

What's Involved in Caring for Dairy Goats¹

Chris DeCubellis and Izabella Toledo²

The 4-H dairy goat project is an excellent choice for young people who enjoy working with animals. This particular project allows a 4-H member to work with the same animal for an extended period, possibly even years, as both “kids” can grow together. It also can be an excellent introductory project to livestock, because dairy goats are usually docile and respond well to proper treatment and training. Additionally, many families enjoy the added benefit of the goat's milk when she comes into production, although milking a goat is a required daily chore that needs to be considered before deciding to participate in the project. This publication will explore some of the minimum requirements to successfully care for a dairy goat.

For those who want to enjoy caring for a production animal but do not have a large piece of land, keeping a goat or a few goats might be a good option. Goats are also excellent animals for young people to help care for, and children as young as age 8 can raise and exhibit both dairy and meat goats as a 4-H project.

General Information

Dairy goats include those breeds that have been selected over the years to produce a larger amount of milk. There are several breeds of dairy goats to choose from, such as Nubian, La Mancha, Alpine, Toggenburg, Saanen, Sable, and Oberhasli. Some people also milk smaller breeds, like Nigerian Dwarf and Pygmy goats. Dairy does will typically give birth to one to three (and sometimes even four) kids per year. Many people enjoy goat milk, and goat milk may

be used to make cheese and other products such as goat milk soap.

When looking for a goat, it is advisable to select an animal from a farm free from Caprine Arthritic Encephalitis Virus (CAE). CAE is a highly contagious disease among goats and can be transmitted to kids through milk, or to adult goats through close contact. It is advised to talk to the person you purchase your goat from about preventative medical treatments they have utilized, including regular deworming schedules and vaccinations.

Before buying goats, it is important to think about one's goals for the animals and the facilities, resources, and care required to keep the animals healthy and productive. If the idea is to keep the goats as pets, breed or production history might not be as important. If you want your child to be competitive in the show ring, or if you want to keep your goat for milk, it might be wise to purchase a registered animal whose pedigree includes production records. Youth and adults can show goats in fairs and goat shows throughout Florida. Many shows are sponsored by local fairs, regional fairs, or the Florida State Fair, and through the American Dairy Goat Association (ADGA) and the Florida Dairy Goat Association (FDGA).

Housing Requirements/Facilities

How much land a goat requires depends on several factors, including how much of the goat's diet will come from pasture. Goats are browsers and will eat grass, leaves, and

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2. Chris DeCubellis, dairy/animal sciences 4-H state specialized Extension agent III, Florida 4-H Youth Development Program; and Izabella Toledo, regional specialized Extension agent II, dairy, UF/IFAS Extension Northeast District; UF/IFAS Extension, Gainesville, FL 32611.

even bark off trees if they do not have access to other feed. Goats can be successfully kept on a lush pasture, which would provide a large portion of necessary nutrients, or kept successfully in a paddock or barn if sufficient feed and high-quality forages are provided to meet the goat's daily nutritional needs. Goats require a dog/coyote-proof woven-wire fence and a well-ventilated shelter, with constant access to fresh, clean water.

While protection from cold might not be as big of a concern in Florida as in other locations, keep in mind that goats do not like to get wet, and thus shelter from the rain is important. Shade is necessary as well, and trees or a shaded structure should be provided.

A clean, dry area or barn space is necessary to milk goats. Many people purchase or build a goat milking stand that has a head station to hold the goat still during milking. Many will allow the goat to eat feed during the milking process. Goats can be trained to readily hop up on the milking stand in anticipation of milking.

Milking Goats

If you are interested in milking your goat, then you might want to purchase an animal that has already had at least one lactation, or one that is pregnant and about to enter her first lactation, from an experienced and reputable breeder. Deciding to keep an animal for milk is a commitment of time and hard work. Proper cleanliness, sanitation and safe milk handling are imperative to ensure a wholesome and safe product for human consumption.

Most people who keep a dairy goat will milk their goats twice a day. The milk and the goat need to be handled properly to ensure a healthy animal as well as a safe food product for the family. Milking a healthy goat and producing milk of high quality involves proper milking procedures, including sanitation before, during, and after milking. Additionally, pasteurizing the milk before using at home is highly recommended. The doe can be milked by hand or with a milking machine. Sanitizing the milking equipment is of the utmost importance. Recommended practices to help prevent problems such as intramammary infections or mastitis include predipping with a commercial iodine or chlorine solution before milking; drying the udder and teats before hand-milking or attaching milking units; stripping the teats and inspecting for any abnormalities with the milk; harvesting the milk by hand or attaching the units; and then using a postmilk dipping of the teats in a teat-dip solution. The milking chore becomes easier as the goat and the milker both improve with twice-daily practice.

Be calm and gentle when handling goats. It is much easier to milk a docile doe that is contently chewing on her feed while milking than a fidgety doe that is terrified of the slightest touch. Goats need to be milked on weekends and holidays too, so if you want to get away for a few days, you will need to find someone knowledgeable who will milk for you while you are gone.

Care of Kids

You will also have to care for the doe's kids, which will need milk themselves until they are weaned. They will require dehorning/disbudding, ear tags for identification, proper vaccination and deworming, and if desired, castration of the young bucks. Some people build or purchase a small wooden or metal fence/box to safely keep kids still and secure while performing management tasks such as dehorning and vaccination. In addition, all the goats will require regular hoof trimmings. Developing a good relationship with a livestock veterinarian, other farmers, or a mentor in the FDGA/ADGA who can help you navigate situations as they arise should help you get off to a successful start in caring for your goats.

Some people keep goats but have no desire to milk, allowing the kids to drink most of the milk. This might be an issue with a doe that is a heavy producer of milk. Importantly, if a doe is diagnosed with CAE, her kids should immediately be removed at birth and her colostrum and milk must be pasteurized before feeding to kids in an attempt to prevent the spread of this viral disease. A local livestock veterinarian can test the goats in your herd for CAE.

Basic Healthcare

Develop a relationship with a local livestock veterinarian who is experienced with goats. Your location as well as local prevalence of particular diseases will influence which regular vaccinations are required. A common vaccination protocol for goats is the CDT or CD&T, which is the vaccination for *Clostridium perfringens* Type C and D and tetanus. It is important to vaccinate at the proper time (time of year as well as time of pregnancy) to accomplish the desired protection from vaccinations. Typically, does receive a CDT booster 4–6 weeks prior to kidding. Kids are often given a series of CDT vaccinations at 5, 8, 12, and sometimes 16 weeks.

The doe and kids will also require regular deworming and other preventative health care measures. Begin deworming kids at 6–8 weeks of age. Deworm the doe 1–2 weeks after

kidding, and work with your veterinarian to develop a deworming protocol for the adult animals in your area. External parasites are sometimes a concern, so regularly check your animal's hair and skin for any irritation or issues.

Goats' hooves will need periodic trimming (at least once annually and possibly more often). In addition, goats' hair will need to be clipped for shows.

Keep newly purchased goats quarantined from the rest of your animals for at least 30 days before introducing the newcomer into your herd. It is important to closely monitor the newcomer for any diseases or other potential issues to prevent the spread to your other animals.

Feeding Goats

Goats are a smaller ruminant animal. A ruminant is an animal with a four-compartment stomach. This amazing digestion system is made up of the rumen (a big "fermentation compartment" that has beneficial microbes), the reticulum (a honeycomb-like structure that traps heavy or dense objects), the omasum (also called the manyplies), and the abomasum (the compartment most like a nonruminant stomach that produces acid). Together these four compartments allow ruminant animals to be able to digest complex plant tissue, breaking down plant cell walls so nutrients become available. This is why ruminant animals like goats and cattle are the best upcyclers of high-quality protein: they can turn grass and plant tissue into milk and meat!

Just like any mammal, goats require water, energy (from carbohydrates and fats/lipids), protein, minerals, and vitamins. Because they are ruminants, they can break down complex roughages. This is why roughages like high-quality grass, alfalfa mix hay, perennial peanut hay or pasture grass should be the largest portion of their diet. Concentrates like grain-based feeds supplement the goat's energy, protein and fat requirements. Vitamins and mineral supplements may also be included. Work with your local veterinarian, Extension agent, or feed dealer to determine which mineral supplements should be provided in your area.

Within a few hours of birth, kids require colostrum. Ideally, kids should consume at least a half cup of colostrum starting about 15 minutes after birth. Kids will drink about 4 ounces (a half cup of milk) 4–5 times per day during their first three days of life. From 4 days to 14 days, kids will drink 8–12 ounces of milk 3–4 times per day. At about 2 weeks of age, kids will start drinking water. From 2 weeks to 3 months of age, kids will drink about 16 ounces of milk

2–3 times per day, and from 3 to 4 months, kids should drink 16 ounces of milk twice each day.

Begin introducing grain and hay at 1–2 weeks of age. The kid can be weaned when it consumes at least $\frac{1}{4}$ pound of concentrated feed (grain) each day as well as readily consumes hay or grass.

For adult goats kept on grass pasture or fed grass hay, concentrate feed should contain 16%–18% crude protein. If feeding a legume hay such as alfalfa or perennial peanut, the concentrate can be 14%–16% crude protein. How much concentrated feed (grain feed) to feed in supplementation to forages will depend on the animal's age and level of milk production. Heavy-producing does require constant access to high-quality forage and concentrate. A rule of thumb for a doe in mid-lactation and desired amount of flesh is all the high-quality forage she can consume plus 1 pound of concentrated feed per 3 pounds of milk she produces, and for does in late lactation, 1 pound of concentrated feed per 5 pounds of milk produced. Use regular observations of your animal's condition to gradually adjust her daily feed amount. Remember, goats will require mineral supplementation.

There are many opportunities for young 4-H members who are interested in caring for and showing goats as a 4-H project. Many local county fairs have dairy goat shows. Many state-level youth and open shows also allow youth opportunities to show their animals in multiple shows. There is a dairy-goat judging contest at the Florida State Fair, and 4-H members can compete in speech/demonstration/illustrated talk contests related to their dairy-goat project.

Goats are amazing animals and can provide delicious milk and other high-quality products for your family if you are willing to commit to adequately care for these animals. Some goats can be quite endearing, much to the delight of their caretakers, who enjoy their company and utility. For more information, contact your local UF/IFAS Extension office, and enjoy the following publications:

<https://animal.ifas.ufl.edu/smallruminant/>

<https://florida4h.ifas.ufl.edu/media/florida4hifasufledu/docs/project-files/sciencex2/animal-science-projects/animal-science-pdf/4-H-Dairy-Goat-Project.pdf>

<https://extension.psu.edu/dairy-goat-production>

<https://extension.wsu.edu/animalag/content/your-dairy-goat/>

<https://goats.extension.org/goat-vaccination-program/>

<http://adga.org/dairy-goat-management-calendar/>

<https://extension2.missouri.edu/g3990>

<https://extension.oregonstate.edu/sites/default/files/documents/8836/sp50932homepasteurizationofrawmilk.pdf>