat and milk source. Early settlers to America brought goats over on the Mayflower. Most goat breeds entered North America from the 1500s to the 1700s and were of Swiss origin. Smaller numbers of



Spanish and Austrian goats were also in North America at that time. In 1904, the first dairy goat show was held in America at the World's Fair in St. Louis, Missouri. Also in 1904, the American Milk Goat Record Association was formed in Elyria, Ohio. Shortly thereafter, the association moved to North Carolina where it is currently located. In 1965, the name was changed to the American Dairy Goat Association (ADGA).

Today, goats provide a wide variety of products. They are important parts of the agriculture of many countries. Goat milk has a different fatty acid and protein structure than doe milk, and this often makes it easier for some people to digest. Individuals who are allergic to doe milk are commonly able to drink goat milk. Large parts of the world's population regularly drink goat versus doe milk. Worldwide, goat meat is consumed more than any other red meat and is a staple in many countries for festivals and holidays. Goats also provide two types of fiber—mohair and cashmere.

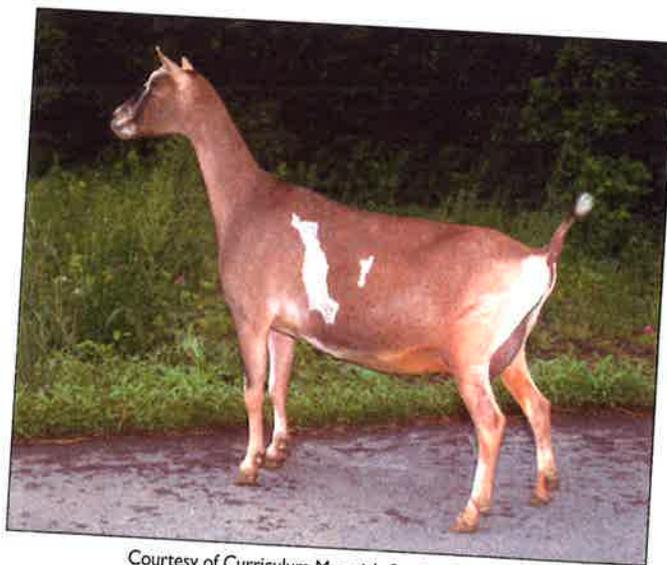
Breeds of Goats

Dairy Goats

The following descriptions have been adapted in part from the ADGA Breed Standards (<http://adga.org/breedstandards.html>) and from the Dairy Herd Improvement Registry (DHIR) (http://adga.org/DHIR/05breed_lactation_averages.htm).

There are six breeds of dairy goats commonly found in the United States. These are the Alpine, LaMancha, Nubian, Oberhasli, Saanen, and Toggenburg. In 2005, two less common breeds, the Sable and the Nigerian Dwarf, were admitted into ADGA.

Alpine



Courtesy of Curriculum Materials Service, The Ohio State University.
Special thanks to Willow Run Dairy.

The Alpine can be called either the French Alpine or the American Alpine, depending on parentage. However, when registered with ADGA, they are both referred to simply as Alpine. Alpines are a medium to large animal, have upright ears, medium to short hair, and a straight face. A Roman nose, Toggenburg color and markings, or an all white coat is discriminated against in the Alpine breed. Erect, medium-sized ears are preferred.

Alpines originated in the Alps region and are a fairly large and rangy goat. While no distinct color patterns have been bred for, there are typical color patterns that occur in the breed. Terms that describe the Alpine colors are as follows:

- Cou Blanc—Literally “white neck”; a white neck with black hindquarters and black or gray markings on the head.
- Cou Clair—Literally “clear neck”; a tan, saffron, off-white, or gray neck with black hindquarters.
- Cou Noir—Literally “black neck”; a black neck and front quarters with white hindquarters.



- Sundgau—Black with white markings on the underbody, facial stripes, and leg stripes, etc.
- Pied—Spotted or mottled in coloring.
- Chamoisee—Brown or bay with characteristic markings of a black face, dorsal stripe, feet and legs, and sometimes a martingale running over the withers and down the chest.
- Two-Tone Chamoisee—Light front quarters with brown or gray hindquarters. These animals are not Cou Blanc or Cou Clair as those animals have black hindquarters.
- Broken Chamoisee—A solid chamoisee color, broken by another color (usually white) by being banded or splashed.

Any variations in the above patterns broken with white should be described as a broken pattern, such as a broken Cou Blanc.

Alpines are known for being excellent milkers, with large, well-shaped udders. Alpines does should be at least 30 inches tall and weigh at least 135 pounds, while bucks must stand 32 inches tall and weigh a minimum of 170 pounds. According to ADGA and DHI, Alpines in 2005 averaged 2,334 pounds of milk, 3.3 percent milk fat, and 2.9 percent protein.

LaMancha

The LaMancha is the only dairy goat that was developed in the United States. LaManchas are medium-sized animals, with any color combination acceptable. The hair is short and fine. The distinctive characteristic of the LaMancha is its very small ears. The history of the LaMancha is not well known. Short-eared goats are found throughout history and are thought to have originated in the United States from some goats that the Spanish missionaries brought to California.

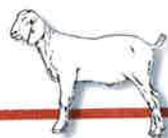


Courtesy of Curriculum Materials Service, The Ohio State University.
Special thanks to Willow Run Dairy.

Two individuals seem to be responsible for developing the American LaMancha as it is seen today. The name LaMancha supposedly comes from a group of short-eared goats that were sent to the 1904 World's Fair in Paris for exhibition. The crate they were in was labeled "LaMancha, Cordoba, Spain." The name LaMancha was kept for these short-eared goats.

While Phoebe Wilhelm was supposedly the first to own a herd of 125 LaManchas in the early 1920s, Mrs. Eula Fay Frey from Oregon was very instrumental in developing today's LaMancha from some short-eared goats that were in a herd that she bought. She was amazed by how much milk these smaller animals produced. She bred these short-eared animals to Nubian and French Alpines and got short-eared offspring that were excellent milkers. She further developed the breed, and LaManchas were accepted as a breed into the ADGA registry on January 27, 1958, with Fay's Ernie, L-1. Approximately 200 animals were entered into the herd book at that time.

LaManchas have two types of ears—the "gopher ear" and the "elf ear." Gopher ears preferably have very little to no cartilage,



with a maximum length of 1 inch (2.5 cm). The end of the ear must be turned up or down. Bucks, or male goats, must have a gopher ear to be eligible for registration. The other type of ear is the “elf ear.” Elf ears are a maximum of 2 inches (5.0 cm) in length and the end of the ear must turn up or down. Bucks with elf ears are ineligible for registration.

Mature LaMancha does, or females, should stand 28 inches tall and weigh 130 pounds, while bucks should stand 30 inches tall and weigh a minimum of 160 pounds. According to ADGA and DHI, LaManchas in 2005 averaged 2,050 pounds of milk, 3.9 percent milk fat, and 3.1 percent protein.

Nubian



Courtesy of Curriculum Materials Service, The Ohio State University.
Special thanks to Willow Run Dairy.

The Nubian is also called the Anglo-Nubian outside of the United States. It originated in England where bucks from the Nubia region of Africa and India were crossed with English does sometime around 1895. The Nubian is a large animal and is more heavily muscled than the other dairy breeds. This heavier muscling lends the Nubian breed to also being marketable as a meat goat.

Nubians are characterized by their long pendulous ears that must extend 1 inch past the end of their muzzle, a Roman nose, and short, fine hair. They are well suited for hot weather conditions. Any color or color pattern is acceptable in the Nubian breed. Their milk is known for its higher milk fat and protein concentrations compared to the other dairy breeds; however, their milk production is usually lower.

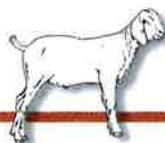
Mature Nubian does should be at least 30 inches tall and weigh 135 pounds. Nubian bucks should be at least 32 inches tall and weigh at least 170 pounds. According to ADGA and DHI, Nubians in 2005 averaged 1,754 pounds of milk, 4.8 percent milk fat, and 3.7 percent protein.

Oberhasli



Courtesy of Curriculum Materials Service, The Ohio State University.
Special thanks to Willow Run Dairy.

The Oberhasli breed is of Swiss origin and is a medium-sized animal. They are from the Brienz region of Switzerland and are also known as the Oberhasli-Brienz. When these animals were first imported to the United States in 1906 and again in 1920, they were called Swiss Alpines and were placed into the Alpine registry. In 1936, another group was imported to the



United States. Today's Oberhaslis come from the 1936 imports. A small group of dedicated breeders were determined to keep the Oberhasli as a pure breed and petitioned ADGA for its own herd book. In 1979, ADGA voted to make the Oberhasli its own breed, with its own herd book.

The Oberhasli differ from the Alpines in that they are slightly smaller in stature and more compact. They are characterized by their coloring, which is chamoisee. The females may be black, but the chamoisee coloring is preferred. The ADGA describes the standard coloring, called bay, as ranging from light to a deep red bay with the latter most desirable. A few white hairs through the coat and about the ears are permitted. Markings should include two black stripes down the face from above each eye to a black muzzle, a forehead that is nearly all black, black stripes from the base of each ear coming to a point just back of the poll and continuing along the neck and back as a dorsal stripe to the tail, a black belly and light tray to black udder, black legs below the knees and hocks, and ears that are black on the inside and bay on the outside. Bucks often have more black on the head than does, black whiskers, and black hair along the shoulder and lower chest with a mantle of black along the back. Bucks frequently have more white hairs throughout the coat than does. The face should be straight, as a Roman nose is discriminated against in the breed.

Mature height for an Oberhasli doe is 28 inches or more, and the mature weight should be near 120 pounds. Mature Oberhasli bucks must stand 30 inches tall and weigh 150 pounds. According to ADGA and DHI, the Oberhasli breed in 2005 averaged 2,137 pounds of milk, 3.4 percent milk fat, and 2.8 percent protein.

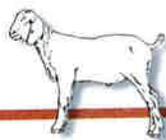
Saanen



Courtesy of Curriculum Materials Service, The Ohio State University.
Special thanks to Willow Run Dairy.

Saanens originated in the Saanen Valley of Switzerland. Saanens are the largest of all the dairy breeds. Saanen coat color is either white or cream, with white being preferred. Spots on the skin are allowed and are actually common; however, spots on the hair coat are discouraged. The hair is short and fine and the face is straight or dished, with ears erect. Because of their light coloring, they are sensitive to sunlight and can sunburn easy. They tend to not perform as well in hot weather and prefer colder climates. Saanens have the highest milk production of all the dairy goat breeds, which has given them the nickname of "Queen of the Dairy Goats."

Approximately 150 Saanens were imported between 1904 and the early 1930s from Switzerland. More Saanens came from England at a later date. Mature Saanen does should be at least 30 inches tall and weigh 135 pounds. The minimum height for mature bucks is 32 inches and 170 pounds. According to ADGA and DHI, the Saanen breed in 2005 averaged 2,537 pounds of milk, 3.3 percent milk fat, and 2.9 percent protein.



Toggenburg



Courtesy of Curriculum Materials Service, The Ohio State University.
Special thanks to Willow Run Dairy.

The Toggenburg originated in the Toggenburg Valley of Switzerland. It is the smallest and most compact of all the dairy breeds. Toggenburgs are a light fawn to a chocolate color with white markings. Their ears are white with a dark spot in the middle, and they have two white stripes down the face from above each eye to the muzzle. The hind legs are white from the hocks to the hooves, and the forelegs are white from the knees downward, with a dark vertical stripe below the knee being acceptable. They have a white triangle on either side of the tail, and white spots may be present at the root of the wattles or in the area where the wattles would be. The markings should be a light cream color, but white is the desired color. The ears are erect and carried straight forward, while the face is dished. As with the other breeds, except Nubian, a Roman nose is unacceptable. Toggenburgs have the longest hair of any of the dairy breeds, and it should be soft and very fine.

The Toggenburg is the smallest of the dairy breeds, with mature height for does being at least 26 inches. They should weigh 120 pounds. Mature bucks should be at least 28 inches tall with a minimum weight of 150

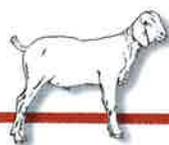
pounds. According to 2005 ADGA and DHI records, the Toggenburg breed averaged 2,101 pounds of milk, 3.3 percent milk fat, and 2.8 percent milk protein.

Sable



Courtesy of International Sable Breeders Association.

The Sable is an animal of Saanen breeding that is not white. In Saanens, the gene for the white coat is dominant and a colored coat is recessive. When an animal of Saanen breeding is colored, it is because it has two recessive genes paired for hair coat color. When two Saanens with the recessive gene for hair color are mated, 25 percent of the offspring are likely to be colored. Colored Saanens are NOT eligible for registry in the Saanen herd book; however, they are eligible for registering in the Sable herd book. To register an animal in the Sable herd book, proof of Saanen, Sable, or Sable/Saanen parentage must be provided. Any color pattern for Sables is acceptable except solid white and solid light cream, and Toggenburg color is discouraged. Mature does must be at least 30 inches tall at the withers and weigh 135 pounds. Mature bucks must be at least 32 inches tall at the withers and weigh 170 pounds. The hair is short. The ears are erect and alertly carried, pointing forward. The face should be straight or dished.



Nigerian Dwarf



Courtesy of Prairie Wood Ranch.

The Nigerian Dwarf is a small goat breed from Western Africa that has been developed for milk production more than for meat production. This goat is much smaller than the standard dairy goat breeds, standing 17 to 20 inches at the withers. Originally kept by African villagers to supply milk, these goats produce approximately 1 quart of high fat milk per day for up to 10 months.

The Nigerian Dwarf was imported to the United States in the 1980s, primarily to be exhibited at zoos and to be kept as pets. Their popularity grew due to their small size, ease of handling, and level of milk production.

The Nigerian Dwarf breeds at any time of the year and, therefore, can produce more than one kid crop per year. The doe should weigh 30 to 50 pounds, with a maximum height of 22.5 inches. The mature weight for a buck is 35 to 60 pounds, with a maximum height of 23.5 inches. Animals that are less than 17 inches tall at a mature age are discriminated against. The main colors of Nigerian Dwarfs are black, brown, or gold, with white markings. The Pygmy coloring, known as agouti, is discriminated against.

The Nigerian Dwarf produces approximately 2 to 4 pounds of milk per day, with

anywhere from 6 to 10 percent fat and 5 percent protein. These milk fat and protein concentrations are much higher than for the other dairy breeds, but remember, the Nigerian Dwarf produces much less milk overall. According to ADGA and DHI, the 2005 lactation average for the Nigerian Dwarf breed was 881 pounds of milk, with 6.5 percent fat and 4.0 percent protein.

Meat Goats

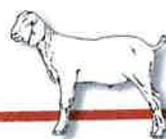
Any breed of goat can be used for meat, and every goat should be looked at as a potential meat source. However, there are breeds that are more suited for meat production than others. This is usually because these breeds have been selected to produce bigger, heavier muscled, and leaner carcasses than other breeds. Several breeds commonly used for meat in the United States include Boer, Kiko, and Spanish goats. Often, the larger dairy breeds, such as Nubian, Alpine, and Saanen, are crossed with meat goats.

Boer



Courtesy of Dail Gracy.

The Boer goat originated in South Africa and is thought to have originated from native African goats crossed with European goats that were brought by Dutch immigrants. The name "Boer" is a Dutch



word for “farmer.” This term was used by the early Dutch settlers in the late 1800s to differentiate native goats from the Angora goats that were imported around the same time. In the early 1900s, South African farmers started to select animals for meat purposes and developed today’s Boer goat. In 1959, a registry for Boer goats was established in South Africa. Boer goats were first imported into the United States in 1993 from Australia and New Zealand. The American Boer Goat Association was also formed in 1993 to record and certify these new Boer imports and Boer goat crosses.

Breed standards for the Boer goat include having a strong head with brown eyes, a Roman nose, and horns that are smooth and curve around the head (although animals that have been dehorned are not discriminated against). The ears are pendulous, similar to Nubians, and must hang smoothly against the side of the face. Boer goats traditionally have a white body with a red-brown head, or a red head with a white blaze on the face. Solid colors, other than all white or all black, are not discriminated against.

Animals should give the appearance of a meat animal with a broad chest, and a strong back, rump, and thighs. Mature Boer does weigh between 200 to 225 pounds, while mature Boer bucks weigh between 240 to 300 pounds. Kids are capable of gaining an average of 0.4 to 0.6 pounds per day. It is common to have a kidding rate of 200 percent in the herd. The Boer breed is known for extended breeding seasons, and it is possible to have three kiddings in two years.

Many commercial meat goat producers have found that Boer crosses perform exceptionally well or even better than purebred Boer goats, due to hybrid vigor. Crosses with the larger framed dairy goats, especially Nubians, are common.

Kiko

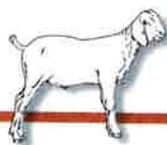


Courtesy of Shelby Acres Okie-Dokie Kikos.

The Kiko goat was developed in New Zealand by a group of individuals who were interested in a meat animal that would perform well under natural browse conditions. Using native, feral goats and selecting specifically for production, the Kiko was developed. The word “kiko” is used by New Zealand native people for any meat-producing animal.

Specific traits were selected for during the development of this breed. Those traits included rapid growth rate, increased fertility (multiple births), early breeding age, good mothering skills with the ability to give birth unassisted, resistance to parasite infection, and soundness in feet. Animals were culled if they did not produce more than one kid, if they needed assistance with birthing, and if they showed any signs of developing foot rot or foot scald. The resulting breed is very hardy and adaptable to range living. Kids are noted for being extremely vigorous at birth and not needing any supplementation during growth.

Kikos are large animals. They are usually white, although they can be any color and any coat type (short or long). Kikos are excellent browsers and can survive quite



well in open rangeland under a wide variety of conditions and still have significant weight gains. Breed standards for Kikos include hardiness, capability of browsing for food, and maintaining substantial growth. Does should be able to conceive easily, carry multiple kids during pregnancy, and give birth without assistance. Mature males have a spiral horn, while females have smaller horns. Ears are high on the animal's head, are of moderate length, and are not pendulous or prick. The registered Kiko is typically identified with a microchip or tattoo, plus an ear tag.

Spanish Goat



Photo by Phillip Sponenberg.
Courtesy of the American Livestock Breeds Conservancy.

The current-day Spanish goat is thought to be a descendant of the goats Spanish explorers brought to the United States as meat and milk producers. They are not of any specific breed but describe a type of goat. Spanish goats are smaller, meaty animals that browse well on range conditions. They typically have small udders so that they do not get scratched up by brush and cacti. They can be any color, horned or not horned, and have different types of hair coats. Some Spanish goats are also used for cashmere. Most of the Spanish goats in the United States are located in

Texas, are raised on the range, and are selected for meat production.

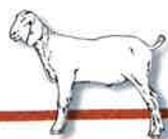
Fiber Goats

Angora



Courtesy of Lavender Hill Farm.

Angora goats are raised primarily for the mohair, or fiber, from their fleece. Angora goats are excellent producers of fine quality fleece. If cared for properly, an Angora goat can produce anywhere from 8 to 16 pounds per year of mohair. They are thought to have originated in the Himalayan Mountains of Asia. Angora goats migrated to Turkey sometime during the 13th century. Their name comes from the Ankara (Angora, prior to 1930) province in Turkey, where they were first bred. Although these goats were not exported from Turkey to the United States until 1849, the United States is one of the principal mohair producers in the world today, producing more than 13 million pounds of mohair each year. Turkey and South Africa are two other major mohair producers in the world. Angora goats are known for being docile, compared with other breeds of goats, but also for being "delicate." The fleece grows year-round at the rate of $\frac{3}{4}$ to 1 inch per month. This fast rate of



growth puts a large amount of strain on the animal and may contribute to their relative lack of hardiness. At mature weight, does weigh approximately 75 to 100 pounds and wethers (castrated males) and bucks weigh between 85 to 125 pounds.

Cashmere



Courtesy of Liberty Farm Cashmere.

Cashmere goats are a type, not a breed, so there is no such thing as a “purebred cashmere” goat. Cashmere is the fine underdown from goats, which most goats (except Angora) produce in varying quantities. A “cashmere goat” is one that produces commercial quantities of cashmere. The fleece from a cashmere goat consists of very fine, crimped down and longer, coarse outside guard hairs. The down undercoat is grown during late summer and autumn and is shed naturally in the spring. Cashmere fibers can be separated from the fleece either by combing out the down from the animal or by means of a commercial dehairer on sheared fleeces. In the United States, Spanish meat goats from Texas and the southwest are used for cashmere breeding stock, in addition to being used for meat production. Of the dairy breeds, Toggenburg, Saanen, and Nubian also produce cashmere.

Other Breeds

Pygmy Goat



Department of Animal Sciences, The Ohio State University.

The Pygmy goat (originally called the Cameroon Dwarf Goat) was originally developed in the French Cameroon area of western Africa. This goat is very small, with a full-grown Pygmy goat standing 16 to 23 inches at the withers. Females are slightly smaller than males. The most common coat color is known as “agouti.” Agouti means that the hairs are two-toned, giving a salt and pepper appearance to the coat. Pygmy goats are very hardy and gregarious. They also have a good temperament and are excellent with children.

The first U.S. Pygmy goats were imported from Sweden in 1959. Since that time, they have grown in popularity for use in 4-H and FFA projects and in children’s zoos. Some of their growth in popularity has occurred because they require less space and feed.

Pygmy goats have also been used for family milk and meat production. A doe in milk can be expected to give about 1 pint of high-fat milk twice a day for 4 to 6 months. The carcass is well muscled, providing meat similar in quantity to a spring lamb. The Pygmy goat, unlike most goat breeds, breeds



out of season and may kid twice per year. The mature weight for a doe is 35 to 60 pounds and a buck weighs 45 to 70 pounds.

Parts of the Goat

To be successful in raising and selecting goats, you should know the names of the various body parts. This helps you know what to look for and to accurately describe what you see. Read and carefully study the illustrations on the following pages.

Evaluating Goats

Understanding the parts of the goat is very important for selecting an animal. While the show ring is only a small part of your goat project, the traits that goats are evaluated for in the show ring are often highly related with overall production, profitability, and health. Whether you choose a dairy, meat, or other project animal, conformation and structure are very important.

The American Dairy Goat Association (ADGA) has a unified scorecard by which dairy goats are evaluated in the show ring and for on-farm type appraisals (table 2.1). According to ADGA, “The goal of the unified scorecard is to aid in the selection of the type of dairy goat that can function efficiently over a long productive lifetime.”

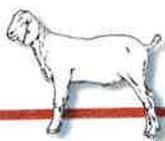
Although meat goats do not have a formal scorecard, the American Meat Goat Association (AMGA) does offer very specific guidelines for selection (see <http://www.meatgoats.com/selection.phtml>). According to the AMGA, “The breed standard for the meat goat is primarily designed to enhance structural correctness of the breeding meat goat, with an emphasis on muscle volume, function, and survivability of the commercial animal.”

Meat goats should have long bodies with strong, wide backs. The loin and rump should also be wide. The front end should be muscular, wide, and smooth with adequate space between the front legs and a wide chest floor. The rear legs should be wide apart and straight when viewed from behind. There should be muscling in the thighs. From the side, the rear legs should have moderate curve, so that if you were to draw an imaginary line from the pin to the pastern, the line would pass through the hock. The pasterns should be strong, and the feet should have tight toes and a level sole. It is important that the mouth is square, with no overshot or undershot jaw.

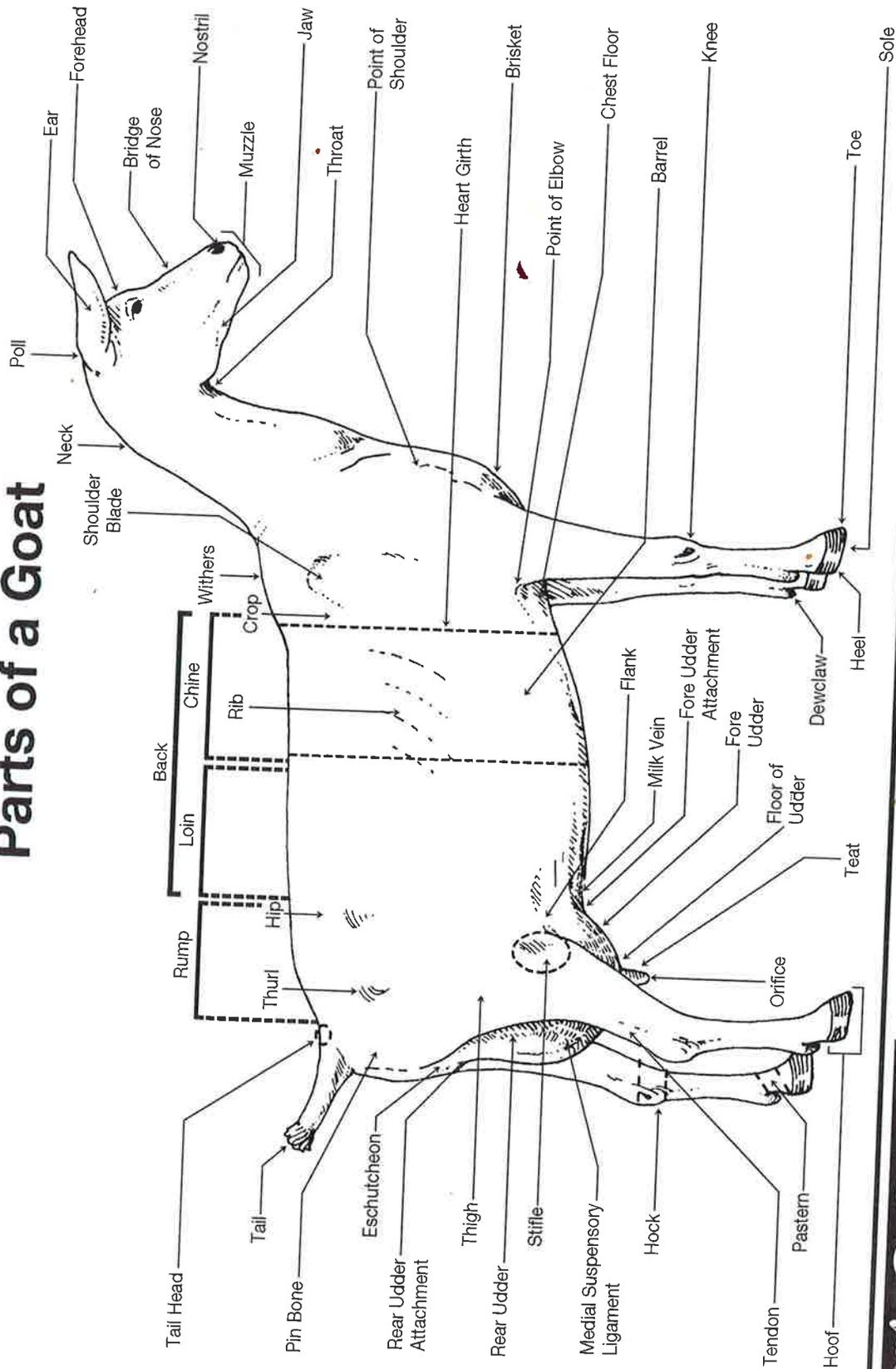
If selecting breeding stock (does and bucks to grow your own herd), evaluate the does and bucks for individual characteristics. Does should have a feminine head, good spring of rib and depth of body, with adequate muscling in the rear legs. Both sides of the udder should be functional and the udder should be formed so kids can easily nurse. Breeding age females should show evidence of having kidded by 2 years of age. Bucks used for meat goat breeding should exhibit masculinity and muscling. They should have broad muzzles and have heavier muscling and strength through the front end than females. See chapter 8 for more information about selecting meat goats.

The sample scorecard for Angora goats (table 2.2) includes aspects of the goat's body and the fleece.

The National Pygmy Goat Association (NPGA) describes their breed standards and ideal structural traits in a scorecard that also can be used for selection (table 2.3). More information about selecting a pygmy goat can be found in chapter 9.



Parts of a Goat



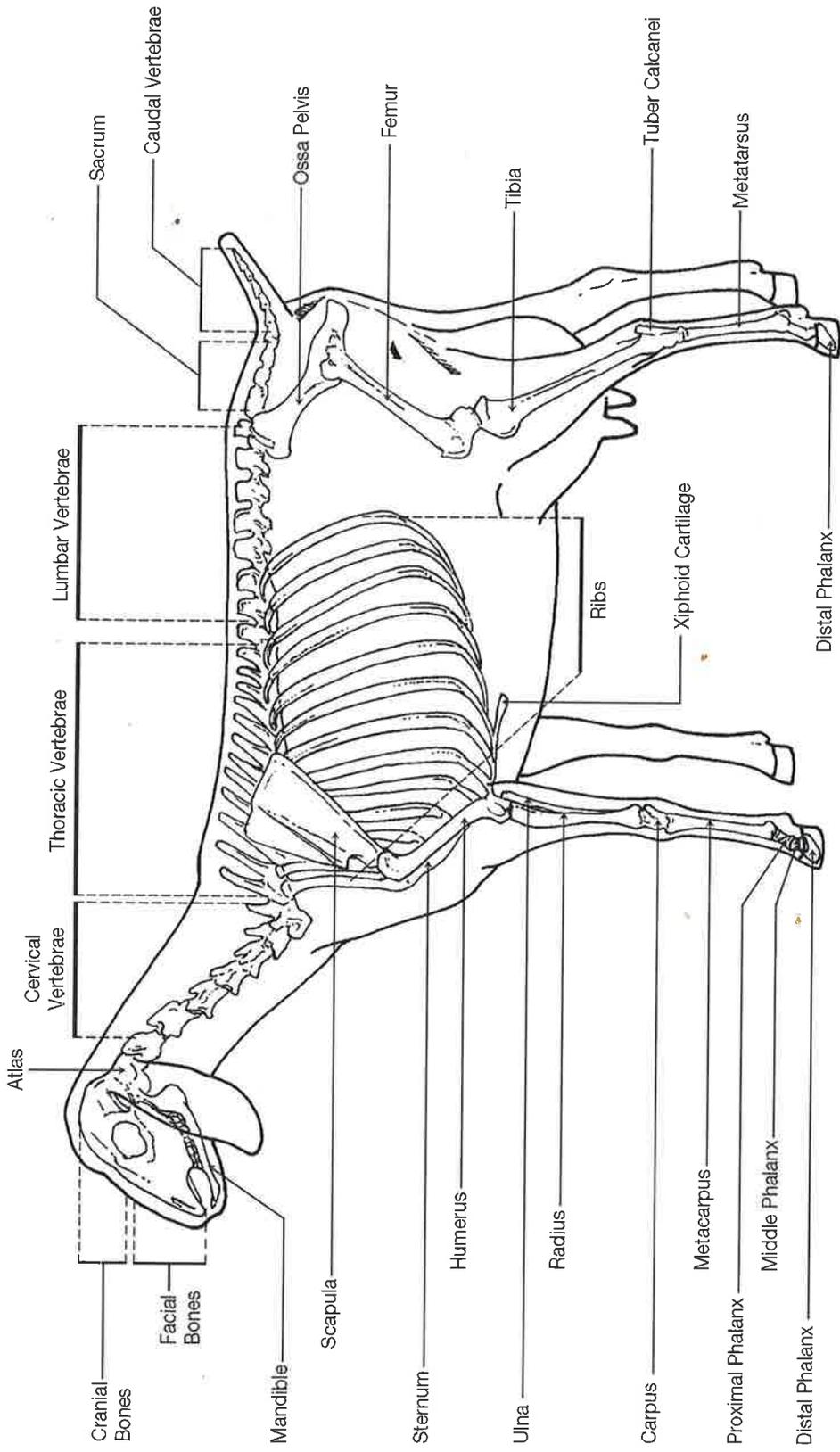
GOAT LEARNING LABORATORY KIT

Exploratory Learning: Educational Program
 This component adapted from materials of the American Dairy Goat Association

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Goat Skeletal System



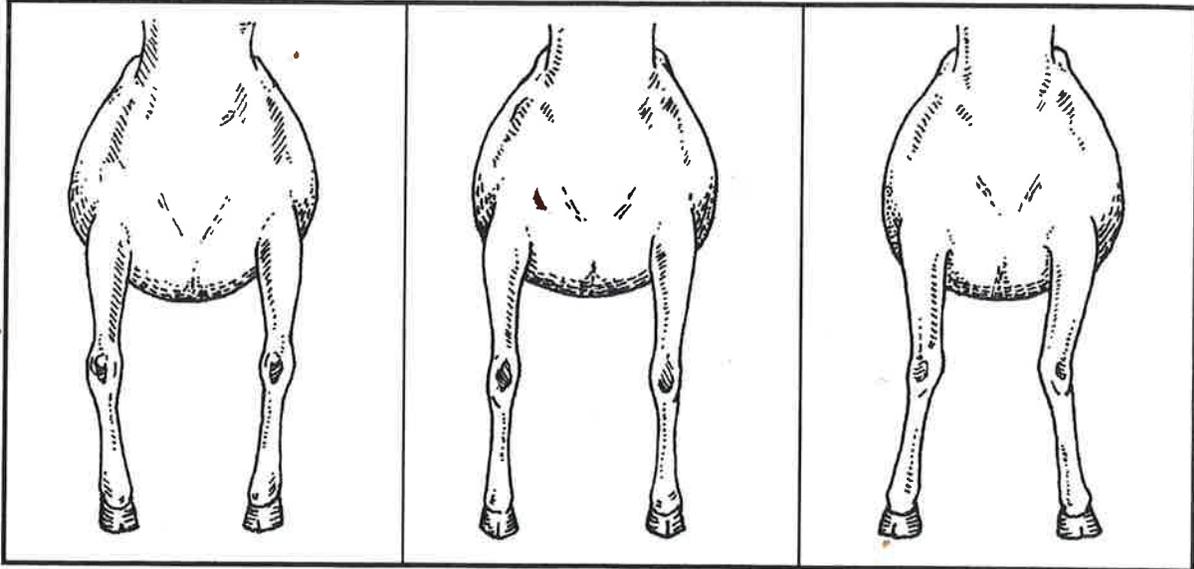
Exploratory Learning: Educational Program
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Goat Feet and Leg Structure (Part I)

Front Legs

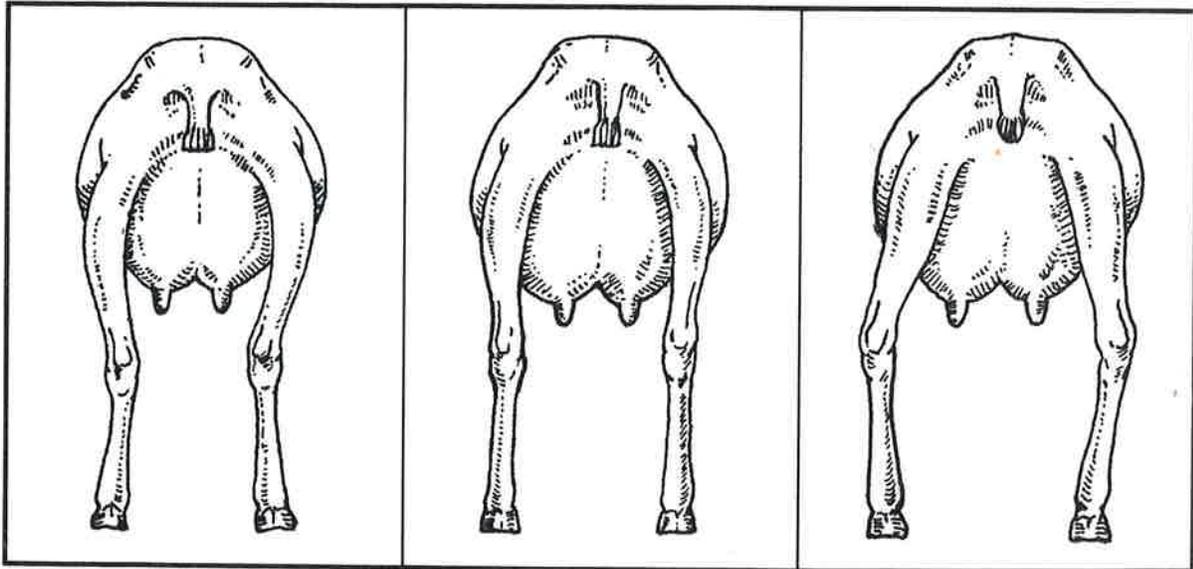


Buckled Knees

Ideal

Knock-Kneed

Rear Legs



Close at the Hocks

Ideal

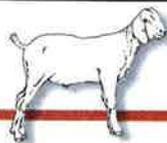
Bowlegged

 **GOAT**
LEARNING LABORATORY KIT

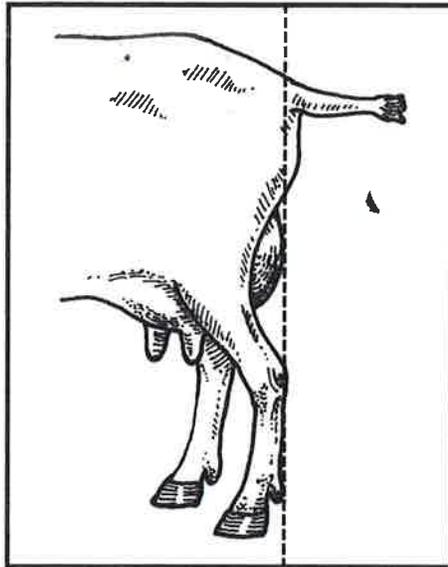
Exploratory Learning: Educational Program

This component adapted from materials published in the *Dairy Goat Journal*, Helenville, WI

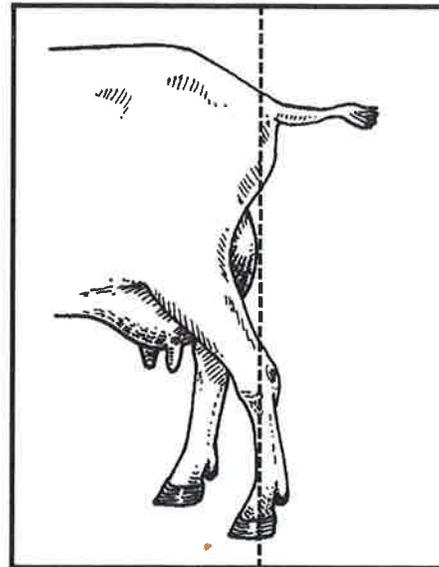
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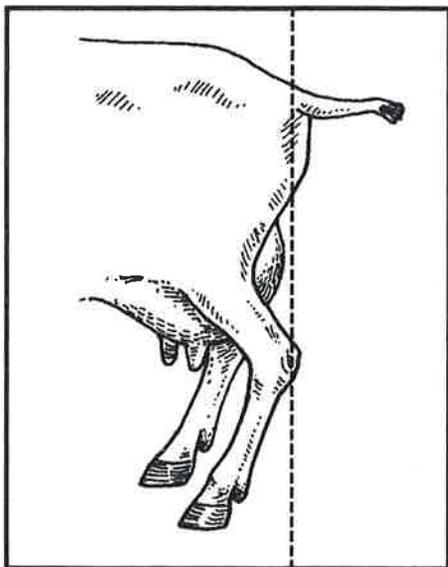
Goat Feet and Leg Structure (Part II)



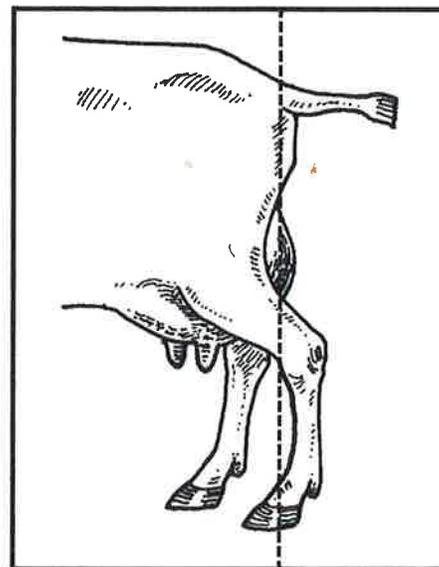
Ideal Rear Legs



Post-Legged



Sickle-Hocked



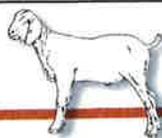
Weak Pasterns

 **GOAT**
LEARNING LABORATORY KIT

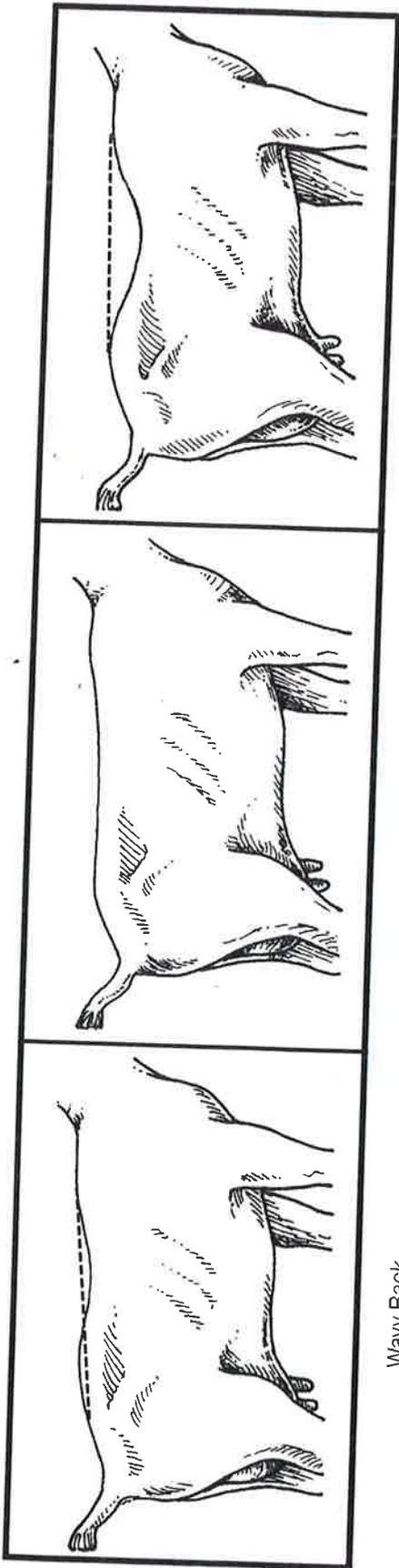
Exploratory Learning: Educational Program

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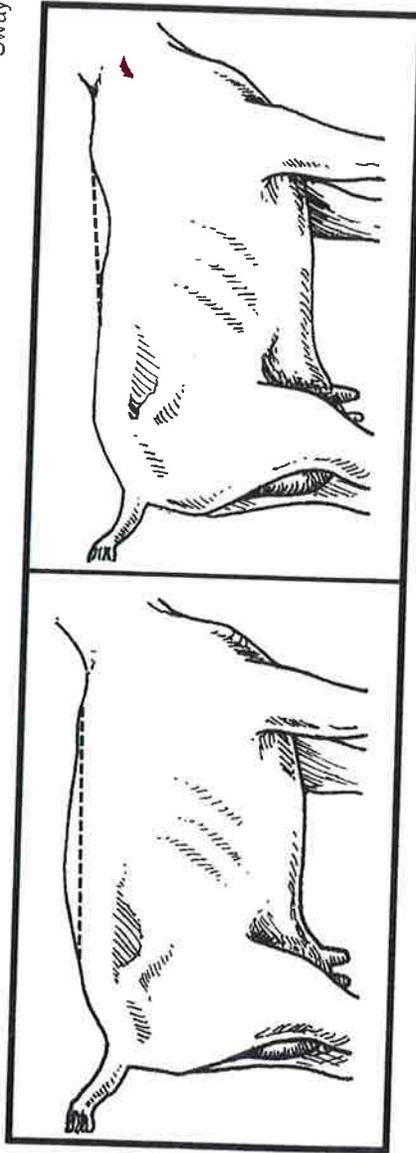
Goat Topline Structure



Wavy Back

Ideal Back

Sway Back



Roached Back

Weak in the Chine

GOAT LEARNING LABORATORY KIT

Exploratory Learning: Educational Program

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Table 2.1. Sample unified scorecard for dairy goats.

Points		Senior Doe	Junior Doe	Buck
A.	General Appearance An attractive framework with femininity (masculinity in bucks), strength, upstandingness, length, and smoothness of blending throughout that create an impressive style and graceful walk.	35	55	55
	Stature —slightly taller at withers than at hips with long bone pattern throughout.	2	2	2
	Head and Breed Characteristics —clean-cut and balanced in length, width, and depth; broad muzzle with full nostrils; well-sculpted, alert eyes; strong jaw with angular lean junction to throat; appropriate size, color, ears, and nose to meet breed standard.	5	10	8
	Front End Assembly —prominent withers arched to point of shoulder with shoulder blade, point of shoulder, and point of elbow set tightly and smoothly against the chest wall both while at rest and in motion; deep and wide into chest floor with moderate strength of brisket.	5	8	10
	Back —strong and straight with well-defined vertebrae throughout and slightly uphill to withers; level chine with full crops into a straight, wide loin; wide hips smoothly set and level with back; strong rump which is uniformly wide and nearly level from hips to pinbones and thurl to thurl; thurls set two-thirds of the distance from hips to pinbones; well defined and wide pinbones set slightly lower than the hips; tailhead slightly above and smoothly set between pinbones; tail symmetrical to body and free from coarseness; vulva normal in size and shape in females (normal sheath and testes in males).	8	12	10
	Legs, Pasterns, and Feet —bone flat and strong throughout leading to smooth, free motion; front legs with clean knees, straight, wide apart and squarely placed; rear legs wide apart and straight from the rear and well angulated in side profile through the stifle to cleanly molded hocks, nearly perpendicular from hock to B, yet flexible pastern of medium length; strong feet with tight toes, pointed directly forward; deep heels with sole nearly uniform in depth from toe to heel.	15	23	25
B.	Dairy Character Angularity and general openness with strong yet refined and clean bone structure, showing freedom from coarseness and with evidence of milking ability giving due regard to stage of lactation (of breeding season in bucks). Neck —long, lean, and blending smoothly into the shoulders; clean-cut throat and brisket. Withers —prominent and wedge-shaped with the dorsal process arising slightly above the shoulder blades. Ribs —flat, flinty, wide apart, and long; lower rear ribs should angle to flank. Flank —deep, yet arched and free of excess tissue. Thighs —in side profile, moderately in-curving from pinbone to stifle; from the rear, clean and wide apart, highly arched and out-curving into the escutcheon to provide ample room for the udder and its attachment. Skin —thin, loose, and pliable with soft, lustrous hair.	20	30	30
C.	Body Capacity Relatively large in proportion in size, age, and period of lactation of animal (of breeding season for bucks), providing ample capacity, strength, and vigor.	10	15	15
	Chest —deep and wide, yet clean-cut, with well sprung foreribs, full in crops and at point of elbow.	4	7	7
	Barrel —strongly supported, long, deep, and wide; depth and spring of rib tending to increase into a deep yet refined flank	6	8	8



Table 2.1 (continued).

Points		Senior Doe	Junior Doe	Buck
D.	Mammary System Strongly attached, elastic, well-balanced with adequate capacity, quality, ease of milking, and indicating heavy milk production over a long period of usefulness.	35		
	Udder Support —strong medial suspensory ligament that clearly defines the udder halves, contributes to desirable shape and capacity, and holds the entire udder snugly to the body and well above the hocks. Fore, rear, and lateral attachments must be strong and smooth.	13		
	Fore Udder —wide and full to the side and extending moderately forward without excess nonlactating tissue and indicating capacity, desirable shape, and productivity.	5		
	Rear Udder —capacious, high, wide, and arched into the escutcheon; uniformity wide and deep to the floor; moderately curved in side profile without protruding beyond the vulva.	7		
	Balanced, Symmetry, and Quality —in side profile, one-third of the capacity visible in front of the leg, one-third under the leg, and one-third behind the leg; well-rounded with soft, pliable, and elastic texture that is well collapsed after milking, free of scar tissue, with halves evenly balanced.	6		
	Teats —uniform size and of medium length and diameter in proportion to capacity of udder, cylindrical in shape, pointed nearly straight down or slightly forward, and situated two-thirds of the distance from the medial suspensory ligament on the floor of each udder-half to the side, indicating ease of milking.	4		
	Totals	100	100	100

Source: American Dairy Goat Association, <http://adga.org/scorecard.htm>

Table 2.2. Angora goat scorecard.

Traits	Points	Disqualifying Traits
BODY	50	
Size and weight for age • Yearling buck minimum 80 pounds • Yearling doe minimum 60 pounds	11	
Constitution and vigor • Width and depth of chest • Fullness of heartgirth • Spring of ribs	11	
Conformation • Width and depth of body • Straightness of back • Width of loin • Strength of back	12	Deformed mouth or feet; divided scrotum or abnormalities of testicles; sway back
Amount of bone • Size of bone below knee and hock • Clean and in proportion to size of animal • Strength of feet and legs	8	Broken down pasterns; crooked legs, including cow hocks

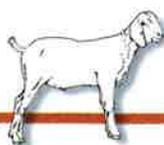


Table 2.2 (continued).

Traits	Points	Disqualifying Traits
Breed type <ul style="list-style-type: none"> • Head • Horns (If the goat has horns, they should spiral outward and go back; they should be set wide on a buck.) • Ears • Color • Markings (small face freckles are not objectionable) 	8	All blue or black horn or hoof; close set, distorted horns
FLEECE	50	
Length —Should be equivalent to 1-inch growth or more a month, uniform all over body, heavy, and high-yielding		Colored hair; sheepy fleece
Freedom from kemp	10	Excessive kemp
Uniformity —Type of lock and covering	5	
Completeness of covering —Adequate covering over entire body, including face	5	
Luster and softness —Good, bright type mohair	9	
Density —Number of fibers in an area	8	
Fineness —Uniformity of fineness over entire fleece	9	
Character —Uniform lock over entire body	4	Straight beard-type hair in foretop or on back
TOTAL POSSIBLE POINTS	100	

Adapted from Michigan State University Extension, *Your 4-H Angora Goat Project*

Table 2.3. Scorecard for Pygmy goats.

	Does	Bucks	NPGA Breed Standard—Ideal Traits	Disqualifying Traits
General Condition	14	14	BALANCED and well-blended, showing style PROPORTIONS typically cobby: wide in relation to length and height Body MEASUREMENTS meet specifications for age group CONDITION optimal for age and frame of animal; HEALTH PERFECT Genetically HORNED (disbudding permitted)	Nonconformity of size Emaciation Genetic hernias (scrotal, umbilical) Natural hornlessness
Head and Expression	10	12	EXPRESSION alert, animated HEAD type, medium short; profile dished MUZZLE broad, full, rounded, nose short, wide, flat JAWS broad, strong, well-muscled, symmetrically aligned BITE even: neither overshot nor undershot EYES bright, set well apart, prominent, but not protruding EARS firm, medium sized, alertly erect	Roman nose Face crooked Disfiguring malocclusion Total blindness Ears pendulous, helicopter
Coat	4	6	COAT dense, hair straight; medium long, abundant in bucks	
Breed Markings	8	12	BREED SPECIFIC MARKINGS distinct: light accents on muzzle, forehead, ears, around eyes and tail; contrasting dark crown, dorsal stripe, cannons, hocks hoofs. OPTIONAL MARKINGS: light girth areas are acceptable.	Lacking distinct, breed-specific markings

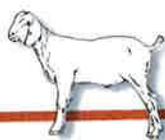


Table 2.3 (continued).

	Does	Bucks	NPGA Breed Standard—Ideal Traits	Disqualifying Traits
Neck	3	5	NECK strong, full-throated, muscular, round blending well into withers.	
Shoulders	5	5	SHOULDERS well laid back and angulated, blades firmly attached WITHERS nearly level with spine	
Chest	10	10	CHEST floor wide, forechest prominent, heart GIRTH large, full at elbows RIBS long, well sprung, wide apart	
Barrel	8	8	BARREL symmetrical, broad, deep, widening towards low-set flanks	
Back	8	8	BACK strong, broad, straight; level along chine and loin	
Rump	8	8	RUMP medium long, medium wide, neither level not steep HIPS wide, nearly level with back THURLS high and wide apart, PINBONES well apart, prominent TAIL symmetrical, set and carried high	
Legs and Feet	10	12	LEGS strong, well muscled, wide apart, squarely set FORELEGS straight, CANNON BONE short; elbows close to ribs HINDLEGS well angulated, short-hocked, parallel and aligned with hips; femur and tibia long, well-muscled; stifle joint pronounced PASTERNS short, strong, resilient FEET well shaped, symmetrical; heels deep; soles level GAIT smooth, balanced, ground-covering and effortless	Front cannon over/under-sized
Reproductive System, Bucks			TESTICLES normal, equal in size, both fully descended	Failing to display two normal fully descended testicles
Mammary System, Bucks			TEATS: two single, normal, nonfunctional, devoid of multiple orifices; free of deformities	Multiple and/or functional teats Multiple orifices Bifurcal teats
Mammary System, Does	12		TEATS: cylindrical, symmetrically shaped and placed, milkable, functional, free of deformities and obstructions, devoid of multiple orifices UDDER functional, balanced, firm, elastic, rounded, small to medium sized, well attached: high in rear, well forward in front	Nonfunctional, blind teats Bifurcal teats Nonfunctional, blind udder
Bucks and Does	100	100	SEX CHARACTERISTICS pronounced, either masculine or feminine	Hermaphroditism

Based on National Pygmy Goat Association Judging Scorecard for Pygmy Does and Bucks. http://www.npga-pygmy.com/resources/conformation/scorecard_db.asp

