

Tips and Tricks to Diving into Dairy Goats



Image courtesy of University of Arkansas Division of Agriculture Research and Extension
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Purpose of this packet.

The purpose of this packet is to provide basic information to 4-H members and other interested parties about dairy goats. Many members, especially those just beginning, are unsure of where to start or what to learn in regards to a dairy goat 4-H project. This packet discusses different breeds and types, diseases, and specific issues related to the project. While this packet is by no means all-inclusive of what is required to raise dairy goats, it is a good starting point.

This packet will encompass topics such as disease and treatment, types, and other related information that will work to better the reader's understanding of their project. The primary goal is to help facilitate a more confident and prepared member that will continue to develop skills and greater personal and project growth in their desired project area.

This packet was developed in 2020 for families beginning in the dairy goat project area.

Common Terminology

1. Buck: Uncastrated male goat
2. Buttermilk: Leftover liquid after cream has been churned into butter
3. California Mastitis Test (CMT): One popular form of testing for mastitis in herd by mixing milk with CMT reagent and then observing for clumping and evaluating on a scale of 0 to 5. Clumping indicates mastitis and severity
4. Castration: Removal of testicles to prevent breeding
5. Colostrum: First milk consumed by kid after birth
6. Cull: Removing animal from your herd due to lack of need for that animal in program
7. Dipping: The process of dipping a freshly milked teat in a teat disinfectant to help prevent bacteria from entering
8. Doe: Female goat
9. Escutcheon: Area located between vulva and a doe's rear udder attachment
10. Fore Udder Attachment: Junction located between doe's lower portion of abdomen and udder.
11. Freshen: When a doe begins a new lactation period
12. Grade: First definition: Both parents are purebred but not of the same breed
Second definition: Unknown breed(s) in the animal's background
13. Homogenized: The breaking up of particles of fat in the milk to ensure they don't separate from the milk
14. Kidding: The birthing process of a goat
15. Oxytocin: The hormone secreted from the pituitary gland that causes milk to be letdown in a doe's mammary system
16. Pasteurization: Milk is heated to render microbes, disease-causing agents, harmless to us
17. Purebred: An animal that only has one breed present in its bloodline
18. Weaning: Removing kid from the doe to keep it from nursing
19. Wether: Castrated male goat

Parts of a Dairy Goat

Knowing the parts of a dairy goat is highly important inside and outside the show ring. Inside the show ring, many judges will ask physiological questions and ask you to locate certain body parts. Outside the show ring, knowing the components that make up your goat can help to identify injuries and diseases. Since there is a lot to learn, the diagram below, will help you learn the parts of a dairy goat.

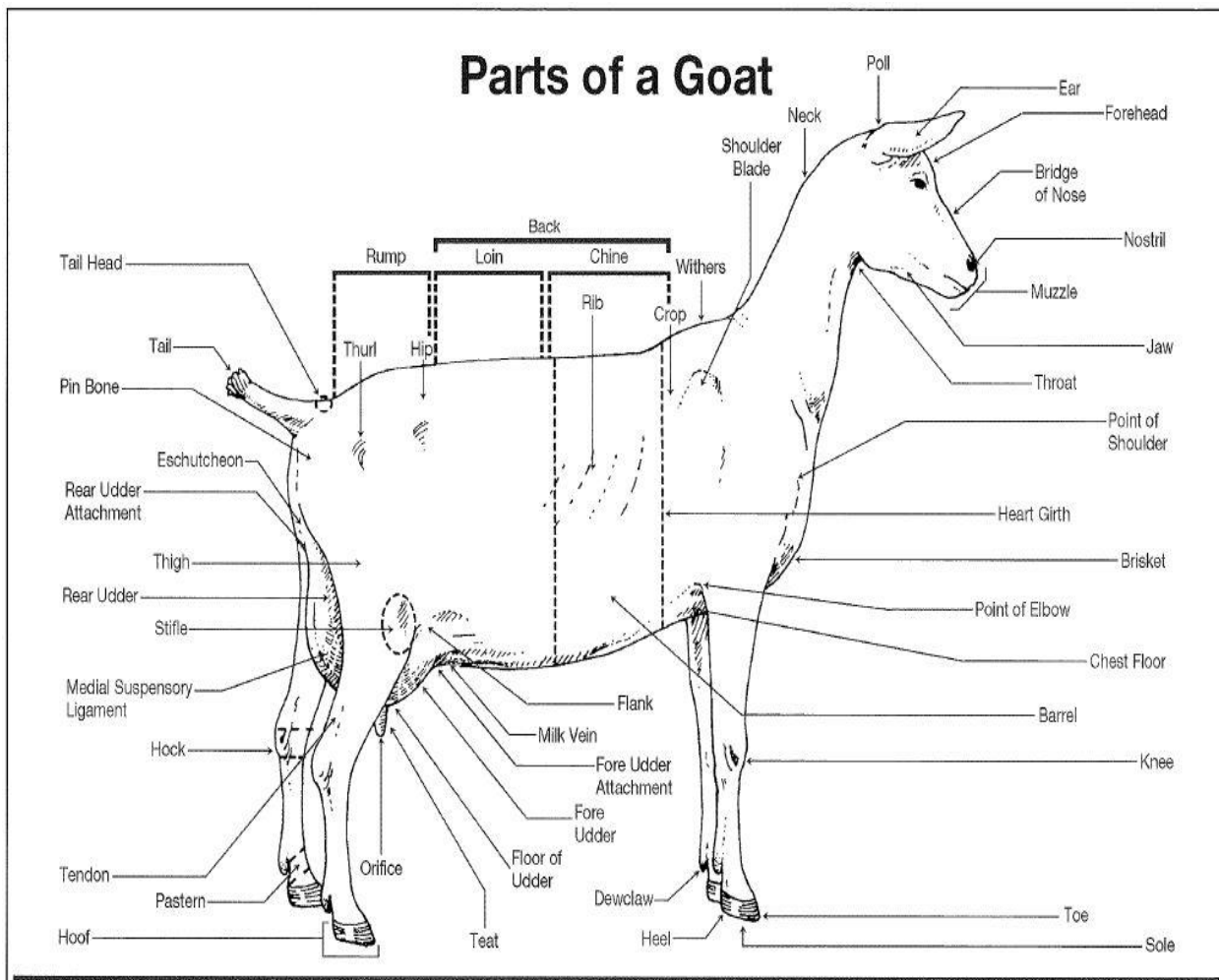


Image courtesy of Colorado State University Pueblo County Extension
Image is stretched

Common Diseases and Treatments

In the table below are some listed common diseases and ailments found in dairy goats as well as a handful of pertinent details in each column. This list is far from all-inclusive and is just a sampling of what can be found, both of diseases/ailments and in the following columns. Columns two through five are common details related to that disease/ailment. It is strongly encouraged that you form a relationship with your local vet to help with common procedures, advice, and anything else that may be needed in a client-vet relationship. Please note that for dairy animals when you use medications such as antibiotics or steroids the milk should be dumped out after milking.

Disease	Symptoms	Treatment	Prevention	Other Details
Mastitis	<ul style="list-style-type: none"> -Reduced milk production -Flakes, clots, or puss in milk paired with watery milk -Hardness, redness, heat, and swelling on udder in clinical mastitis -Pain when the udder is touched in clinical mastitis. 	<ul style="list-style-type: none"> -NSAIDs may help but consult with a veterinarian since treatment varies with type of mastitis 	<ul style="list-style-type: none"> -Test goats for mastitis regularly -Proper preparation and disinfection of teats before and after milking -Good barn hygiene 	<ul style="list-style-type: none"> -Many things cause mastitis, including bacterial infection or injury to udder
Milk Fever	<ul style="list-style-type: none"> -Staggering -Low milk production -Little appetite -Coma -Lethargy 	<ul style="list-style-type: none"> -IV administration of calcium gluconate by your veterinarian 	<ul style="list-style-type: none"> -Loose minerals provided to does -Exercise and a good feed plan -High calcium foods such as alfalfa just before 	<ul style="list-style-type: none"> -Usually caused by a diet low in calcium causes their bodies to rob their bones and blood to make milk

			and after kidding	
Caprine Arthritis Encephalitis (CAE)	<ul style="list-style-type: none"> -Swelling of joints -Atrophied muscles -Seizures -Hindquarter weakness -Death 	-There is no treatment for CAE	<ul style="list-style-type: none"> -Test goats for CAE -Do not bring untested goats onto farm -Sporadic testing of your own herd -Cull goats with CAE. 	-It's a retrovirus
Caseous Lymphadenitis (CL)	<ul style="list-style-type: none"> -Abscesses on lymph nodes -Cheese consistency in puss -If internal, abscesses on organs and inside lymph nodes -Fever 	-There is no treatment for CL	<ul style="list-style-type: none"> -Vaccination -Do not bring untested goats onto farm -Sporadic testing of your own herd -Cull goats with CL 	<ul style="list-style-type: none"> -There are two forms of this, the internal form and the external form -It is caused by a bacteria and can survive in the soil
Strongyle worms	<ul style="list-style-type: none"> -Anemia -Lethargy -Weight loss -Humping up of the back -Lowered production of milk 	<ul style="list-style-type: none"> -Have a fecal sample tested by a veterinarian for confirmed diagnosis -Deworm according to bottle instructions 	<ul style="list-style-type: none"> -Feed animals in feeders and not directly on the ground -Rotate goat between pastures 	<ul style="list-style-type: none"> -It's an internal parasite -In some cases it may be beneficial to increase the animal's protein intake to help get weight back up

***DISCLAIMER:** Authors are not veterinarians and only provide this information as a personal reference. They are not responsible for outcomes. Consult a veterinarian for veterinary advice and treatment.*

Breeds

In the dairy goat world, there are only a handful of recognized breeds, all with a wide variety of purposes and uses. Their capabilities vary equally as widely. Below are six breeds of dairy goats selected to show the reader a variety of goats that have different uses or combination of uses. Listed after are some characteristics to the breed that make it unique, characteristics, or are strong suits of that breed.

Lamancha



Image courtesy of University of Kentucky Department

- Despite popular belief, these goats do have ears. There are two types of Lamancha ears: Elf ears and gopher ears.
 - Elf ears are the longer of the two and are permitted to be a maximum of two inches long. The ear must be upturned or downturned.
 - Gopher ears are the smaller of the two and are permitted to be a maximum of one inch in length but it is preferred they be nonexistent. Bucks are required to have this for purebred registration.
- Since this breed cannot be tagged due to the lack of sufficient ear they have their scrapie identification number tattooed onto the fleshy part on the underside of their tail.
- The Lamancha originated from Oregon.
- Since there is no breed standard on what colors are and are not acceptable all colors and patterns are acceptable.

Nigerian Dwarf



Photo courtesy of Jmkarohl

- This breed is the smallest of all the dairy breeds.
- While small this breed has the highest butterfat percentage at 6.2% as well as the highest protein percentage at 4.4%. This is the highest of any purebred dairy breed.
- Despite the small package the ideal weight for Nigerian Dwarves is 75 lbs.
- Blue eyes are acceptable in this breed and not all that uncommon.

Saanan



Image courtesy of University of Arkansas Division of Agriculture Research and Extension

- The average pounds of milk milked out in a single lactation period for this breed is an impressive 2,765 lbs.
- This breed is sun sensitive and can burn more easily due to its lack of pigmentation.
- The only acceptable coloring for this breed is white or cream, but white is strongly preferred.
- Due to this breed's high production they are often called "Queen of the Dairy Goats."

Nubian



Image courtesy of University of Arkansas Division of Agriculture Research and Extension

- This is the only dairy breed where it acceptable to have a roman nose and will not be discriminated against.
- This is the only purebred dairy goat with ears that are pendulous.
- They are the heaviest muscled of the purebred dairy breeds.
- While they are called Nubians in America, outside of our country they are often called Anglo-Nubians.

Toggenburg



Image courtesy of University of Arkansas Division of Agriculture Research and Extension

- Toggenburgs come in only one color and pattern, shown above. However, the color shade of their grayish-brown coat may vary.
- This breed has the longest hair of the dairy breeds when it is grown out.
- Toggenburgs, also called Toggs, are said to be the oldest purebred dairy breed.
- Lactation periods that go on for 18 to 20 months are not uncommon for this breed, which is quite impressive considering a “normal” lactation period is 305 days.

Alpine



Image courtesy of University of Arkansas Division of Agriculture Research and Extension

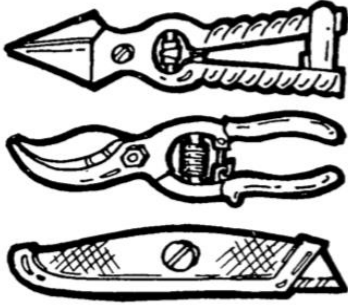
- There are three Alpine classification: French Alpine, Swiss Alpine, and Rock Alpine
 - The Rock Alpine is American in origin and is the product of French and Swiss Alpines being bred together.
- Despite classifications differences all are registrable with the Alpine breed association.
- The coloration and/or markings of a Toggenburg are discriminated against, but not disqualifiable. The same goes for an all-white coat for the Alpine.
- When it comes to describing this breed's coloring there are a handful of terms for typically found colors: Cou Blanc, Cou Clair, Cou Noir, Sundgau, Pied, Chamoisee, Two-Toned Chamoisee, and Broken Chamoisee.
 - Variations of these colorings paired with white broken patterns in them have the term "broken" before the coloration term.

Grooming and Clipping

Hoof Correctness and Trimming

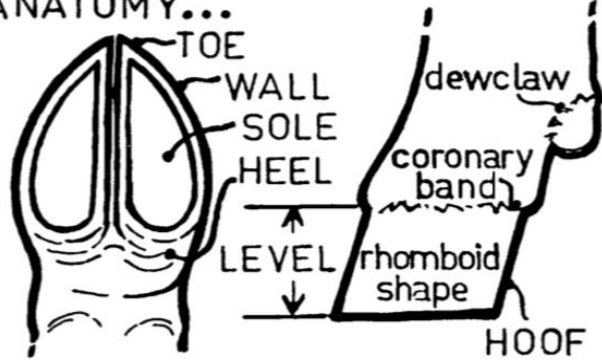
The hooves of your animal are the foundation on which they stand. When the foundation is strong, so is your animal. When the foundation is weak, so is your animal. As long as you're mindful or not catching their quick, it is completely painless to trim their hooves. For this activity, you will need foot trimmers, also called foot shearers, and blood stop in case you do catch their quick. The hooves of your animal can actually affect how the udder and structure is judged so it is important that they be properly trimmed. Below is a diagram on what they should look like and how to trim your goat's feet.

TOOLS...



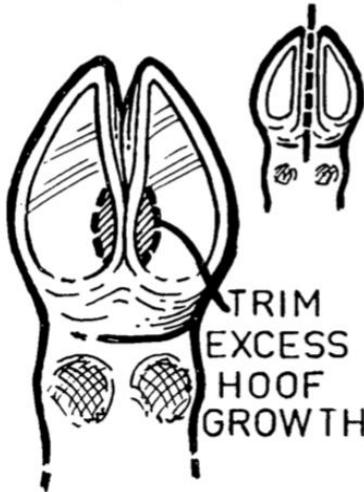
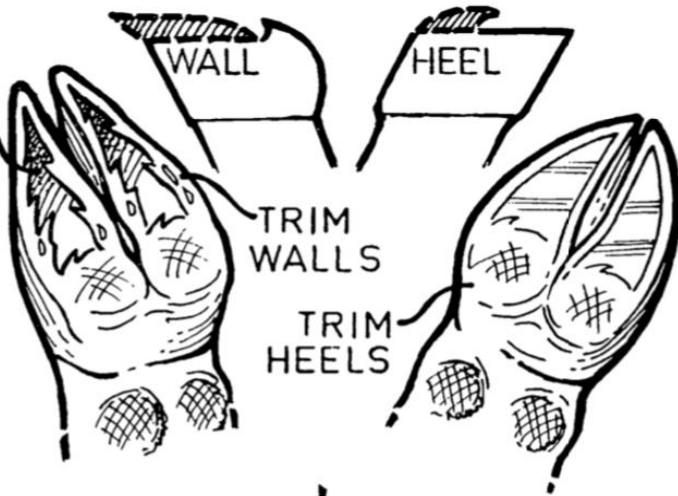
foot rot shears or pruning shears and utility knife

ANATOMY...



OVERGROWN

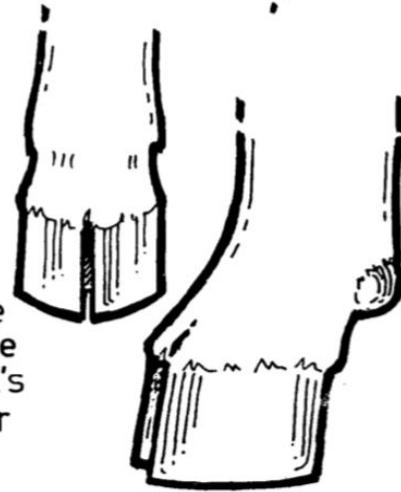
DIG OUT DIRT



TRIM EXCESS HOOF GROWTH

* if the hoofs are trimmed regularly the job is much easier

* if the goat bleeds use some iodine and make sure the animal's tetanus booster is up to date



PROPER TRIM

Image courtesy of Oregon State University Extension Service
Image is cropped

Clipping

It is important to keep your goat clean, especially at fair. Cleanliness highly important in the dairy industry. A wide variety of soaps may be used on your animal to clean her and it is up to you to decide which one to use. Things such as fecal matter should be washed off as soon as possible to help avoid flies and complications.

For show, dairy goats have all of their hair clipped off save for their tails which are trimmed to resemble the brush of a paintbrush. Dairy goats are clipped with clipper blades. When it comes to clipping a dairy goat's udder shaving cream and a fresh store bought razor are commonly used to remove the hair from the udder. Be very careful to not nick the udder. To help locate people who can assist you in learning how to properly clip you goat contact your superintendent, leader, or a local breeder who may assist you or direct you towards assistance in learning how to do this. Below is a diagram to help guide members in a general sense of how to clip their animal.

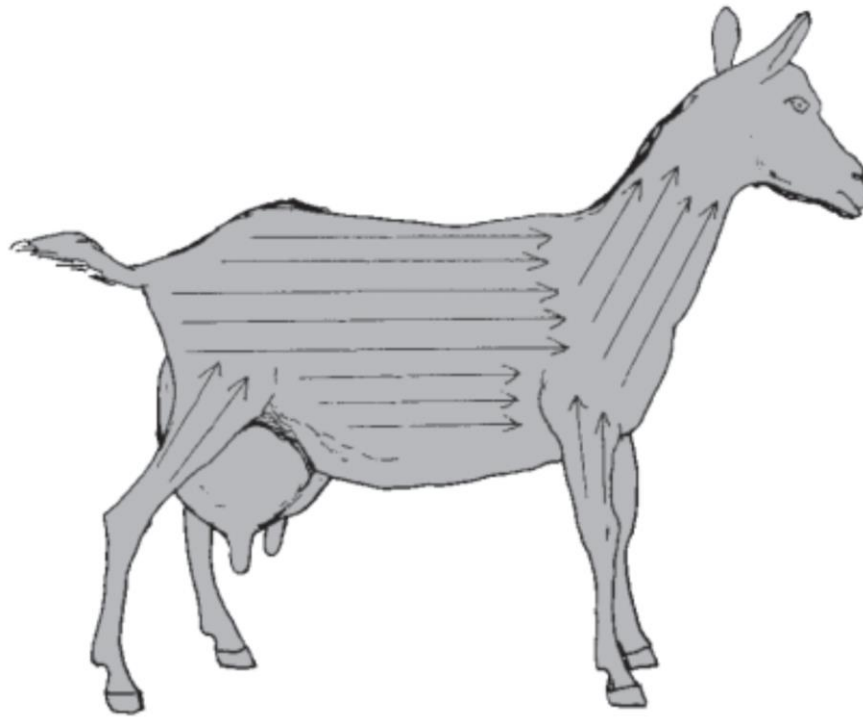


Image courtesy of University of Wyoming Cooperative Extension Service
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Fast Facts

- For every pound of milk made about 300 lbs to 500 lbs of blood will pass through a doe's udder.
- 57% of the nation's dairy goats come from ten states, most of which are located in the midwest and northeast.
- Goat milk and cow milk have the same protein percent average of 3%.
- Goat milk is the most consumed milk in the world. America is considered a dairy outlier since we mostly consume cow milk.
- There is an estimated 305,000 head of dairy goats in America
- You can make lotion and soap from goat milk.
- Gandhi drank goat milk every day for over 30 years.
- Goats were used in the early centuries to nurse human babies.
- 10.8% of the nation's dairy goats are located in Wisconsin with an estimated 33,000 head of dairy goats. California is a close second with 9.8% and an estimated 30,000.
- Goat milk is low in cholesterol with 12 mg of cholesterol per 100 mL, lower than cow milk, which is 15 mg per 100 mL, and human milk, which is 20 mg per 100 mL

Getting Ready for Clackamas County Fair

The Clackamas County Fair is always held in August. Information pertaining to the show, such as breed and specialty classes can all be found in the Clackamas County Fairbook:

General Information

- Members are expected to set-up, paint, and decorate their pen areas.
- Member ***MUST*** participate in showmanship.
- Good sportsmanship and herdsmanship are strongly emphasized.
- Members are expected to care for animals themselves, including clipping, feeding, and caring for the animal, both at home and at fair.
 - Club members or members from another club enrolled in 4-H may help with these tasks but the sole responsibility falls on the member.
- ***MUST HAVE A SCRAPIES TAG in accordance with the USDA Scrapie Eradication Program***

Wethers and Breeding Does

- Horns are not permitted on dairy animals. They must be polled or dehorned.
 - Scurs must be under an inch if present.
- Wethers can be shown at county fair but are excluded from state fair.

Resources

1. <http://cconeida.com/resources/dairy-goat-project-manual>
2. <http://www.thecattlesite.com/diseaseinfo/179/mastitis/>
3. <https://www.caprinesupply.com/milk-fever>
4. <https://www.purinamills.com/goat-feed/education/detail/milk-fever-in-goats>
5. <https://fiascofarm.com/goats/milkfever.htm>
6. <https://www.tractorsupply.com/tsc/cms/life-out-here/the-barn/animal-medication-for-goats/goat-health-conditions-and-caprine-arthritis-encephalitis>
7. <https://www.texvetpets.org/article/caseous-lymphadenitis/>
8. <https://www.tennesseeameatgoats.com/articles2/caseouslymphadenitis.html>
9. <https://pueblo.extension.colostate.edu/programs/4-h/4-h-project-areas/livestock/livestock-tests-and-study-guides/>
10. <http://afs.ca.uky.edu/livestock/goat/breeds/lamancha>
11. <https://commons.wikimedia.org/wiki/File:NigerianDwarfDairyGoat.jpg>
12. <http://www.ndga.org/ndga-breed-standard.html>
13. https://www.uaex.edu/4h-youth/activities-programs/docs/Dairy%20Goats%20General_.pdf
14. <http://adga.org/knowledgebase/breed-averages/>
15. <https://www.roysfarm.com/toggenburg-goat/>
16. <https://www.hobbyfarms.com/toggenburg/>
17. <https://extension.psu.edu/dairy-goat-production>
18. <http://afs.ca.uky.edu/livestock/goat/breeds/alpine>
19. <http://adga.org/breed-standards/>
20. <https://www.unce.unr.edu/4H/programs/stem/files/pdf/4-HManualIntroDairyGoat.pdf>
21. <https://ir.library.oregonstate.edu/downloads/8w32r575j>
22. <http://adga.org/about-dairy-goats/>
23. <https://www.legendscreekfarm.com/pages/4-fun-facts-you-didnt-know-about-goat-milk#targetText=Though%20goat%20milk%20is%20more,quickly%2C%20it's%20cheaper%20to%20sell.>
24. https://www.famu.edu/cesta/main/assets/File/coop_extension/small%20ruminant/goat%20pubs/Facts%20About%20Goats.pdf
25. <https://goats.extension.org/top-states-for-number-of-dairy-goats/>
26. <http://members.toast.net/dawog/Goats/DairyGoatFactBook.htm>

**4-H Reference Books:

1. Goat Resource Handbook by The Ohio State University Extension
2. 4-H Goat Manual by The Ohio State University Extension

Note: These books are available to check-out or purchase from the Clackamas County 4-H Extension Office in Oregon City.