INTRODUCTION

It was love at first bite when I tasted goat cheese at a party in Vermont when I was 19 years old. More than a decade passed before I saw goat cheese in a grocery store and immediately snatched it up. But at a dollar an ounce, it was a rare treat. When my husband and I started talking about moving to the country to grow our own food organically, goats were one of the three species of livestock I wanted, and I wanted them simply for that delicious cheese. I wanted chickens for eggs and cows for milk and butter.

While the chickens and goats proved to be easy for a city slicker to learn to raise, the cows were a different story. I had purchased Irish Dexters, which are the smallest breed of cattle, but I quickly learned that it really didn't matter whether a cow weighed 800 pounds or 1,500 pounds—if she wanted to do something, she could easily get her way because she outweighed me by so much that it was hopeless.

In purchasing both the cows and goats, I made similar mistakes. I bought animals that had no experience with milking, and I didn't even buy animals whose mothers had been milked, so the genetic potential as milkers was a mystery. I made the novice mistake of assuming that because every female mammal makes milk, they would all make good milkers. I knew nothing about udder texture, teat size, orifice size—I didn't even know what an orifice was! And it never occurred to me that a cow or goat might not be terribly excited at the prospect of being milked.

Learning to milk the goats was not the easiest thing I ever did, but it wasn't terribly difficult either. It was Mother's Day 2002 when I brought home my first two goats, a two-month-old doeling and an unrelated three-year-old doe that had been nursing triplets. My husband had built a milk stand based on pictures we found on the Internet. I arrived home with the goats shortly before sundown and attempted to milk Star, the three-year-old. We put her on the milk stand and filled up the feed bowl. She took a couple of bites, but as soon as I touched her udder, she kicked the bucket, turned her head around, and glared at me. She continued to give me this look that I translated as, "*What* are you doing back there?" There were ultimately four of us working toward the single goal of extracting milk from this goat. My husband held her back legs so she couldn't kick over the bucket. My two daughters scooped up the grain in their hands and sweet-talked her, saying, "Here, Star, don't you want some yummy grain?" Star continued to glare at me. Then I remembered reading somewhere that music relaxes animals and that some people play music in their milking parlors, so I suggested that we sing. "Twinkle, Twinkle, Little Star" seemed appropriate given the goat's name, but she was not impressed. However, within a few days I was able to milk Star by myself with no one holding her legs or sweet-talking her or even singing. It was my first lesson in the importance of the three Ps: practice, persistence, and patience.

The cows were a completely different story, though. I was never able to even touch their udders. Despite the fact the seller had said they would be very easy to train—"Just tie 'em up for a couple of days, and they'll be following you around like a dog"—they were range cows, never handled during their first year of life before I purchased them. Although livestock are domesticated, they have to be handled from the time they're born, or they can easily return to a feral state of mind. We wound up selling our first two cows after a couple of years, but I also came to the realization that we didn't need cows. The goats could meet all of our dairy needs—and more.

That soft creamy cheese that so many people call "goat cheese" is more correctly called chèvre (pronounced like "shev"), and it is possible

to make many types of cheese and other dairy products from goat milk. The first cheese I made was queso blanco, and it was quickly followed by chèvre, yogurt, kefir, and queso fresco. A few months after starting to make cheese, I began to make goat milk soap. Then we started making aged cheeses. Eventually we learned to make 100 percent of the cheese that our family uses, including cheddar, mozzarella, Parmesan, Gouda, Havarti, and more. Although we were vegetarians when we started our homesteading adventure, today we also eat goat meat and use goat leather. Even our goats' manure contributes to our homestead, as it is the only fertilizer we use in our garden.

It makes a lot of sense to raise goats for milk production for your family because goats are smaller than cows, eat less, poop less, are easier to handle, and produce a more manageable amount of milk. A potential buyer called me a few years ago because after a couple of years with a cow, her family realized that they didn't need the amount of milk a cow produced. They were not interested in making cheese, so it made no sense for them to have an animal that was producing five gallons of milk a day. Because dairy animals are all herd animals, you always need to have at least two, and with goats it is easy to add to your herd, especially when that special kid is born that you just can't bring yourself to sell. "Just one more goat" doesn't eat nearly as much as "just one more cow."

My journey with goats has been an interesting one, generally made easier and only sometimes more complicated by the internet. I joined online groups and forums where people would answer my questions when I came across a situation that was not answered in any of my books. In the early 2000s, most of the people answering questions on the groups had been breeding goats for at least a few years and had a lot of good information. Today, however, because goats have become more common, there are a multitude of websites and blogs putting out information, some of which is questionable or downright wrong. Although information is more plentiful than ever, it is also more challenging to weed through it all to get accurate information. Social media has made it even more challenging. I've seen people giving kidding advice when they've only had one or two sets of kids themselves. It's not unusual

for a person to ask a question and get more than 50 responses, many of which are contradictory.

There is no one-size-fits-all approach to raising goats. When I was in graduate school working towards my master's degree in communication, I had a professor who would often throw out a question and after someone gave an answer he'd nod and then ask, "Anyone else?" Someone would hesitantly raise a hand and say, "Well, it depends." The professor would smile and respond, "That's the grad school answer." He would reassure the first person that their answer was not necessarily wrong and point out that there could be multiple right answers to the question, depending on the situation. This is often the case when raising goats. Many people want to know exactly what to feed, what supplements to use, and whether a management practice is safe. Usually the answer is, "It depends."

The goal of this book is not to put forth the single best plan for raising goats and making dairy products. Quite simply, the best plan on my farm probably won't work for most other farms. It should be obvious that goats on the Illinois prairie will require different management from those in the Arizona desert or the mountains of British Columbia. But if the farmer two miles from me raised goats, they would require different management as well because the well water on that farm does not have the high sulfur content of my well. If I'm starting to lose you because it sounds like raising goats might be too complicated, wait! It really isn't.

The goal of this book is to give you the information you need so you can figure out what will work best for you and your goats. I see a lot of new goat owners online asking why they see so much contradictory information and wanting to know who is right. Is a certain brand of mineral the best? Should you give injectable mineral supplements? Why can one person's goats do well with a mineral block while other goats need loose minerals? The reality is that sometimes two people with seemingly opposite ideas are both making the right decision for their goats. This is why it is important for you to understand the "why" behind recommendations. If you simply try to duplicate the practices of

some award-winning herd, you could wind up with dead goats, and that is not an exaggeration or a hypothetical conclusion. It has happened.

Throughout this book, I've included stories that tell you about what various goats have taught me. I've done this because I truly believe that I have learned far more from my goats than from any book, website, or veterinarian. Your goats will let you know whether your management style is working for them. This book will give you a good basic knowledge of goats' needs, but ultimately it is by listening to your own animals that you will figure out the best way to care for them. When a goat gets sick, has difficulty birthing, or dies, it has just given you valuable information about your management practices and possibly about its own genetics. It is also giving you information when its fertility rate skyrockets or milk production goes down. Whether a kid grows quickly or slowly, it is giving you information about its mother's milk production. This book will help you understand what the goats are telling you so that you can provide them with the environment and diet that will help them reach their genetic potential.

You may be wondering what "raising goats naturally" means. It is definitely not what happens in factory farms, but it is not strictly organic either. It is important to understand that under organic standards an animal cannot be denied medical attention. The animal is supposed to be treated with conventional medication when necessary, but its milk cannot be sold as organic for the rest of the current lactation. Once a meat animal has been treated with conventional medication, it can never be sold as organic. There is no legal definition of "natural" food, but in my world it means that animals are not given antibiotics in their daily rations and they are not injected with hormones to increase milk production or to get bred. They are not given dewormers on a regular basis—either chemical or herbal. Just as it is my personal goal to have a diet and lifestyle that allow me to stay healthy and avoid routine medications, my goal for my herd is that they will stay healthy with the proper diet and management.

Goats have enriched my life in so many ways, from their charming personalities to their delicious cheese. Unfortunately, goats have a bad

We started our little endeavor partly because I'm horrified by factory farm treatment of animals and partly because I think a lot of the food that is being mass marketed right now is very unhealthy to downright poisonous.

When I started raising our chickens and goats, I had an epiphany about the "cost" of food. And I don't really mean money. Huge chain stores advertise "cheap" food, but I think the idea of "cheap" meat, eggs, or milk is an insult. There is nothing cheap about life. The amount of waste in this country generated either by individuals overindulging or restaurants or other institutions throwing food away affects the real cost of food, just as do poor management practices in the mass production of meat or eggs that cause huge recalls and the disposal of thousands of pounds of these products.

I have learned by watching pregnant does waddle around, scream in labor, and go through everything they go through to make milk that it's a big deal. It isn't just some beverage that appears in a bottle at the grocery store: an animal carried a baby, delivered and loved that baby, and then put their life energy into making that milk. I can't stand to waste an egg or a cup of milk that I and my animals have labored over producing (pun intended). An enormous amount of collective effort, animal and human, has gone into that egg or milk, and it is special. To associate "cheap" or "disposable" with this milk is to say that my little goat's life, love for her baby, and effort to make milk is not worthy of the dignity we generally assign to living beings. I think that separating the food product from the intimate relationship with the living being that produced it is what allows us to treat factory-farmed animals so terribly.

Around the world, I see that some animals are afforded a certain quality of life or protection under the law, such as pet dogs, and some are not, such as factory-farmed animals. Some people are afforded certain rights, and some people are deprived of these rights due to societal prejudice. It is my personal philosophy that no life, human or animal, is cheap or expendable. My greatest hope for our farm is that my human children will grow up with an enduring respect for all life. I hope they know there is not a type of animal, breed of animal, or use for an animal that justifies forcing that animal to live with zero dignity or respect. I believe that this sort of respect for animal life will also help them to understand that there are no "types" of people who are less deserving of any quality of life.

— Juliana Goodwin, Punta Gorda, Florida

reputation—undeserved, in my opinion—for being difficult to handle and having off-flavored milk. And some people wrongly assume that having a dairy animal sentences you to twice-daily milkings every day of the year with no holidays. So another goal of this book is to dispel misconceptions about goats.

Whether you are just thinking about getting a couple of goats to make your own cheese or you are further along in your personal goat journey, there is always more to learn. Every goat is an individual and will present you with its own unique personality and physical traits. The milk that you get from month to month will be a little bit different, providing you with cheese-making surprises. Like every other aspect of

The Question of Lactose

Can I drink goat milk if I'm lactose intolerant? The answer to this question is actually quite complicated. Many people assume any type of physical discomfort following milk consumption is due to lactose intolerance, but there are a number of reasons why you may have difficulty drinking milk. If you are truly lactose intolerant, you cannot comfortably consume any milk because all milk contains lactose, a milk sugar. Aged cheeses will have less lactose in them as they age, so the older the cheese gets, the less you may react to it.

A true milk allergy, however, is a reaction to the milk protein, and this allergy can vary when consuming milk from one species to another, so you might react negatively to cow milk but be able to drink goat or sheep milk. There are people who have difficulty digesting pasteurized milk but are fine with raw milk. And then there is the most confusing group—those who react negatively to dairy products only sometimes. They may be reacting to the drugs or hormones that are in the milk, which can vary from day to day, depending upon whether the milk came from a farm that uses hormones or when a cow received her last dose of an antibiotic. Even though no detectable level of antibiotics is permitted in milk for sale, a sensitive person may react to residual levels of antibiotics that are below what is detectable by modern testing procedures.

If you cannot happily consume milk and dairy products, try goat milk or goat cheese before actually buying a couple of goats to make sure that you will be able to eat and drink your homegrown products.

living a self-reliant lifestyle, you can't expect perfection. But at some point you realize that perfection really is not the goal.

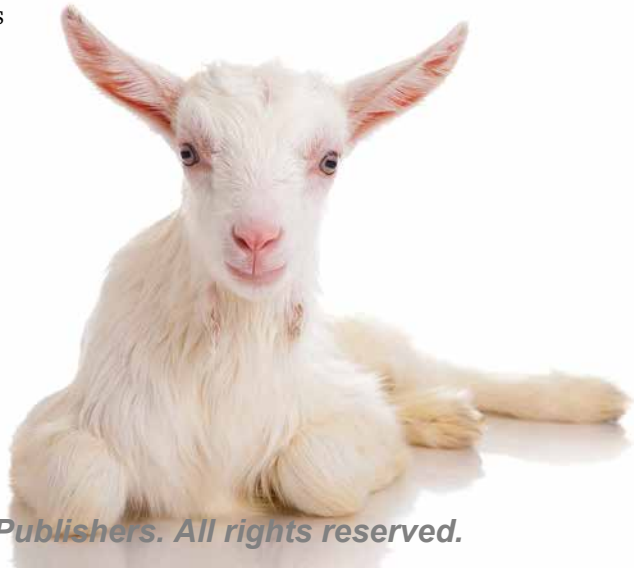
The reason you have goats on your homestead is not necessarily to produce the perfect cheese or to create a million-dollar corporation that makes artisanal goat cheese. Goats on your homestead provide you with milk that is fresher than anything money can buy. It comes from animals that spend their days outside in the sunshine breathing fresh air. It comes from animals that have names and are loved and cared for. They are not given hormones to increase milk production or to grow faster than nature intended. Your homegrown meat and your homemade dairy products are free from ingredients that you can't pronounce. Although homestead goats can save you money, the reality is that the benefits are priceless.

PART I

Planning, Purchasing, and Protecting

If you grew up consuming cow milk, you may have considered a cow when you decided to start producing your own dairy products. But there are plenty of reasons why goats are a better option for most people in modern society. Goats are easier to handle simply because they are smaller than cows. If you did not grow up on a farm, where you got used to handling cattle, goats will be less intimidating. It can be almost impossible to find a trained milk cow to purchase, but training a goat is not as difficult or as potentially dangerous for the novice as training a cow that has never been milked. It is also less expensive to get started with goats because they do not require the heavy-duty handling equipment needed for safe handling of cattle.

Although goats are easier to raise than cattle, this does not mean that you can just bring them home and let them run free in the pasture and expect all of their needs to be met. This section will give you the information you need to consider before getting goats as well as information on choosing a breed, on housing, bedding, fencing, livestock guardians, and more so that you have everything in place and ready when you bring your goats home. If you already have goats, this section might give you ideas for making your life easier or your goats happier.



CHAPTER 1

CHOOSING YOUR GOATS

After deciding that I wanted Nigerian Dwarf goats, mostly because they were listed on the American Livestock Breeds Conservancy conservation list, I bought the first three that I found for sale. As you might imagine, there is a better way to go about choosing goats. It never occurred to me that some might be better milkers than others in terms of production, personality, or mammary system. Those are just a few of the things to take into consideration before buying.

How much milk do you want every day for consumption as fluid milk? How much cheese do you want to make? Do you want to butcher extra bucks for meat? How much meat do you want? Do you want fiber? Can you handle a 200-pound animal, or do you need one around 75 pounds? By the time you finish reading this section, you should have figured out how many goats you need and narrowed down the breed options, and you will have a good idea how to find goats that will meet your needs.

Breeds

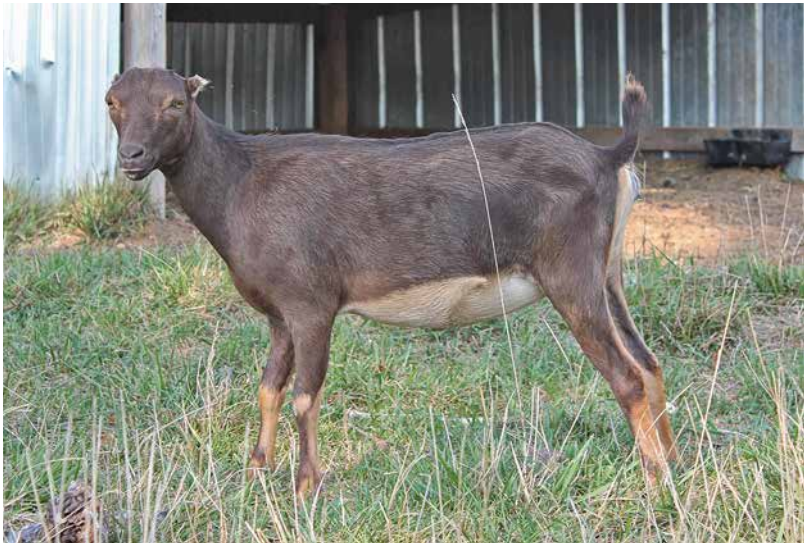
Goats are categorized as meat, dairy, or fiber goats. Of course, all goats make milk and all have meat on them, but those that have been bred as dairy goats tend to be better milk producers, and the meat goat breeds tend to have more meat on them. You can milk meat goats, and most dairy wethers are butchered, but if your main goal is to make cheese, you'd probably be disappointed in the milk yield if you purchased a

meat breed. On the flip side, if you have no interest in milking, and you only want goats for meat, you'd probably be better off with a meat breed. Although all goats have an undercoat of cashmere, it's not very much, so if your main goal is fiber, you should go with a fiber breed. There is a lot to consider when choosing a breed of goat, and it goes far beyond the descriptions of their color, personality, and milk production. The following information about the different breeds can serve as a starting point.

Dairy Breeds

There are eight breeds of dairy goats common to the United States and Canada: Alpine, LaMancha, Nigerian Dwarf, Nubian, Oberhasli, Saanen, Sable, and Toggenburg. The Guernsey is a rare breed that is slowly increasing in number in North America. All of these are standard-sized except for the Nigerian Dwarf.

There are also miniature dairy goats, which are hybrids of the Nigerian Dwarf and any of the standard-sized breeds. In order to avoid birthing difficulties when breeding for a hybrid, the buck must be the Nigerian Dwarf and the doe must be the standard-sized goat. The



This mini-LaMancha has the characteristic elf ears of a full-sized LaMancha, but it is several inches shorter. Production and butterfat fall somewhere between that of a Nigerian Dwarf and a LaMancha. Many people are drawn to mini-LaManchas and mini-Nubians because they like the non-erect ears but prefer the smaller size.

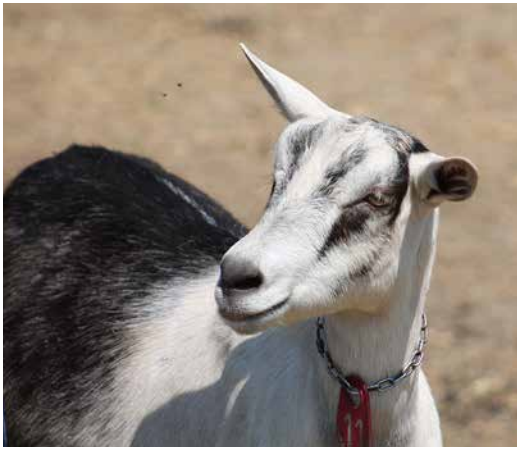
hybrids are referred to as the mini-Alpine, mini-Nubian, and so on. Although Pygmies used to be raised for dairy, the focus of most breeders in the last couple decades has turned towards raising them for pets, meaning that milk production and ease of milking are not emphasized.

You may also see "grade" or "experimental" goats, which are usually crossbreeds. A "recorded grade" is a goat whose pedigree is recorded with the American Dairy Goat Association (ADGA) but is not registered as a purebred.

The production and butterfat averages listed in the breed descriptions are from the American Dairy Goat Association, which keeps milking records for herds that are on Dairy Herd Improvement (DHI), which means the goats are milked once a month under the supervision of a milk tester. The milk is weighed, and a sample is sent to a lab where it is tested for butterfat, protein, and somatic cell count. ADGA keeps track of the milking records so that breeders can see how their goats measure up to others in the breed. Some might argue that goats on test will have higher average production than goats not on test because only breeders with exceptional producers will want to test. In other words, the breed averages are really just the averages of goats on test, which is probably much higher than the average goat.

Alpine

Sometimes called the French Alpine, this breed comes in a variety of colors and patterns. They have erect ears and a straight nose. The does should be at least 30 inches tall at the withers and weigh at least 135 pounds. Bucks should be at least 32 inches tall and weigh at least 170 pounds. The Alpine's butterfat averages 3.3 percent and production is around 2,400 pounds of milk over a nine- to ten-month lactation. Alpines are a popular breed for those who want a lot of fluid milk, including commercial goat dairies.

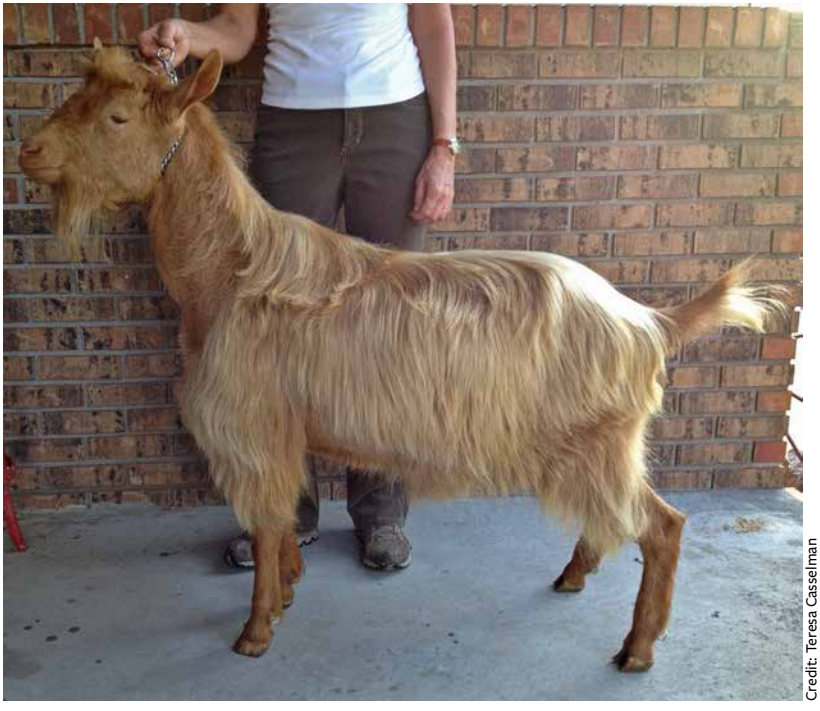


Valium is an Alpine doe at Triple Creek Dairy in Iowa. Her color is "cou blanc," which means white neck. The Alpine's striking colors and markings are one reason for the breed's popularity.

Guernsey

The Guernsey is a recent addition to the dairy goat scene in the United States. The breed is being developed from Golden Guernsey embryos that were imported in the 1990s. Those offspring, as well as some imported semen, were crossed with Swiss-type dairy goats here. The Guernsey is medium-sized, similar to the Oberhasli or Toggenburg. Guernseys are critically endangered worldwide, which attracted the interest of Teresa Casselman of Six Point Farm in Bloomington, Illinois, who has been raising Nubians since 1994.

"I first learned about the Guernsey breed in 2003 when the *Dairy Goat Journal* featured the Golden Guernsey goat on its cover. As the name implies, the Golden Guernsey goat originated on the Island of Guernsey and nearby Channel Islands," Teresa has said. "I continued to follow the progress of the breed in the United States, and in 2011 I purchased my first Guernsey does. By this time, both does and bucks were



Credit: Teresa Casselman

Snowbird Angelo is a Guernsey buck. Although both does and bucks grow beards, you may see pictures of does without beards because they are cut off when does are clipped for shows.

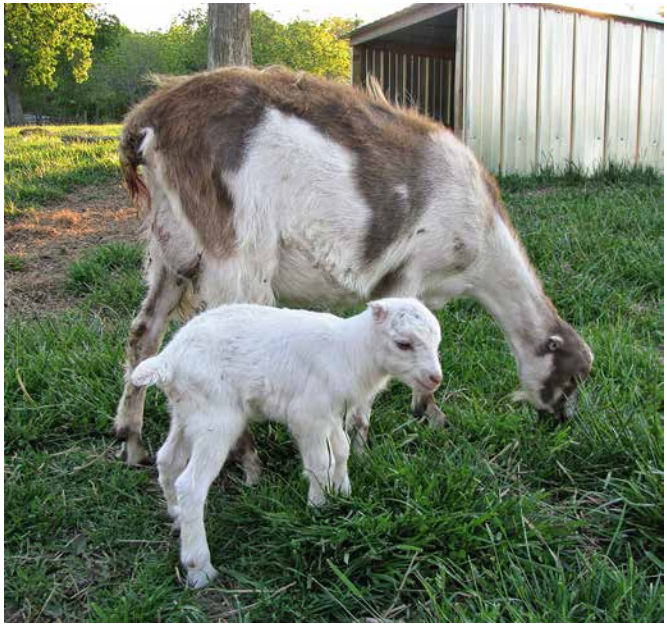
starting to become available, but they were still few and far between. I drove to Pennsylvania for my does and to Washington for my buck. The does were bred and kidded in 2012. As beginner's luck would have it, my first Guernsey kidded with quad does."

Teresa describes Guernsey goats as having a friendly and affectionate temperament. "Many people," she says, "are attracted to their golden hair coats, which can be short or long and flowing and range in color from pale cream to deep russet." She believes that the Guernsey breed's "productivity and smaller size make them ideal for a household or a less intensive production system."

Because Guernseys are still new to this continent, official milk production and butterfat averages are not yet available.

LaMancha

The LaMancha is the only dairy goat that claims the United States as its home. Its history dates back only about a century, unlike many of the European breeds, which have been around for hundreds of years. The distinguishing characteristic of the LaMancha is its ears—or lack thereof. I had LaManchas for seven years, and typically the first thing anyone asks when they see one for the first time is, "What happened to its ears?" Gopher ears are supposed to be almost nonexistent up to one inch in length, whereas elf ears can be up to two inches long. Although does can have either type of ears, bucks can only be registered if they have gopher ears. LaManchas may be slightly smaller than Alpines, but not more than a couple of inches. LaManchas average 2,200 pounds of milk with 3.8 percent butterfat.

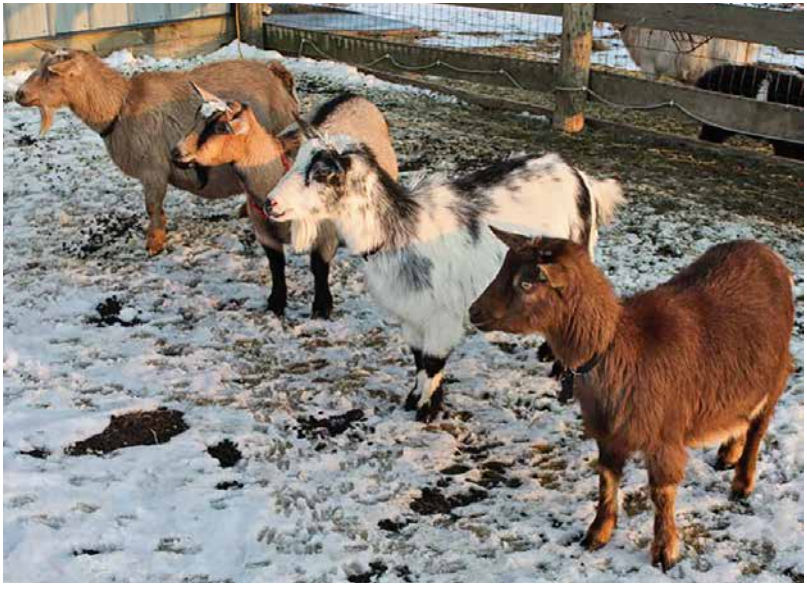


This LaMancha doe and her buckling show the diversity of color available in the breed.

Nigerian Dwarf

Many Nigerian Dwarf owners originally choose this goat for its small size or its high butterfat, or perhaps both. The maximum height is 22.5 inches for a doe and 23.5 inches for a buck in order to be shown with the American Dairy Goat Association or American Goat Society (AGS). Sometimes confused with Pygmy goats because of their small size, the Nigerian Dwarf is a small dairy goat and has a very different body type from the Pygmy, which has more of a meat goat body type and does not produce as much milk. I once heard a judge say that the ideal Nigerian should look like someone took a picture of an Alpine or a Saanen and shrank it on a copy machine. The average Nigerian Dwarf produces 715 pounds of milk with 6.5 percent butterfat, making it an excellent choice for those who want to make cheese.

We've had a herd of Nigerians since we started our homestead in 2002. After our children left home, I realized my husband and I didn't need many goats to meet our dairy needs, so either the LaManchas or the Nigerians needed to go. I ultimately chose to keep the Nigerians because their smaller size makes them easier to handle, and the high



In spite of their small size, Nigerian Dwarf goats do well in cooler climates.

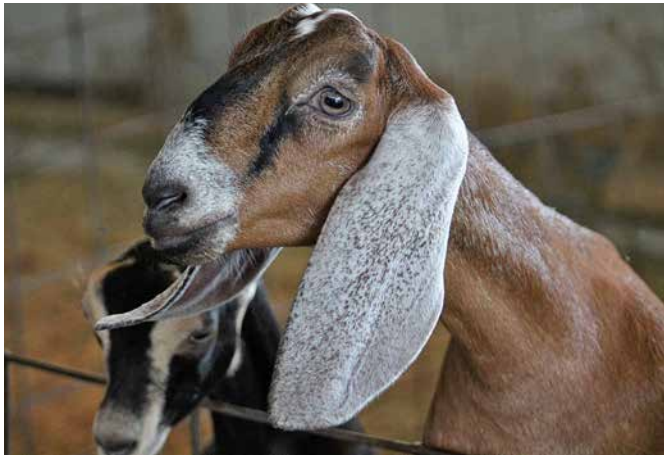
butterfat gave me twice as much cheese yield as the LaMancha milk. Yogurt made with Nigerian milk is also much thicker due to the higher milk solids.

Some sources say that Nigerians will breed year-round and cite this as a benefit to having them. This was historically true because they originally came from Nigeria where there are not big differences between the seasons. However, I live in Illinois, and most of my does are seasonal breeders, so I decided to do a survey of Nigerian Dwarf breeders to get a better idea of what is happening with this breed in the US. When asked how many of their goats come into heat in the spring, 39 percent of the 212 respondents said that all of their goats could be bred for fall kidding, 18 percent said more than 75 percent of their does, 9 percent said 51 to 75 percent. Five percent said that none of their does could be bred for fall kidding. When asked how many of their goats got pregnant when they bred them for off-season kidding, only about one third said all of their does got pregnant.

Nubian

The Nubian, whose history goes back to Asia, Africa, and Europe, has two distinguishing characteristics that set it apart visually from the other standard-sized dairy goats—its long, pendulous ears and its Roman nose.

The Nubian is also unique in its butterfat, which tends to be higher than in the other standard-sized breeds, although milk production tends to be lower, averaging 1,750 pounds at 4.7 percent butterfat. "The higher butterfat and protein are great for my cheese making," says Brendia Kempf, who has Nubians in her herd at Triple Creek Dairy in Iowa.



Tasmania is pictured here as a doeling at Triple Creek Dairy. The Nubian's Roman nose, which is convex rather than straight or dished, is a disqualification in any other breed of dairy goat. When the ears are held flat against the face, they should extend at least one inch beyond the end of the muzzle.

Over the years, I've owned several breeds of dairy goats, including the controversial Pygmy goat (is it a dairy goat or isn't it?!). I finally settled on three breeds. Currently I raise Nigerian Dwarves as my main breed, Alpines, and Nubians. Why? I suppose there are a variety of reasons.

The Nubian—I love to watch them regally cross the pasture. None of the breeds quite measure up to the Nubian in its gait or stance. They have nice butterfat and protein numbers and produce very sweet milk. Mine, however, are quite dumb and try my patience on a daily basis. You see, I am a rather energetic person, so I am constantly cleaning or fiddling with things at milking time, trimming hooves, or treating some ailment or another. A simple relocation of the broom will result in an entire group of Nubians refusing to enter the milk parlor, which means I must drag them in one at a time, increasing my already long chore schedule.

The Alpine—I'm not quite sure why I have Alpines. I guess I just like them! I do love the look of the Swiss breeds, and this one allows pretty much any color or color combination, which certainly is eye appealing when scanning the pasture. My Alpines are high-producing does with a generic-tasting milk. Not sharp and goaty, but not the truly sweet milk that my Nigerian Dwarves produce. I've found, because I sell milk to white-tailed deer farmers, that a combination of the high butterfat/protein milk of the Nigerian cut with Alpine milk seems to be perfect for good growth patterns in deer fawns, and you cannot reproduce this combination using a strictly Nubian herd. The Alpine typically has a fun personality. One minute she's pawing and snorting at an enemy; the next, she's climbing the walls to get away! She has a fight or flight instinct that in my herd is confused at best!

The Nigerian Dwarf—aside from their easy-to-manage smaller size (there isn't a Nigerian on the place that I cannot pick up and move to where I want when necessary), they have a personality that is bigger than life. They rule on this farm. Even the staunchest, most heroic of Alpines will turn tail and run when met with a chorus of angry Nigerian Dwarves with hackles raised. They have incredibly sweet-tasting milk, rich in butterfat and protein. I liken it to drinking half and half. It's not unusual for me to cut it with a bit of water if I just want to enjoy a glass with a few cookies. Mine produce more milk per capita on less feed than either of my standard breeds, so it is an economical breed as well. If forced to choose one breed to raise, the Nigerian Dwarf would win hands down, no hesitation. I love the breed with all of its personality traits, both good and bad, its ability to reproduce with few problems, and the fact that it's an easy and economical breed to raise.

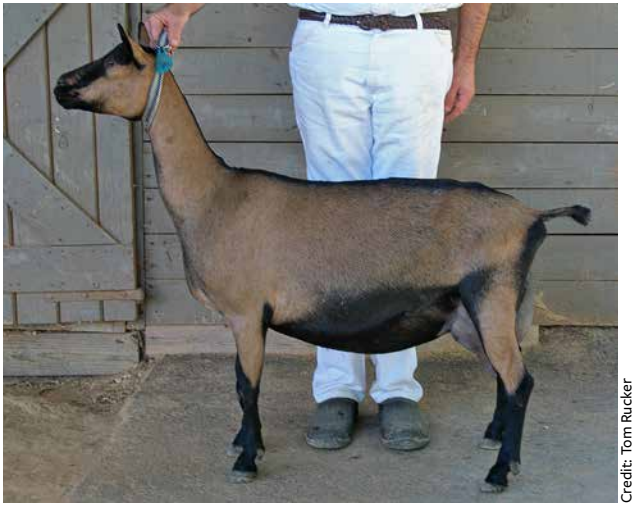
— Ellen F. Dorsey, Dill's-A Little Goat Farm,
Chelsea, Oklahoma

Keep in mind that every goat owner has their own reasons for preferring a particular breed. What appeals to one breeder might not appeal to you. "What I do like about Nubians is what most people would put on their 'don't like' list," says Vicki McGaugh of Cleveland, Texas. "They are bossy, they are loud, they have distinct personalities, and living just ten acres away from thousands of acres of national forest, they are fearless." While some people may be drawn to less common breeds, Vicki likes the Nubian's popularity. "The bloodlines are so diverse, the herd book so large, that you can really breed this breed into whatever you like it to be."

Oberhasli

The Oberhasli was originally called the Swiss Alpine in the United States, and the breed was registered in a sub-herd book of the Alpine breed until the late 1970s. They produce an average of 2,200 pounds of milk a year with butterfat around 3.8 percent.

"One of the traits that originally attracted me to the breed in 1991 was that they are a more moderate size than most of the other Swiss or erect-eared breeds," says Tom Rucker of Buttin'Heads Dairy Goats in Marengo, Ohio. Although there is no upper limit on size, the minimum size is two inches shorter than the Alpine. The Oberhasli buck must be chamoisee, which is red with black markings, although does can be chamoisee or black.



Credit: Tom Rucker

SGCH Buttin'Heads Sofia *M.

"While the attractive coloring and appearance are what originally caught my eye, it's the temperament that has kept me breeding these beautiful creatures for more than 20 years. I often joke that if an Oberhasli makes noise, it's time to call the vet. As a rule, they are a very quiet breed. Even at feeding time when many other breeds become

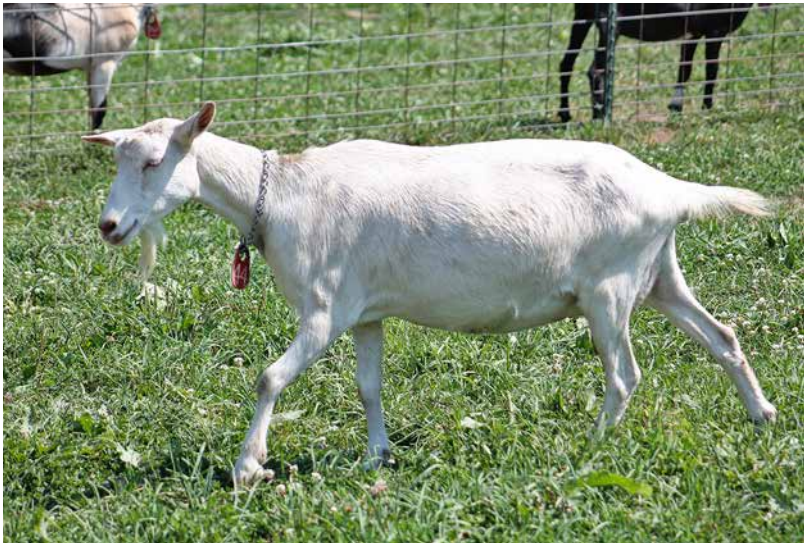
quite vocal, the Oberhasli stand quietly waiting for their rations. They are just too dignified to make a ruckus," Tom explains:

> Rarely have I had an aggressive Oberhasli. Even mature bucks during breeding season are easily handled and are able to be penned with other bucks of varying sizes without harm to anyone. They will do the typical head butting of any goat, but it is usually more posturing than contact and is over very quickly and the combatants are often found minutes later nestled together taking a nap. While genetics and environment are both components of temperament, most Oberhasli love people attention but are not pushy about getting it and have no problem sharing the pats and scratches with their herdmates.
>
> While the popularity of the breed is growing, they are still far less numerous than some of the other breeds. Finding a quality Oberhasli to add to (or start) your herd may require a bit more effort but is well worth it.

Saanen

A solid white or cream-colored large goat, the Saanen originally came from Switzerland. Sometimes called the Holsteins of the dairy goat world, Saanens tend to be excellent milk producers, although the milk is fairly low in butterfat. This makes them a popular choice for goat dairies with a focus on fluid milk rather than cheese. The Saanen has been the top-producing breed in milk production for many years, usually averaging more than 2,500 pounds in a standard lactation. Butterfat averages only 3.3 percent, but with such high production, they can be a good choice for someone who wants lots of milk and cheese. Although they are the largest breed, they are known for their calm personality, which makes them easy to handle.

Heather Houlahan of Harmony, Pennsylvania, originally bought two Saanens because they were available in her area, and it turned out to be a good decision for her. "They are tremendous milk producers," she says. "I can accumulate enough milk for a little cheese making even if only one of them is milking."



Kelli is a Saanen owned by Dawn Penn at Triple Creek Dairy.

Sable

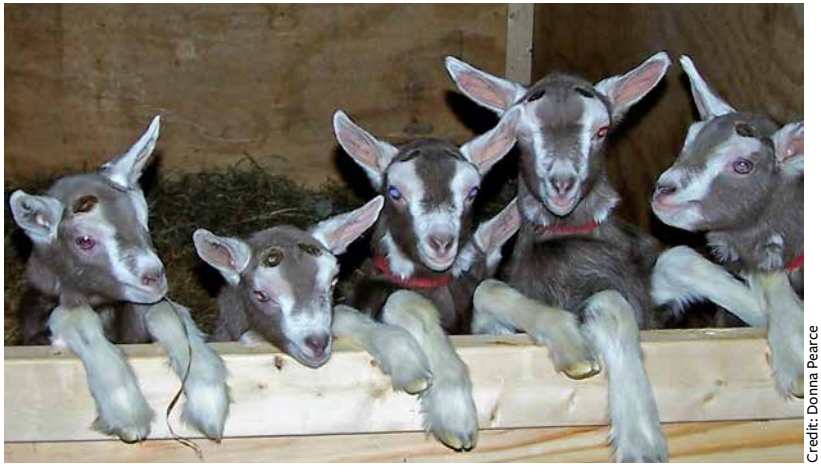
Historically, if a Saanen goat in the United States was born any color other than white or cream, it could not be registered as a Saanen, and hence the Sable Saanen breed was born. The name has now been shortened to Sable, and they can be any color other than solid white or cream. If you ask Sable breeders why they chose the breed, most will say they wanted all of the positive attributes of the Saanen, such as calm disposition and high production, but wanted some color in their pasture, too. While some people say they love the look of a herd of white goats on the pasture, others are annoyed that all of the goats look the same at a distance. Other Sable breeders used to breed Saanens exclusively until a colored kid was born, and then they were hooked.

"I love color so Sables are for me. I'm not interested in Saanens," says Wendy McKenzie of McKenzie Acres in Fairbury, Nebraska. "I want to know across the barnyard who is doing what. Love the size and personality. I like things less common, and Sables are rare if you look at the numbers of each of the registered breeds." Milk production and butterfat are similar to the Saanen, which is important to Wendy, whose goats provide milk for her business, Udderly Naked Goat Milk Soap Products.

Toggenburg

The Toggenburg, which was the first dairy goat to be registered, also originated in Switzerland and is the smallest of the standard breeds, with a minimum height of 26 inches for does and 28 inches for bucks. Toggs are only brown, but the shade can vary from light fawn to dark chocolate, with specific white markings, such as two white stripes down the face and down the lower part of the legs. They average around 2,200 pounds of milk with 3.1 percent butterfat.

Although Toggs have a reputation for being cool weather goats, they can be found all over the US. "Toggenburgs are incredibly smart and quick to learn. They're also very dependable. Rain or shine, good day or bad, Toggenburg milkers will consistently milk the same amount each day," says Melanie Fergason of Royal Cedars Farm in Junction City, Oregon. "They don't like to dry up and are known for extended lactations, even for several years. Toggenburgs are wonderful mothers. They are fiercely protective of their kids and are known to steal/share another doe's kids if she doesn't have any of her own. They have very strong bonds with one another and make friends for life. Toggenburgs tend to be very easy to breed because their genetics are very consistent. You breed a nice Togg doe to a nice togg buck and you're almost guaranteed a nice togg kid. The consistency is very impressive."



Credit: Donna Pearce

These Toggenburg kids show the classic white markings on their faces, ears, and legs.

Grade or Experimental Dairy Goats

When you are raising more than one breed of dairy goats, odds are good that at some point a buck is going to jump a fence when a doe is in heat, and crossbred goat kids, often called "grade" or "experimental," will be the result. A recorded grade is the offspring of registered parents, and they may not be less expensive than a purebred goat. Some recorded grade goats are on DHI milk test and have distinguished themselves as excellent milkers, and if so, you can expect to pay as much for their kids as you would for a kid from registered purebred parents. If the parents are registered with ADGA, the offspring may also be registered.

It is also worth noting that some breeders will create crossbred goats on purpose, which is why the term "experimental" is sometimes used. I know someone who owns a dairy and says that her LaMancha and Nubian crosses are her favorite milkers. Another loves her Nigerian and LaMancha crosses while another prefers Kinders and miniature dairy goats.

Dual Purpose

Kinder breeders are the only ones who officially identify their breed as dual-purpose, meaning that it is good for both meat and milk. It was developed by crossing a Pygmy buck with a Nubian doe. Before becoming popular as pets, Pygmies were a meat breed and still retain the blocky, meaty body of a meat goat. Although Nubians are officially a dairy goat, some individual breeders consider them to be dual-purpose, as they do produce a good-sized carcass. Since they are a cross of two breeds that originated in Africa, many can be bred year-round.

Kinders are not registered with ADGA or AGS, but they have their own breed association that registers goats, sanctions shows, and sponsors milk testing. According to the Kinder Goat Breeders Association, the average milk production is 1,557 pounds with a range of 990 to 2,290 pounds and 6.25 percent butterfat. The highest recorded producer was Zederkamm Daffodil with 2,290 pounds in 296 days in milk.

Unlike mini-Nubians where the goal is to eventually have the same long ears as the standard-size Nubian, most Kinders have airplane ears,

Credit: Sue Beck

Kinders are the only breed in the US that is allowed to have airplane ears that stick straight out on the sides.

which stick straight out to the sides. However, they may have upright or more Nubian-like ears, according to Sue Beck, president of the KGBA.

"Kinder goats are a hardy, friendly breed that tend to flourish under a broad range of circumstances," says Sue. "They tend to kid easily with multiples and are wonderful mothers. Kids grow quickly and have few health issues. Average rate of growth is around 10 pounds or more per month with kids averaging 30 to 40 pounds at weaning and close to 100 pounds by a year.

"Kinders generally don't have foot problems or parasite problems, but the breed is not without issues," Sue continues. "Kinder goats are becoming more widespread, but they are still not readily available in many areas of the country. This means that breeders are often forced to travel long distances or wait for months to get their Kinders. This also creates an issue for those who want to show their goats, because breed-specific Kinder shows are few and far between, and getting Kinders accepted in local shows often takes a bit of work and perseverance. As the breed grows in numbers and popularity, we are seeing these issues decline."

Meat Breeds

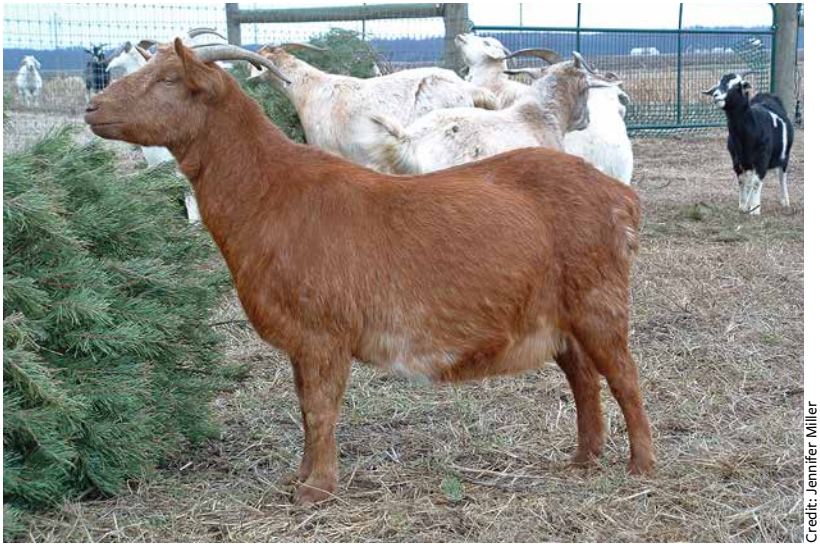
Boer, Kiko, Tennessee Fainting (or Myotonic), Savanna, and Spanish goats are meat goat breeds in North America. There are also a number of hybrids that have been developed from these breeds. Meat breeds gain weight faster and have heavier finished weights than dairy goats.

"We currently raise crossbred commercial meat goats, mainly for slaughter goat production, with some being sold for breeding stock," says Jennifer Miller of Rush Creek Farms in Illinois. "We use Boer and Savanna genetics in order to produce the larger-framed kid that

slaughter buyers prefer. However, we need the mothering ability, increased milk production, better feet, and parasite resistance/resilience of the Kiko breed. Our ideal cross is a 50 percent or more Kiko dam and a Kiko/Boer or Kiko/Savanna sire."

Although excess bucks are a fact of life with dairy goats, excess milk is not common with meat breeds. Because meat breeds have not been selectively bred for milk production, milkable teats, and good udders, very few meat goats make great milk goats. They also have shorter lactations than you find in better dairy goats. Because they are not bred for milk, there are no official milk records for these breeds.

However, if you look at kid finishing weights for does, that will give you a good idea of which ones are better milk producers. Just as pounds of milk per day will vary for dairy goats, weight gain of kids will vary based upon the dams. Serious breeders of meat goats usually keep records of kids' birth weights, as well as weights at various stages, such as one month, two months, etc. Does may be culled if their kids don't gain weight fast enough. Because the goal is to have as much meat as possible, breeders may also cull does that consistently have single kids rather than twins.



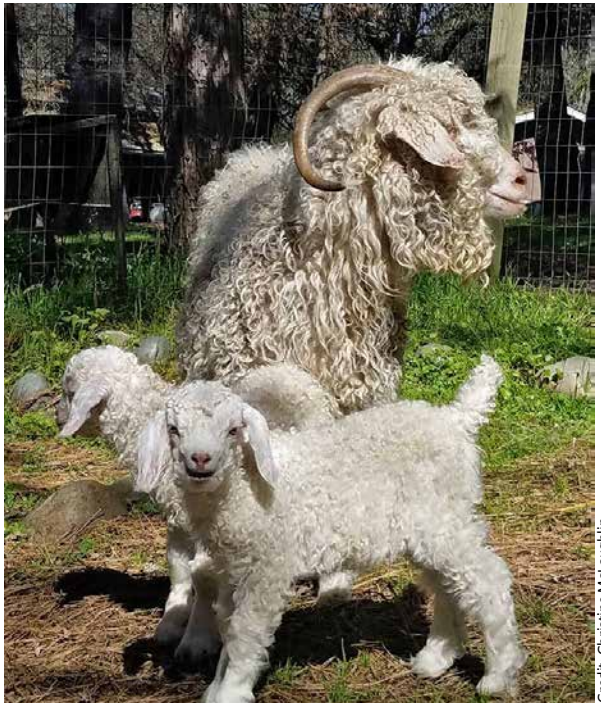
Credit: Jennifer Miller

This crossbred meat goat doe is a high-percentage Kiko that lives at Rush Creek in Illinois.

If you start with a couple of dairy goats and discover that you want more meat, you can increase the size of your herd so that you'll have more kids for meat. You can also add a doe to your herd that is a meat goat and breed her to your dairy goat sire. Although the kids won't be as big as if you were breeding her to a larger buck, they will be bigger than what you were getting when breeding the dairy goats.

Fiber Breeds

Although dairy goats should be able to provide you with as much milk, meat, and leather as you want, you might need to add Angora or Nigora goats to your herd if you want homegrown fiber. All goats produce cashmere as part of their winter coat, but the volume of the cashmere is very small and it must be separated from the coarse guard hair that makes up the majority of the goat's coat.



Credit: Christine McLaughlin

Angora goats like Tink, a doe, and her kids Artemis and Jupiter at Laughing Crow and Company Flower and Fiber Farm in California usually get to keep their horns because their mohair grows so long and is quite warm, and horns are thought to help them regulate their body temperature.

Angora goats, which produce mohair, are smaller than standard-sized dairy goats but larger than the Nigerian Dwarf. Unlike sheep, which are sheared annually, Angora goats are sheared twice a year as their long curly locks of mohair grow to several inches in only a few months.

Angora does bred to Nigerian Dwarf bucks produce Nigoras, which are considered a dual-purpose goat that will yield milk and fiber. This is still an experimental breed, however, and milk production numbers are not available. If milk production is important to you, it is especially important to buy from someone who milks their Nigoras and keeps records. Fiber produced by Nigoras will be one of three types. It may be mohair, which is

While white Angora goats have been bred for centuries, *colored* Angora goats are the new kids on the block and have only been actively bred for a little over 30 years. A white Angora at our farm is registered as a white, but is a color carrier, which allows us to improve the colored Angoras. Thanks to these newcomers, fiber enthusiasts have other natural Angora colors to choose from such as black, gray, silver, chocolate, red, and variations of those shades.

So why are we so smitten with Angoras?

From a Commercial or Cottage Industry Standpoint:

- The luxurious fiber called mohair is highly valued worldwide by yarn and fiber enthusiasts such as fiber artists, hand spinners, knitters, weavers, and doll hair crafters. In fact, the word "mohair" is derived from the Arabic word "Mukhayyar," which literally translates to "best" or "choice."
- Mohair is desired for its rich luster, strength, and durability. It feels smooth, very much like silk.
- The mohair fleece grows about one inch per month, and Angora goats are typically shorn twice a year (sheep are shorn once a year), making them the most efficient fiber-producing animal in the world.

From Our Personal Standpoint:

I had been dabbling with fiber crafts in the first place. As far as starting a goat herd as a small business venture, we knew that we wanted goats that we could get to know and build relationships with here on our farm. Raising Angoras for fiber production allowed us to do that. We wanted sweet, kind animals, small in stature, that are easy to handle. Angoras simply filled the bill in every way. In full fleece, they may look like large animals. However, if you stand next to one in real life, you might be surprised to see that they're actually one of the smaller goat breeds. Once shorn, they don't stand much taller than our Nigerian dwarfs.

Angoras have sweet personalities and are wonderful mothers, another thing that was important to us. Both bucks and does are almost always allowed to keep their long, beautiful horns. Horns have living bone inside, complete with blood flow that acts as a cooling system for these animals, which are asked to carry a load of warm fiber for much of the year. Horned goats *does* mean choosing your fencing wisely so they don't get caught up. However, we find that they do best with their horns on, and they carry them off beautifully!

— Christine McLaughlin,
Laughing Crow and Company
Flower and Fiber Farm,
Somerset, CA

what Angoras produce, and it is considered fiber type A. Fiber type B is a blend of mohair and cashmere, sometimes called cashgora. Fiber type C is mostly cashmere.

If you decide to start crossing breeds, remember the buck must be from the smaller breed in order to avoid birthing challenges. An Angora buck can be bred with a standard-sized dairy goat doe because the Angora is smaller in size.

Does

The number of goats you need will be determined by which breed you choose and what you plan to do with the milk and with the kids that are born. The amount of pasture space you have may limit your options. If you need two gallons of milk or more per day for consuming as fluid milk, one of the Swiss breeds, such as Alpine or Saanen, would be a good choice. Excellent milkers in those breeds can produce a couple of gallons a day at their peak, gradually declining to around a gallon a day, which they can produce for a few months.

Ten months is a standard lactation period, but some does will milk for a couple of years without rebreeding. If you want does that can milk for extended periods, be sure to buy from someone who milks their goats for an extended period of time and keeps records. Keep in mind that first fresheners produce less than mature does and that individual production can vary tremendously between goats of the same breed. For example, the range for Saanens in 2016 was 940 to 6,740 pounds for

Why Do We Talk About Milk Production in Pounds?

Official milk records are reported in pounds and tenths of pounds of milk, rather than cups, quarts, or gallons. Weight is used because it is far more accurate than eyeballing a measuring cup or canning jar, and if you are hand milking, odds are good that there will be foam on the milk, making it harder to figure out the exact amount visually. Milk is a little heavier than water, so a gallon of milk will weigh between eight and nine pounds, depending on the percentage of milk solids, such as butterfat.

285 to 305 days, according to the American Dairy Goat Association. This is why it's important to buy from someone who keeps milk records. Don't assume that a huge udder has a lot of milk in it. While you can't hide a lot of milk in a tiny udder, a goat with a big udder could be a great producer, or she could have a meaty udder.

A breed with high butterfat is the best choice for making a lot of cheese. The high butterfat level increases cheese yield but generally comes at the cost of lower fluid milk production as breeds that have higher butterfat tend to produce less milk. The Nigerian Dwarf has the highest butterfat, averaging around 6.5 percent over the course of lactation, but they average only a quart or two a day. Miniature dairy

You Can't Have Just One…

Remember that goats are herd animals, which means you need to have at least two so that they have a friend who speaks the same language. Keeping them with a pig, sheep, or horse is not the same. Pigs communicate by biting and horses by kicking. Although it may appear that goats and sheep speak a similar language, they don't. Sheep run at each other with their heads down to butt heads and establish dominance, whereas goats rear up on their hind legs and come down to butt heads.

Buying a single goat is asking for trouble. I have received plenty of phone calls from people who bought a single goat and then frantically searched for another one. A lonely goat will be the world's best escape artist because it is looking for a friend. One woman said her goat wanted to live on her front porch, which meant it was hard to keep the poop and pee cleaned off. Another said her goat would jump on her car and dance around. One caller was terribly afraid that her horse was going to kill her goat. In spite of the fact that the horse kept kicking at it, the goat kept sneaking into the horse's pasture for company.

Although there may be solo goat success stories, it isn't worth trying. Goats do not unlearn bad behavior. Once a goat starts doing something, it will likely teach the trick to its new friend when you do bring in another goat. There is simply no reason to buy a single goat. It takes just as much time to care for one goat as three or four, and most reputable goat breeders refuse to sell single goats to homes where there are not already other goat friends.

goats, which are a hybrid created by crossing a Nigerian Dwarf buck with a standard breed doe, and Kinders have butterfat that is about as high as the Nigerians but produce more milk. Nubians have butterfat around five percent, although they have the lowest overall production of the standard breeds. Other standard breeds of dairy goats average around three percent butterfat, which is similar to whole cow milk sold in the store.

If you plan to use the extra bucklings for meat, the standard dairy goats obviously produce larger kids and therefore more meat, but how much goat meat do you want versus milk or cheese? The Nubian is one of the meatier dairy goats, so if you want a lot of cheese and meat, this breed might be a good choice for you. The Kinder gives you high butterfat for cheese and almost as much meat as Nubians, but is easier to handle because it's smaller. Saanens, Sables, and Alpines will provide lots of meat and fluid milk. If you want cheese or a smaller amount of milk but no meat, the Nigerian Dwarf might be a better option. Extra Nigerian Dwarf bucklings can often be castrated and sold as pets because of their small size, although they can also be butchered.

Bucks

To make milk, a doe has to get pregnant and give birth, which means you need access to a buck—or at least a buck's semen. For many people this means buying a couple of bucks to breed the does. However, some people don't want to buy a buck or can't have a buck for some reason, such as living in a city and being limited by zoning that allows only two or three does. You might also be worried about the odor of a buck bothering you or your neighbors if you have a small piece of property. There are a few options for those without a buck.

You can buy a bred doe, but that will work for only the first year. After that, a buck can be leased and brought to your property for a month or two. He stays with the does and breeds them when they come into heat. On the flip side, you can wait until you see your doe in heat and take her for a date at the buck's farm. Some breeders will also provide boarding for a doe to stay at the buck's farm for a few weeks if you are having trouble figuring out when she is in heat. However, most

breeders do not offer buck service because of biosecurity issues (concern about bringing contagious diseases onto a farm). This is something you can discuss with breeders when buying does from them. Some will breed does that were born on their farm, even though they won't offer buck service to goats that were born elsewhere.

Prospective goat owners may be hesitant to have a buck because they have heard horror stories. Genetics can play a role in personality, so talk to the breeder of a potential herd sire about his sire's personality. While standard-sized bucks can be a challenge to handle, Nigerian Dwarf bucks tend to be more mellow. Because they weigh one-third to one-half as much as a standard buck, they are also easier to handle.

You might also consider artificial insemination (AI). Although semen costs far less than a buck, a tank for storing semen will cost considerably more than all but the most expensive bucks, and you will need to have the tank recharged regularly so the semen stays frozen. You would need either to have an AI technician inseminate your does for you or learn the technique yourself. Success with AI is usually not as good as with a live buck.

Registration

The largest dairy goat registry in the United States is the American Dairy Goat Association, which has registered more than a million goats since it was founded more than one hundred years ago. The American Goat Society and Canadian Goat Society (CGS) are two smaller organizations that also register dairy goats. The registries keep track of goat pedigrees. They also sanction goat shows, license judges, administer classification and appraisal programs, and create criteria for goats to earn milk stars on 1-day and 305-day milk tests.

You might think that you need purebred, registered goats only if you plan to show, but keep in mind that it costs as much to feed and care for an unregistered animal as it does to care for a registered one. There are some distinct benefits to buying registered goats even if you plan to raise goats only for your family's milk and meat needs.

- Unregistered goats may be poor quality. Reputable breeders will not sell an animal with papers if it has a disqualifying defect.

Therefore, you could be buying a goat with a defect or a goat whose parent had a defect.

- Kids of registered goats can be sold for more money than kids of unregistered parents.
- Registered goats may have documented show records, evaluations, and milk tests that will help you determine whether you are buying good-quality animals.
- Registered goats have pedigrees so you can see how their parents and grandparents performed in the show ring and in milk testing.

But do you need show-quality goats if you are planning to use them only for milk? The short answer is no. Goats from champion parents may not necessarily produce more milk than goats from parents who never set one hoof into a show ring. Great conformation and milk production do not always go hand in hand, although it's great when they do. Given the choice of a doe from a finished champion that would cost the same as two does from a goat with a great milk record, the smarter choice would be to buy the two does from the great milker for the same price. Very few people show their goats, so kids with champion grandparents and great-grandparents do not necessarily sell faster or for a higher price than kids without champions in their pedigree. Although you might be excited to pay top dollar for a goat with champion parents, remember that its kids will be the grandkids of the champion goats, diluting the genetic inheritance. To command top dollar for your kids, the goats

What's "Show Quality"?

The phrase "show quality" does not have any official definition and can mean something different from one person to another. A show-quality kid might be defined as one from champion parents, or it might simply mean that it does not have any disqualifying defects. The bottom line is that you can't tell when a kid is two or three months old whether it will grow up to become a champion.

that are the parents of those kids have to have proven themselves in either production or the show ring.

If you are planning to milk your goats, you should buy from someone who milks and keeps barn records or is on official milk test, also known as DHI, which stands for Dairy Herd Improvement. Herds on official test will have their milk weighed and tested for butterfat and protein monthly. If you don't have a tester nearby, you can get certified yourself and enroll in owner-sampler testing, although an official tester will still need to come to your farm once a year for a verification test. Each dairy goat registry has its own milk performance testing program, and you can get more information from them about how to get started, as the rules are slightly different with each registry. DHI can be expensive for people with small herds, but owners can still keep barn records, which means they record the daily weights to track their goats' production. There is no way that anyone can tell with accuracy whether their goats are good milk goats if they do not milk them for extended lactations, which are at least eight to ten months.

Pedigree

The alphabet soup that surrounds a goat's name on a pedigree can be confusing for people new to the goat world. What do all those letters, pluses, and asterisks mean? And does it really matter?

Although letters vary between registries for similar achievements, the letters at the front of a goat's name usually signify the goat's championship status and sometimes its milk status. Letters after a goat's name signify milking records and classification or linear appraisal scores. For example, ARMCH Antiquity Oaks Carmen *D VG is a master champion (MCH) with the American Goat Society, and she has an advanced registry (AR) milk star, which means she earned her milk star on a 305-day test. The *D means she earned a milk star, which could have been a 1-day test or 305-day test, and the VG means she scored "very good" when classified. If she had not earned her master championship, which requires at least three show ring wins against at least ten goats

at each show, there would not be anything on her registration papers to signify that she had earned a 305-day milk star, rather than a 1-day milk star. Breeders who are on year-round testing usually have milk records on their websites or can give you the numbers so that you can see exactly how much they have milked in the past.

When breeders have goats that are dual-registered, you may see letters from both registries in the animal's name, such as ARMCH Antiquity Oaks Carmen *D 1*M VG. In this case, Carmen has also been on milk test with ADGA and earned her milk star with that registry as well. Registration papers for each registry contain only the recognition earned with that registry. It is only on a farm's website or in advertisements that you will see a name listed with letters from both registries.

When I was still fairly new to goats, I became totally starstruck and wanted to buy goats with milk stars in their pedigrees, not realizing there can be a difference of hundreds of pounds of milk between two goats each of which has a milk star. A goat that barely squeaked by to earn her milk star is definitely not as valuable as one that is on the Top Ten list of breed leaders. And if you want goats to provide milk

Reading a Pedigree

In both ADGA and AGS, there is a system in place to have a goat evaluated against the ideal standard. In ADGA it is called linear appraisal (LA), and in AGS it is called classification. Although the evaluation and grading systems are not identical, it is highly unlikely that an animal would score extremely well in one and poorly in the other. The letters E, V, VG, G, G+, A, or F or a + sign, after a goat's name indicate the classification or LA score. In both registries a score of 90 percent or more is Excellent (E); a score of 85–89 percent is Very Good (V) in ADGA and (VG) in AGS; 80–84 percent is Good Plus (+) in ADGA and Good (G+) in AGS; a score of 70–79 percent is Acceptable (A) in ADGA and Good (G) in AGS; and 60–69 percent is Fair (F) in both registries.

As a matter of practicality, scores of less than 80 percent are not usually advertised because the market for "acceptable" goats is not very big. Those are the goats that go to the sale barn where no one cares about LA scores.

American Dairy Goat Association (ADGA)	American Goat Society (AGS)
DOES	
1*M: A one-star milker is a doe that has met the minimum requirements to earn a milk star, whether in a 1-day or 305-day test. A doe may also earn a star if she has three daughters that have earned stars or two sons who have earned +B.	***D:** A star dam is a doe that has met the minimum requirements to earn a milk star, whether in a 1-day or 305-day test. A doe may also earn a star if she has three daughters that have earned stars or two sons who have earned +S.
2*M: A two-star milker is a second-generation doe that has met the minimum requirements to earn a milk star, whether in a 1-day or 305-day test. A 3*M would be third generation, and so on. Stars cannot skip generations, so if a doe's grandmother is a 1*M but her mother is not, she will be a 1*M rather than a 2*M.	**2*D:** A two-star dam is a doe that is the second generation to meet the minimum requirements to earn a milk star, whether in a 1-day or 305-day test. A 3*D would be the third generation to meet the requirements, and so on. As with ADGA, stars cannot skip generations.
CH: The doe has won three grand champions at shows with at least ten does entered.	**MCH:** The doe has won three grand champions at shows with at least ten does entered.
GCH: The doe has won three grand champions at shows with at least ten does entered, and she has earned a milk star.	**ARMCH:** The doe has won three grand champions at shows with at least ten does entered, and she has earned a 305-day milk star.
BUCKS	
***B:** A star buck's dam and his sire's dam have earned their milk stars.	***S:** A star sire's dam and his sire's dam have earned their milk stars.
+B: A plus buck has three daughters out of three different dams who have earned milk stars, or two sons who have each earned +B.	**+S:** A plus sire has three daughters out of three different dams who have earned milk stars, or two sons who have each earned their +B.
++B: A two-plus buck has three or more daughters who have earned milk stars and two sons who have each earned +B.	**++S:** A two-plus sire has three daughters who have earned milk stars and two sons who have each earned +S.
CH: The buck has won three grand champions at shows with at least ten bucks entered.	**MCH:** The buck has won three grand champions at shows with at least ten bucks entered.
GCH: The buck has won at least three grand champions at shows with at least ten bucks entered, and he has earned +B.	**ARMCH:** The buck has won at least three grand champions at shows with at least ten bucks entered, and he has earned +S with at least three of his daughters earning their 305-day milk stars.

year-round, a 305-day milk record is definitely more important to review than a 1-day milk star, which is simply verification that a goat milked a certain number of pounds on one day of her lactation. Some goats can produce a lot of milk early in lactation but then dry up after only a few months, so it's important to look at long-term milk records.

Genetics is a gamble, and if you are buying kids, you are buying genetic potential based on the goats in that kid's pedigree. Although you can't be guaranteed a bucket-busting milker based on a great pedigree, it is highly unlikely that you'll get a great milker from a mediocre dam and grandmother. On the flip side, don't get too excited about goats that are far back in a pedigree. Having an outstanding milker as a great-grandmother in a goat's pedigree only represents one-eighth of that goat's genetics, and if the rest of the goats in the pedigree are only mediocre, the odds are against the kid getting only the spectacular genetics.

Purchasing

Although you can find goats on internet classified ad sites and in sale barns, the quality is often questionable. Keep in mind that no one is going to sell a goat for $50 if they can sell it for $300 or more, and if they can sell it only for $50, there is probably a very good reason. The animal could have a disease, a disqualifying defect, kidding problems, or poor milk production.

An internet search will find the websites of breeders in your area. Search for your state and the breed you want, such as "Oregon Nubians." Many goat breeders have websites where you can learn more about their herd, breeding philosophy, and individual goats. They often have photographs, milk records, show records, classification or linear appraisal scores, and sometimes even stories about the goats.

It is a good idea for a couple of reasons to buy your first goats from a breeder who has a philosophy similar to yours. First, if the goats are thriving in their current environment, they may not perform as well under a different management system. For example, if you want to raise your goats in a sustainable system, you won't know if goats from

another farm will do well on yours if they are being given multiple vaccines and chemical dewormers on a regular basis. Also, if a farm bottle raises all of their kids, they will have no idea whether their goats are good mothers, which could present a challenge if you are planning to dam raise. Hopefully the person who sells you your first goats will be willing to serve as a mentor. Having someone who shares your philosophy and personally knows your goats is invaluable.

Keep in mind that if you want good quality stock of a specific breed, you might need to look at surrounding states or even across the country. When I was starting my herd, there was no one in my state who was raising Nigerians for anything other than pets, so my foundation animals all came from other states, including bucks that came from as far away as Massachusetts and Alaska. Goats can be shipped by air in dog crates. When buying from a distance, it is less expensive to buy kids than adults because the cost of shipping is based on weight or size of the crate.

Should You Buy All Your Goats from a Single Herd?

From a veterinary perspective, it is safer to buy all of your goats initially from a single herd. If you are bringing in animals from a variety of places, they will each come with their own germs and parasites. Although each individual goat has been living with its bugs forever, the other goats have not, and their systems will be faced with the stress of fighting off new bacteria and viruses. It is not plausible for a goat to be completely parasite free, and with the growing problem of dewormer resistance, bringing in goats from a variety of herds could result in severe parasite problems. There are only three classes of dewormers, so if you bring in goats from three different herds, it is possible that you will have put together goats that are carrying parasites that, combined, have resistance to all known dewormers.

Probably at some point you will be bringing in at least a few goats from different herds, and when you do, it is imperative that you quarantine new goats for both their safety and the safety of the rest of your herd. Moving to a new farm is stressful on goats, whether it is across the

continent or across the road, and being isolated from other goats can stress them even more. If you can afford to do it, bring in two goats at a time from a single farm so that they will have a friend to stay with them during the quarantine period.

If you buy a single goat, put a wether with it for company to keep its stress as low as possible. Although it may appear that a castrated male would have no place on a farm, he can provide a variety of important functions, such as letting you know when does are in heat as well as being a companion to animals in quarantine, such as those newly purchased or showing signs of illness. They can also help out around a homestead by pulling a cart or carrying firewood. Because they are not producing babies or milk or sperm, they tend to be very easy keepers with high resistance to parasites and illness.

How Do You Know You Are Buying Healthy Goats?

Goats can have a number of health problems, and some are more obvious than others. Few people would be willing to take home a goat with a crusty nose or diarrhea, but there are some diseases that can be asymptomatic in the early stages.

Caprine arthritic encephalitis, usually called CAE, and Johne's (pronounced like yo-nees) can often be detected only by testing animals. There is no requirement for testing, and everyone handles it a little differently. Some herds are tested annually, especially if they attend shows and the goats are exposed to other herds. A herd may be closed, meaning the breeder no longer buys goats and does not offer breeding services. But a herd may be called closed even though the animals are taken to shows, so the term "closed herd" does not have a universal definition. After several years of negative test results in a closed herd that does not show, some breeders may test less often or not at all.

If the animals you want to buy are not tested, you can ask that adult goats you want to buy be tested or the dam of any dam-raised kids you want to buy be tested. Because it takes months for a goat's body to develop enough antibodies to show up in a blood test, pathologists recommend that kids not be tested until six months after they have

stopped nursing. As an additional precaution, you can ask to have the kid's sire tested because research has shown that CAE can be transmitted through breeding.[1] If the dam was infected during breeding, she could infect nursing kids with the virus, even though she might still test negative. Normally the buyer pays for pre-sale testing. Although a single negative test is not as convincing as several years of whole-herd negative tests, it is better than nothing. More information about CAE and Johne's is in Chapter Seven: Injury, Illnesses, and Diseases.

What I Learned from Tom Selleck—The Goat, Not the Actor

After two years of goat ownership, I bought Tom Selleck, a new buckling, and immediately put him into the pen with my other bucks. A couple weeks later, I took a fecal sample to the vet. She said he had a heavy load of barber pole worms and tapeworms and should be given a dewormer for three days. A week later we found him unable to stand and rushed him to the University of Illinois veterinary hospital. Within less than an hour of our arrival, he was dead.

A necropsy showed that he had died from anemia caused by the barber pole worms. I was confused because we had just given him a dewormer. When I talked to the woman at the farm he had come from, she said, "Well, everyone knows that dewormer doesn't work." That was my first lesson in dewormer resistance. That particular dewormer had always worked well on my farm, but the internal parasites on the other farm had developed resistance to it. Not only did I lose a buckling, but we then had worms on our pasture that were resistant to the dewormer we had been using.

The vet told me to start deworming the bucks monthly, which I did, not knowing at the time that it was a terrible idea, which would lead to even more dewormer resistance. A couple of months later, two more bucks died from parasites. It was bad enough to lose one goat, but it was even worse to lose three. Although quarantining might not have saved the buckling I had purchased, I would not have lost the other two bucks.

You may think that if you are buying your goats from a herd that has tested negative for all of the most insidious diseases there is no need to quarantine. However, it is sometimes the simplest things, such as parasites, that can cause the biggest problems.

One should be concerned about tuberculosis (TB) and brucellosis when buying dairy animals because these diseases can be transmitted to humans through body fluids, such as blood, milk, and vaginal secretions during birth. Tests are available for both of these diseases, but the incidence of TB and brucellosis in humans is quite rare because of aggressive programs to eradicate the diseases in dairy herds. According to the Centers for Disease Control, around one hundred cases of brucellosis occur annually in the United States.[2] Almost all states are accredited tuberculosis-free, and many have not had a case of TB in 25 years, but this can change literally overnight if a new case is discovered. When the first edition of this book was published, there were only two states with herds that were affected by TB. When writing this second edition, that number had increased to five states. This is why most TB-free states have strict rules about importing animals from states that are not accredited TB-free.

When animals cross state lines, whether in an airplane or private vehicle, they are supposed to have a certificate of veterinary inspection, often called a health certificate. In many cases it simply contains information on the seller and the buyer, along with goat identifying information, such as tattoo numbers. A veterinarian signs the health certificate, signifying that the animal is not exhibiting any signs of disease. When a goat is coming from a state with a known disease problem, such as TB, the form will also include the test results required by the state the animal is being imported to.