

Livestock / Raising Sheep And Goats / DIY

# Hand-Milking with a DIY Goat Stand

Learning to successfully hand-milk your goats with a sturdy milking stand can make the difference between a fridge full of chèvre and dismal dairy yields.

By Dominic Lamontagne



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Smaller and more cost-effective than cows, goats offer a practical solution for farmsteaders looking to produce their own milk, cheese, and other dairy delights. They're typically friendly and easy to handle, but, as with any dairy animal, you'll need to know the right way to milk them in order to get the best product. Starting with instructions for building a milking stand, I'll walk you through how to properly hand-milk your dairy goats, including filtering and bottling fresh milk.

# Build a Milking Stand

A milking stand is an indispensable tool that's easy to build. My family and I use it for milking, of course, but it's also proven to be useful for immobilizing our goats while we care for them — when trimming their hooves, for example. If you'll be using the stand indoors, you don't need to weatherproof it. And don't worry about a ramp; goats are agile, and with a little practice, they'll gladly climb up onto the table, especially if there's grain in the feeder. I prefer using rough-sawn (rough-cut) lumber. It's cheaper and stronger than standard lumber, and I can make it myself. **The measurements given in this project are for roughsawn lumber, meaning the board dimensions are actual, rather than the nominal dimensions of standard lumber.** For example, a 2×4 of rough-sawn lumber is actually 2 inches by 4 inches, instead of a standard 2×4, which is 1-1/2 inches by 3-1/2 inches. If you make this project with standard lumber, the measurements will stay the same (except where noted), but the lumber will be smaller in width and thickness, so you'll need to adjust the project dimensions accordingly.

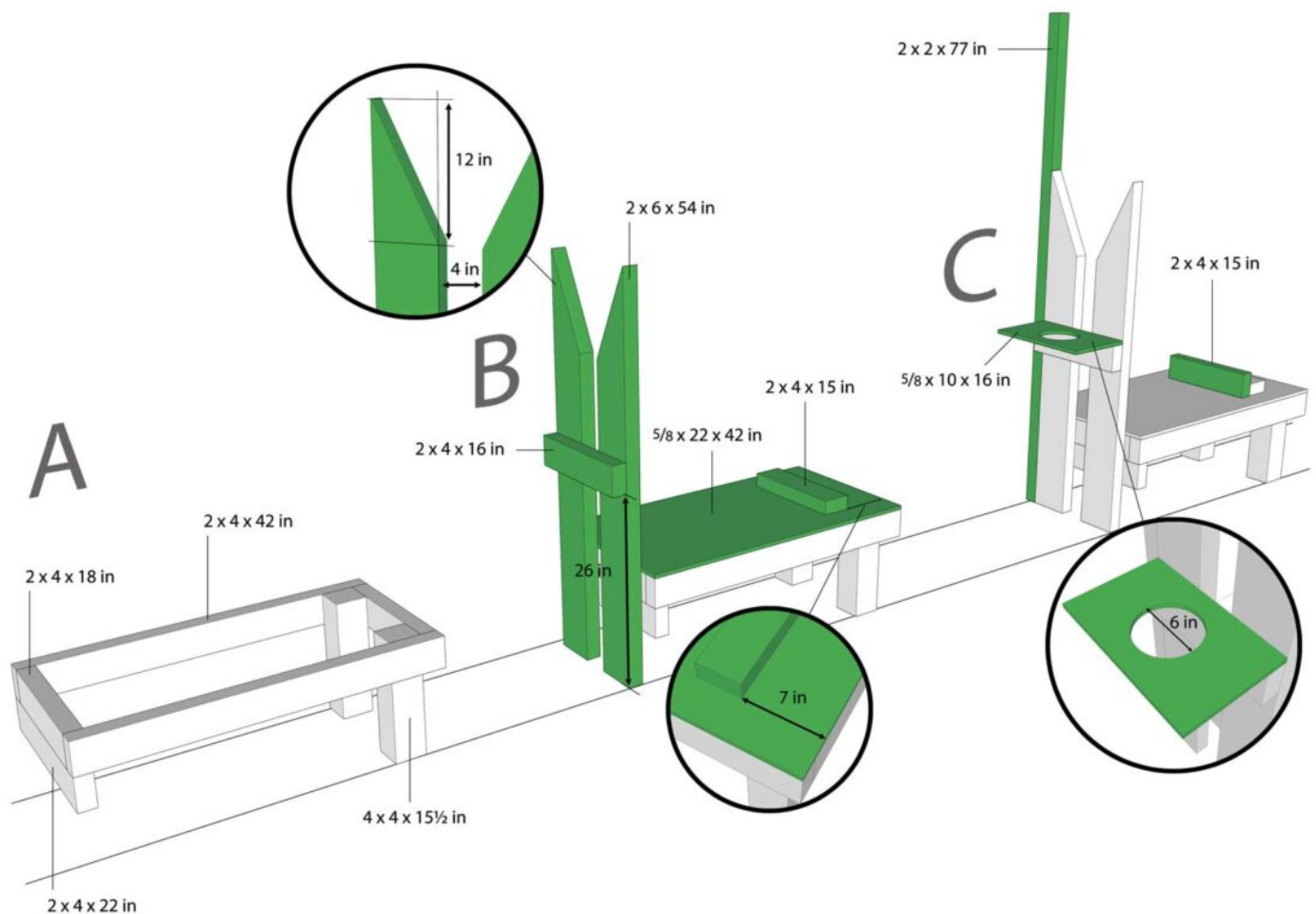
## Tools and Materials

- Drill and bit
- Wood screws
- 42-inch-long rough-sawn 2x4s (2)
- 18-inch-long rough-sawn 2x4s (2)
- 15-1/2-inch-long rough-sawn 4x4s (2)
- 22-inch-long rough-sawn 2x4
- 22-by-42-inch piece of 5/8-inch plywood
- 15-inch-long rough-sawn 2x4s (2)
- 54-inch-long rough-sawn 2x6s (2)
- 16-inch-long rough-sawn 2x4
- 10-by-16-inch piece of 5/8-inch plywood
- 77-inch-long rough-sawn 2x2 (or 2x3 if using standard lumber)
- 6-inch clay pot, for feeder
- Hooks, for hanging bucket and rags (2)
- 6-inch-long chain with hardware and hook
- 13-inch rubber tarp straps (rubber tie-downs) (2)
- Small washers (2)
- Screw eyes (2)

**Step A:** Create the base of the stand by screwing the two 42-inch 2x4s and the two 18-inch 2x4s together into a rectangle, with the short ends situated inside the long sides. Then, screw a 15-1/2-inch 4x4 into both inside corners of what will be the back of the stand. Screw the 22-inch 2x4 onto the bottom front of the stand.

**Step B:** Screw the 22-by-42-inch piece of plywood onto the top of the frame. Screw one of the 15-inch 2x4s onto the top of the plywood, wide side down, centered 7 inches from the back edge.

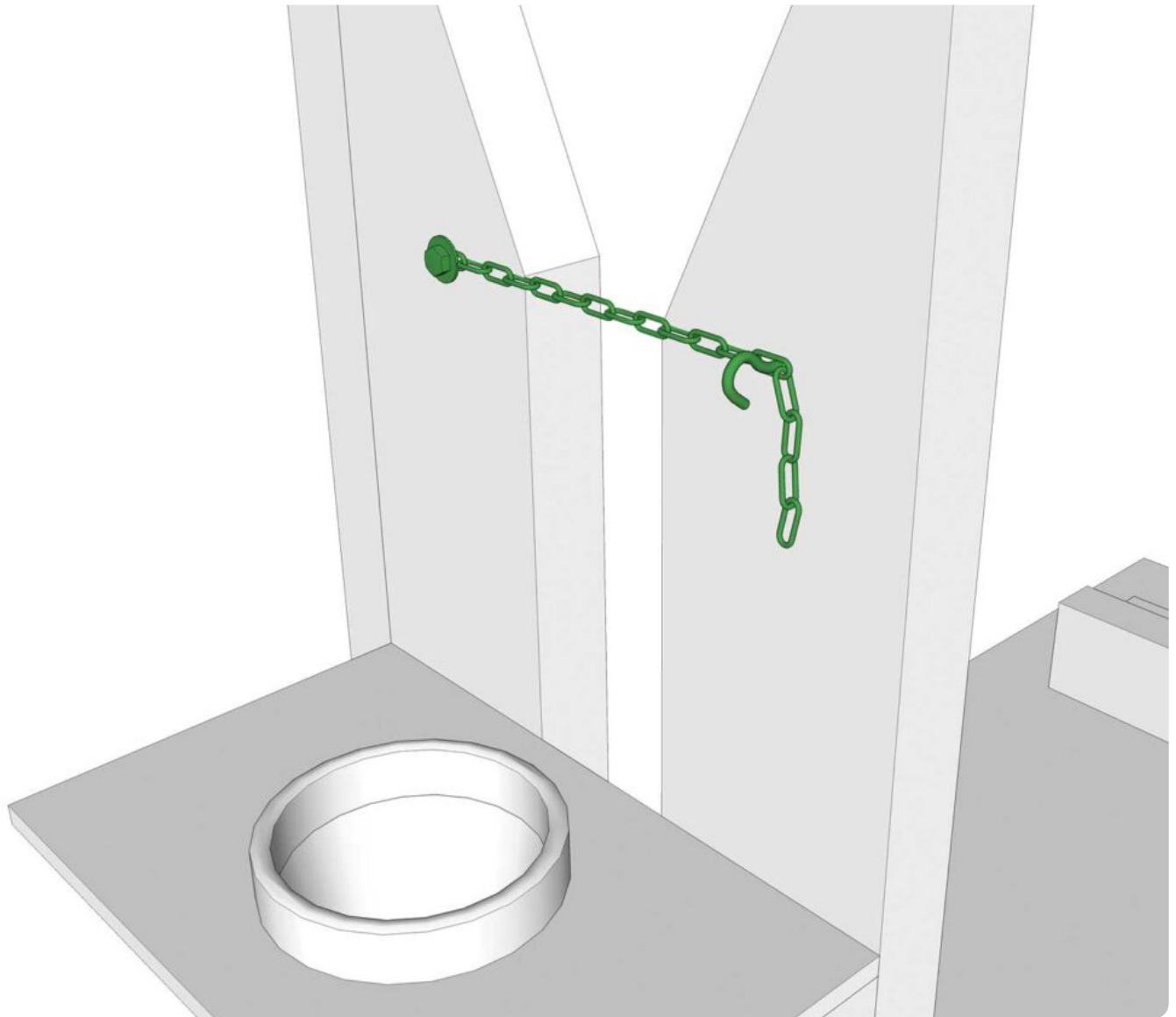
Create the stanchion posts by cutting off the tops of both 2x6s at an angle, cutting down 12 inches from the top on each post. Next, screw the stanchion posts to the front of the stand, spacing them 4 inches apart from each other. Then, screw the 16-inch 2x4 onto the two stanchion posts, situating it 26 inches up from the bottom. (To make installing the stanchion easier, I rested the legless end of the stand on a 7-1/2-inch-high piece of wood to secure it until I screwed on the stanchion. A standard 2x8 is that exact width.)



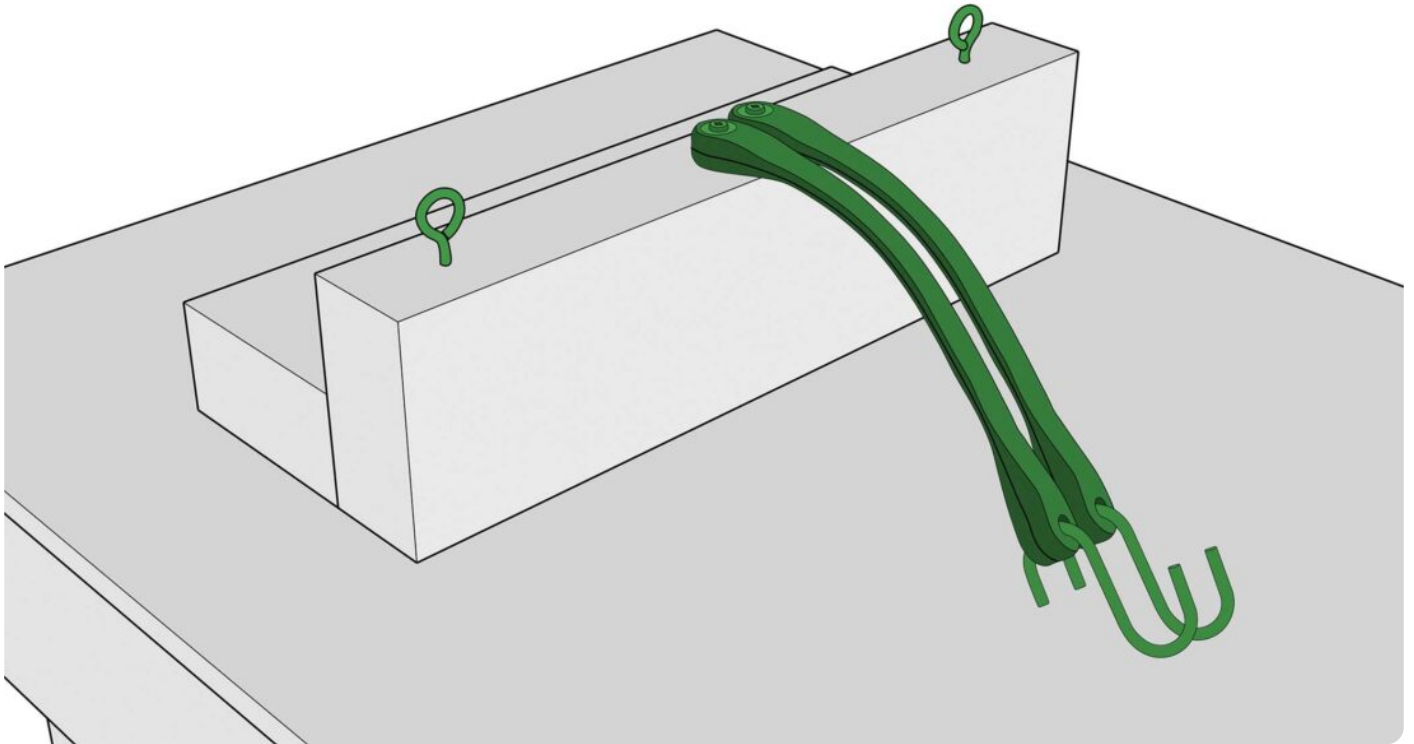
**Step C:** Screw the second 15-inch 2x4 onto the back of the stand, narrow side down, in front of the first 15-inch 2x4. This will be for the leg restraints, which you'll add later.

Cut a circular hole 6 inches in diameter in the center of the 16-by-10-inch piece of plywood to hold the feeder pot. Screw the feeder shelf onto the front of the stanchion so it rests on the 16-inch 2x4. I use a clay flowerpot as a feeder; the rim allows it to fit snugly in the hole. Standard clay pots with a 6-inch-diameter top usually have a rim. Don't forget to plug the hole at the bottom before filling the pot with grain. If you plan on moving the milking stand around a lot, the feeder shelf will make a convenient handle, but you'll need to install diagonal support struts.

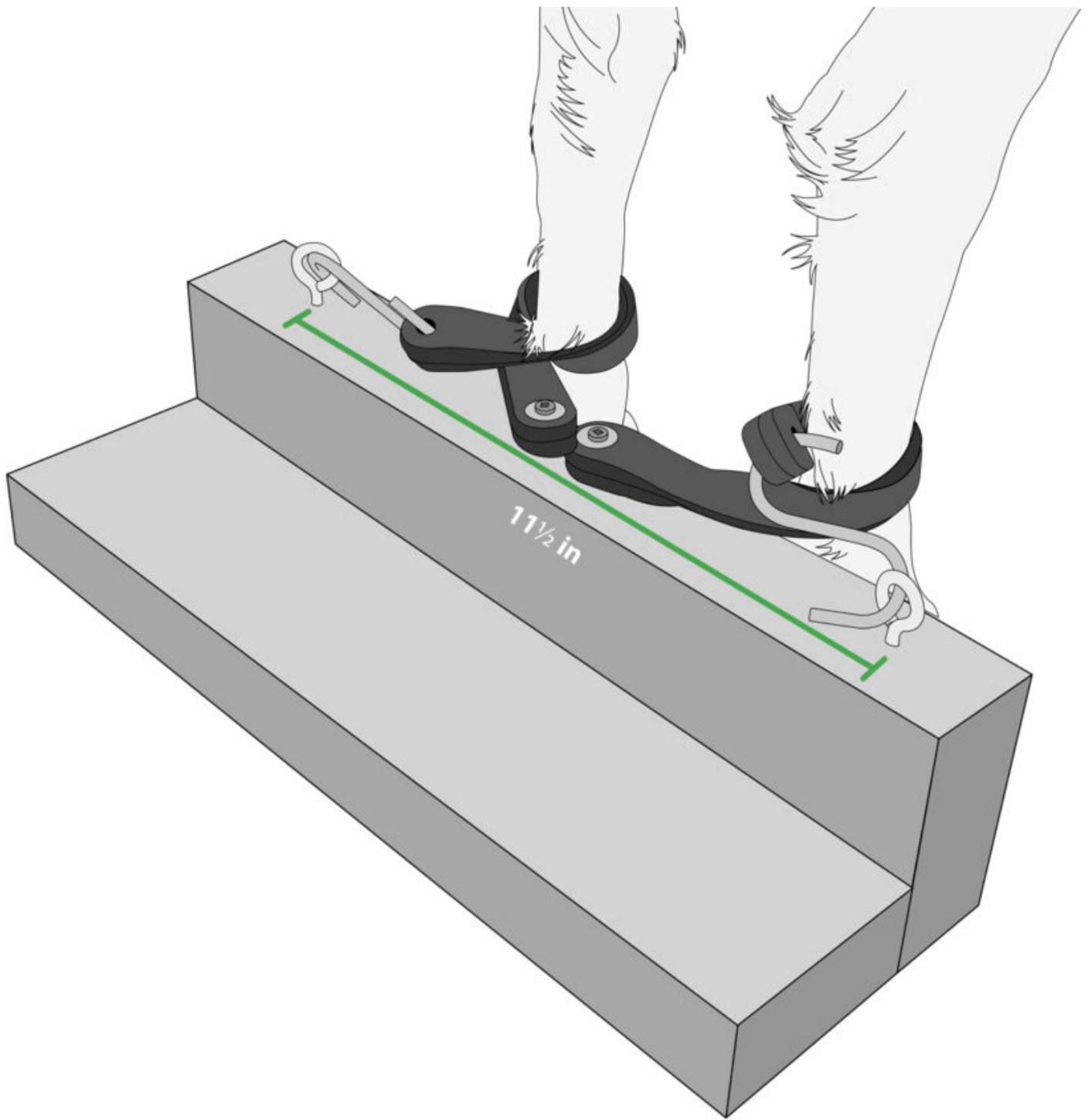
Screw the 77-inch 2x2 to one front side of the stanchion. Install two hooks along the 2x2, one at the top to hang your pail (out of a goat's reach) and the other about halfway up to hang your rags.



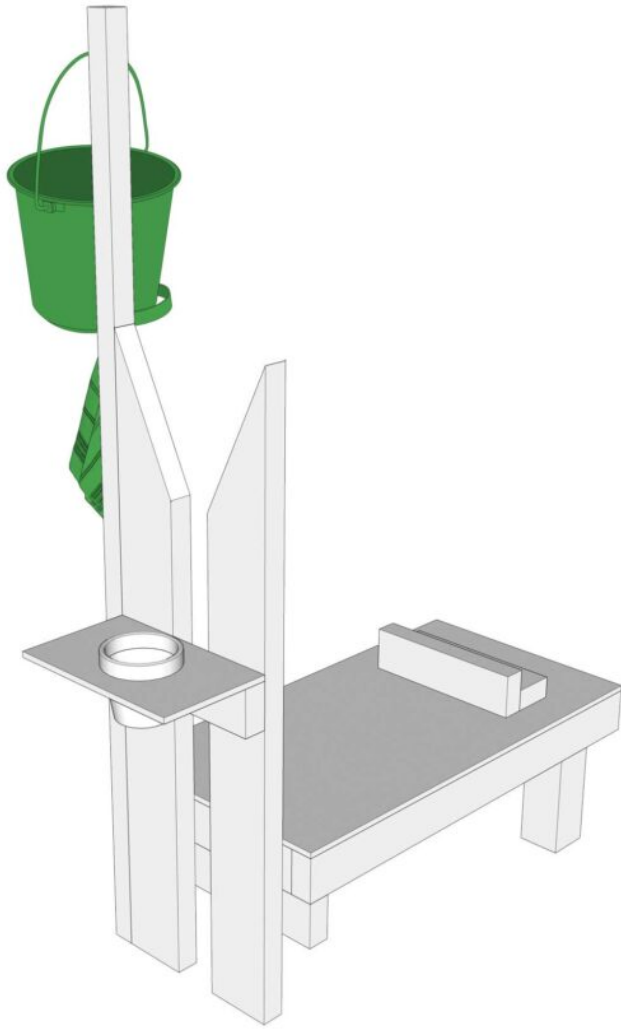
**Step D:** Install the chain and hook so the chain is centered at the base of the stanchion's V-shaped entry point. This will prevent a goat from slipping its head out while on the milking stand.



**Step E:** Remove the S-hook from one end of both rubber tarp straps. This will leave each strap with one hook and one hookless end with a hole in it. Fasten the straps to the leg-restraint block using screws placed through the holes left by the removed S-hooks. Insert a flat washer between the screw heads and the straps. Add a screw eye on both ends of the leg-restraint block set 11-1/2 inches apart.



To restrain a goat's legs, simply wrap one strap around each leg and pass the tip of the hook through the screw eye-opening. You may need to move the restraining structure farther back if your goats are particularly large. I've never had this problem with full-sized Saanen and Alpine goats.



## Milk Your Goats

We milk our goats twice a day using the following tools. You'll need similar supplies.

A 3-gallon [stainless steel](#) pail. Ours is 11 inches high with an 11-inch-diameter opening. It has a sturdy folding handle at the top and a pouring handle at the bottom, which is handy for hanging the pail upside down to dry. Its wide opening allows us to milk a goat without having to aim carefully, and its height allows us to rest our forearms on its flange while milking.

Two spray bottles, which we use to wash goats' teats. We fill one with soapy water (choose a biodegradable, fragrance-free dish soap) and the other with clear water.

Clean rags to dry the washed teats. (You'll need one for each goat.) Cloth towels made of cotton or hemp work well and are reusable once washed.



A few pairs of washable woven or string-knit gloves. Once we've gathered our equipment, we wash our hands and put on a pair of clean gloves, which we wear until the actual milking begins. Afterward, we toss the gloves into a laundry basket to be washed with the milking rags.

## **You will need:**

**A brush** for the goats' coats.

**A sturdy stool** about 20 inches high to sit on during milking.

Once you've gathered your equipment, you'll be ready to start milking. With gloved hands, hang your pail and rags on their stand hooks. Fill the feeder with grain (I give each of my goats 1 pound of organic grain every time I milk them), and then bring a goat to the stand and have it climb up. Once the goat's head is in the stanchion, fasten the stanchion's chain to its hook, and secure the leg-restraint straps. Restraining a goat's hind legs is optional, but it will prevent the goat from kicking over the pail or stepping in it. I seldom put the straps on; I only do so if a goat is fidgety.

Once the goat is settled in, vigorously brush her back, abdomen, and udder to remove any hair or dirt that might otherwise fall in the milk. Squirt a couple of sprays of milk out of each teat. This will purge the teat cistern of stagnant milk (called "foremilk") and push out impurities that may have collected at the mouth of the teat canal. Wash the teats (not the whole udder), first by spraying them with plenty of soapy water and then again with clear water.

Remove your gloves, and dry the teats well with a rag. Make sure the teats are truly dry; milking a goat while your hands or the teats are wet will irritate the skin of the teats and can eventually cause chapping. Through the rag, vigorously massage the goat's udder for a few moments. This will stimulate lactation and remove any dirt that may have escaped brushing.

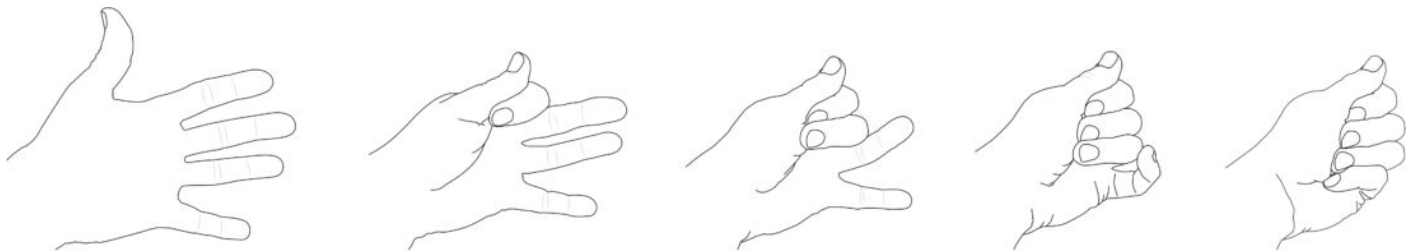
Place the pail under the udder. Grasp a teat in each hand, pinching the upper part of the first teat at the base of the udder, over the annular ring, with the hollow between your thumb and forefinger. Slowly close your other three fingers one after the other, starting with the middle finger, pressing the teat against the palm of your hand and gradually pushing the milk toward the tip of the teat.

The milk should begin coming out as soon as your forefinger starts to press on the bulging teat. If you don't squeeze the top of the teat hard enough, you'll feel the milk move back up into the teat as you close your hand. When the milk stops flowing, repeat the gesture with your other hand on the second teat, letting the first teat fill up again. A well-filled teat can flow for several seconds.



Often, one teat will dry out before the other. Milking is finished when both teats are empty and flaccid. Empty the goat's udder completely, because the fattest milk is the last to come out, and because it will ensure maximum and long-lasting lactation.

If you're milking more than one goat, put your gloves back on between each milking, and always hang the bucket by the handle on the bucket hook before freeing the goats. Remember to use a clean rag for each goat.



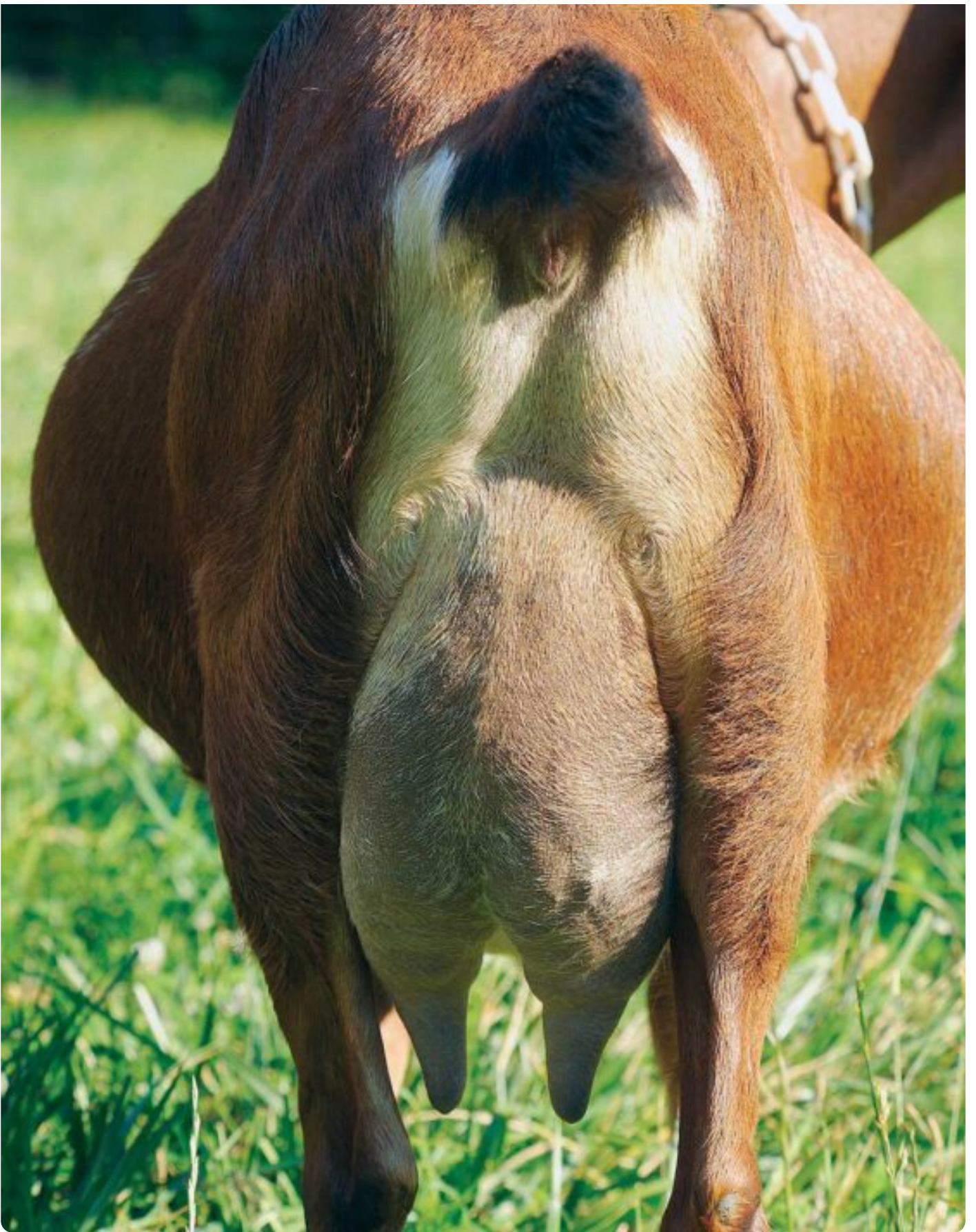
## Filter and Bottle the Raw Milk

Once you've collected your milk, it'll be time to filter and bottle it. Start by putting water on the stove to boil. You'll use it at the end to sanitize your equipment. While the water is heating up, insert a clean funnel into a previously sterilized glass jar. Place a clean reusable coffee filter in the funnel's mouth. We use a stainless steel canning funnel and a reusable, flat-bottomed basket-type coffee filter made of stainless steel mesh. We bottle our milk in 1/2-gallon preserving jars. On average, one of our goats will produce 1/2-gallon of milk per sitting, which is a typical yield for a pasture-raised Saanen goat that's fed no more than 2 pounds of organic grain per day.

Pour the warm milk directly from the pail into the filter. Once the jar or jars are full, screw on the caps and label them. We affix a small piece of masking tape on the caps and record the date and time of day using a felt marker. Put the jars in a plastic pail filled with ice cubes (we use reusable ice cubes), and then add ice-cold water. The faster the milk is cooled, the gentler its flavor will be. Store the pail in a cold refrigerator that's set to 40 degrees Fahrenheit or lower.

Wash your pail, funnel, and filter inside and out with a scrubbing sponge and warm, soapy water. Rinse the items well, and then scald them with boiling water. Hang everything to dry.





**Final Thoughts**

We leave newborn kids with their mothers for a couple of months before we start milking the does. Here in Québec, about 100 miles north of Montréal, we milk our goats from late May to late October.

We typically milk our goats twice a day, first around 8 a.m., and then again around 6 p.m. We only make our cheese using fresh morning milk (labeled "AM") while it's still hot, or within a couple of days of milking if we need to accumulate a bit more.

We generally don't need all the milk our goats produce, so we curdle the afternoon milk overnight using rennet and give it to our laying hens the next day. They love it, and I love the idea of being able to vary their diet using homemade, high-quality food. It also allows me to cut down on chicken feed. When collecting milk for the chickens, we don't bother going through all the time-consuming steps shown in this article. We don't brush the goats, wash the teats, use gloves, or use sterilized equipment; we simply milk directly into a plastic pail and then add a few drops of rennet.

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*Dominic Lamontagne lives on a small farmstead in Québec, where he leads homesteading workshops and advocates for small-scale farming rights. He's the author of *La ferme impossible (The Impossible Farm)* and *L'artisan fermier (The Artisan Farmer)*.*

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