

Good Milking Practices - Or How to Milk a Goat
Presented by Kids for Kids 4-H Club

When milking, a 12-hour interval between times is best, but does can become accustomed to other **regular** routines if necessary. Make any changes **gradually**. Establish habits that will make milking a calm, peaceful, and pleasant time spent with your animal(s). Milk **letdown** is triggered by things the doe comes to recognize as the events which lead to milking — your friendly greeting, the clatter of the bucket, grain being scooped, the washing of her udder, a gentle massage... This anticipation causes her to release **oxytocin**, a hormone, into the bloodstream, which in turn causes a contraction in the muscle surrounding the **alveoli** of the udder, forcing milk into the **cistern**, in preparation for your removing it by "milking" her. Fright or pain can cause the release of **adrenaline**, which neutralizes the oxytocin and prevents a complete milkout. Repeated instances can cause left-over milk to be reabsorbed and production to cease, in effect "drying her off".

Another key to good milking habits is **cleanliness**. Establish an area, separate from the stall, where you place your **milkstand**. Orient this for easy access to the side from which the doe is accustomed, or from which you are most comfortable (hopefully the same! or expect a conflict for awhile). A small table, shelf, or counter is nice to have nearby. A scale is optional, but handy for checking milk weights regularly.

Keep long hair clipped around the udder and belly area. Dust, hair, hay, or manure are not nutritional bonuses to a tasty glass of milk! Use **stainless** steel or glass milking utensils, NEVER plastic, which is porous and cannot be sanitized. To wash after milking, first rinse with lukewarm water, then scrub with **hot** water and detergent using a brush. Rinse thoroughly with hot water, and for extra safety, you can add bleach to the last rinse. Allow to **air dry** before next use. Although there are specially made nice hooded buckets, etc. available, you need not start out with fancy or expensive equipment. You will need **disposable milk filters** and a **funnel** which accepts them. **Quart glass jars** (canning or mayonnaise) with a wide mouth will clean most satisfactorily, and allow milk to cool most quickly, which is essential for good flavor and to prevent bacterial growth.

Many people use a **strip cup** to check the first few discarded streams of milk for lumps or clots which might indicate **mastitis**. Perhaps a better tool for regular use is good attention to the doe's udder and teats for any unusual warmth or redness or **uneven quantity of milk** from the halves, followed by use of the **California Mastitis Test** kit (CMT). A subclinical infection can often be detected and addressed this way, **long before** the milk looks unusual in the strip cup. It is easy to learn to use, and the test paddle, solution concentrate, and directions are readily available at reasonable cost. The key is frequent use and in noting a distinct difference in gelling between the halves. Most goats' milk will cause somewhat more of a reaction than the cows' for which it was designed, but if one half of your doe's udder contains more of the somatic cells with which it reacts, she (and you) likely have a problem.

Healing from mastitis or injuries and regeneration of udder tissue are most effective during the **dry period**, but if your doe has mastitis during her **lactation**, you may want to learn the use of antibiotic udder infusion tubes. It is best to first take a clean sample of the suspect milk to your vet for laboratory culture (and possibly antibiotic sensitivity tests) of the organism. That way, if the medication you use to **immediately** combat the infection is not effective, in a few days you will have an accurate diagnosis of the problem. No matter which brand you choose, follow the directions, **BE CLEAN**, and use the shorter insertion tip. There are different intervals for repeat treatments and **withdrawal times** for discarding milk. Adhere to them, and it's wise to add a couple more days if you are drinking the milk. (This also applies when your doe is receiving any other medication which goes into her bloodstream, and hence the milk.)

HOW TO MILK A GOAT

It's important to get a **first freshener** used to the notion of milking before she ever "kids". You can do this by introducing her to the milkstand, locking her head in, and rewarding her with a small amount of grain and lavish praise. You can brush her as she stands there, position her legs to make room for a bucket, massage teats and udder, and take the opportunity to whisper "Doe babies" repeatedly in her ear... When she finally freshens, these are the steps for removal of **colostrum** or milk from those tiny teats:

WASH and dry both your hands and her udder and teats.

MASSAGE her udder gently to stimulate letdown.

GENTLY GRASP the teat at the top, between your thumb and forefinger, trapping milk in the teat, (it will feel a little like a water balloon):

CLOSE YOUR FINGERS, from the top down. This gives the milk no place to go but out through the **orifice** (try to aim for the bucket!):



RELEASE all your fingers, allowing milk to re-fill the teat. Close your thumb and forefinger and squeeze shut again from the top. Massage and gently "bump" the udder as kids do to remove all the milk.

Once you have mastered this with one hand and one teat, try to establish an alternate rhythm with the other hand and teat! It is possible, and you will become proficient with twice-a-day practice!

When you are sure you have milked her out **completely**, **spray** each teat with an antibacterial **teat dip**. Putting the "dip" into a spray bottle keeps it from becoming contaminated by either the barn atmosphere or the germs of other goats you have milked.

For a good-tasting*, clean, and healthy product, incorporate these steps into your routine:

Discard the first few streams from each teat. These contain the most dirt and bacteria.

Strain the milk through a disposable filter into a clean jar **immediately**. Cap the jar and set it in a larger container filled with **COLD** water. (Don't let the water cover the lid of your jar). Replace the water as it warms. (If you pasteurize the milk, do it right away, and then cool quickly.) It's important to **chill** the milk **quickly** and promptly to prevent bacterial growth. Refrigerate.

* Good-tasting also is dependent on healthy animals, fed good foods (garden gleanings can be healthy additions, but treats like broccoli or cabbage leaves will impart their own flavor!), housed and milked away from the buck.

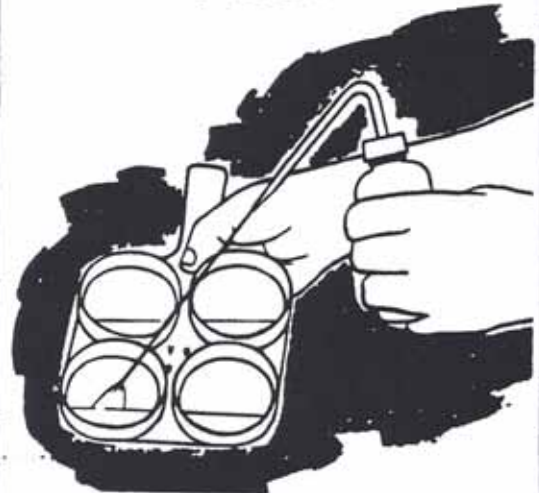
Weighing your milk morning and night, and keeping records for each doe lets you know who your best (or worst) producers are, and can also let you know who is sick, who's in heat, or who's being bullied away from the food.

ORIGINAL CMT

CODE	VISIBLE REACTION	INDIVIDUAL QUARTER SAMPLE	BUCKET MILK SAMPLE
NEGATIVE	Mixture remains liquid. No slime or gel forms.	NO MASTITIS	NO MASTITIS
TRACE	SUSPICIOUS Mixture becomes slimy or gel like. It's seen to best advantage by tipping paddle back and forth, observing mixture as it flows over the bottom of cups.	TRACE OF MASTITIS	MASTITIS IN ONE OR MORE QUARTERS
WEAK	POSITIVE Mixture distinctly forms a gel.	MASTITIS	DEFINITE MASTITIS CHECK QUARTERS
DISTINCT	Mixture thickens immediately, tends to form jelly. Swirling cup moves mixture in toward center exposing outer edges of the cup.	MASTITIS	SERIOUS MASTITIS CHECK QUARTERS

AVAILABLE FROM

California Mastitis Test



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IS MASTITIS WIDESPREAD?

Surprisingly enough, mastitis appears to be much more widespread than most realize. Dairy authorities have estimated that as many as one out of two cows has some mastitis in one or more quarters. Not all are serious cases, of course.

WHAT IS CMT?

CMT is an abbreviation for the original California Mastitis Test developed by Dr. O. W. Schalm of the University of California's School of Veterinary Medicine for the detection of increased leukocyte cell count in fresh milk, resulting from mastitis. It's a simple test to make and interpret. CMT tells in seconds whether milk is mastitic, and pinpoints the quarter delivering mastitic milk.

HOW DO YOU USE CMT?

The CMT Kit contains a bottle of CMT Concentrate (enough to make 1 gallon of test solution), and paddle. Complete instructions on diluting the concentrate are on the bottle label. Details on administering the CMT procedure are illustrated and described on the facing page.

Primary value of CMT is at the side of the cow where it aids in quick diagnosis of mastitis, as well as control, for it pinpoints the quarter secreting mastitic milk.

CMT also can be used to test bulk milk. When doing this, it's important to keep the milk cold and not to let it become too old. After 24 hours, aging and/or bacterial action tend to destroy factors responsible for positive reaction to the test.

Mastitic milk tends to jell when tested by the CMT procedure. The degree of jelling indicates the presence and severity of mastitis.

WAS THE TEST POSITIVE?

If CMT shows a positive mastitis reaction, as determined by consulting the chart on the back page, call your veterinarian at once so that he can determine the extent and nature of the treatment necessary. Follow his instructions.

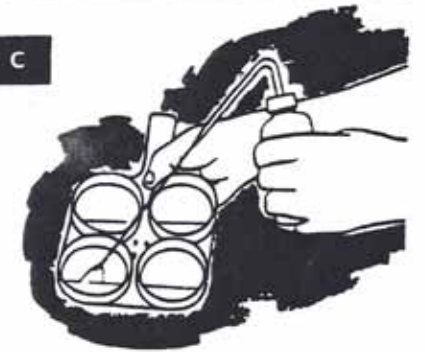
After discarding the first stream of milk, draw the next milk into the shallow cups on the paddle, keeping the quarters separate.



The ideal amount of milk is that which remains in the cup when the paddle is tilted to an almost vertical position, as shown.



Form pools of milk in cups, as shown, by tilting paddle. Squirt test solution over milk. Avoid making bubbles. Proportion of solution to milk should be at least one to one.



Mix solution and milk by gently rotating paddle in horizontal plane, swirling the mixture. Positive reactions occur and can be graded during this rotary motion.

