



Eliza Belle



MaryJane & daughter Meg



\$70 gadget turns a fridge into a cheese cellar



5-minute butter



use milk raw or heat-treat with low temp/fast time

MILK COW KITCHEN

MaryJane Butters

I haven't met a woman yet who didn't swoon when she first set eyes on one of my newborn Heritage Jerseys. It happens every time. True "cow" girl romance is a feeling that grabs you at moo. We've all seen the many photos of pioneer women posing with their family milk cows—wanting and loving a milk cow is imbedded in our very DNA. It's part of our herstory. Falling head-over-hooves in love with a cow combines the love of a kissy-pooch fido and love-me-do kitty into one sweetie-pie moo-cow that FEEDS you! Have I got a "cowpanion" for you!!

But a backyard cow in our modern-day era is more than just an adorable, unique pet. It's about dairy products without growth hormones and routine antibiotics. It's about food as pleasure. It's about robust good health. It can even be about making money.

My recipe for moo-cow love is one part cookbook and one part cow care. I'm here to guide you through 75 fuss-free, farmstyle recipes, in addition to 15 step-by-step, super-simple cheese-making recipes that *really work*, plus how-to details for keeping a pet milk cow on your suburban half acre, a backyard lot in town ... or at least the fantasy of a someday cow grazing outside your kitchen window.

Follow my growing "milk-her-once-a-day-not-twice" backyard milk cow movement at [HeritageJersey.org](http://HeritageJersey.org).



dairy start-up in a single-car garage



once-a-day milking by hand or easy automation

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GIBBS SMITH

# MILK COW KITCHEN

MARYJANE BUTTERS



"cow" girl romance



backyard cow keeping



15 step-by-step cheese recipes



75 farmstyle recipes



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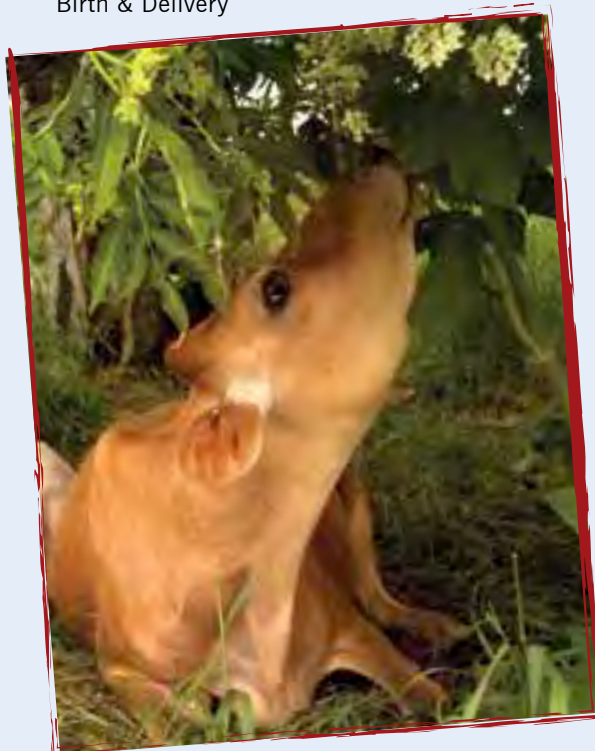


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“ We all have *hometown* appetites.  
 Every other person is a *bundle* of  
*longing* for the *simplicities* of good  
*taste* once enjoyed on the *farm* or  
 in the *hometown* left behind. ”

– Clementine Paddleford

## Flavored Butters

### Blue Cheese & Green Onion

Prep Time: 10 minutes  
Makes: 3/4 cup

- 1/2 cup butter, softened
- 2 green onions, minced
- 1/4 cup blue cheese

1. In a small bowl, combine butter, green onions, and blue cheese. Roll into a log, wrap in wax paper or plastic wrap, and refrigerate until ready to use.

### Raspberry & Honey Butter

Prep Time: 15 minutes  
Makes: 3/4 cup

- 1/2 cup butter, softened
- 2 T raspberry preserves
- 2 T raspberry fruit leather, finely diced
- 2 T honey
- 1 cardamom pod, seeds removed and pulverized

1. In a small bowl, combine butter, raspberry preserves, fruit leather, honey, and ground cardamom seeds. Roll into a log, wrap in wax paper or plastic wrap, and refrigerate until ready to use.

### Roasted Garlic & Sun-dried Tomato Butter

Prep Time: 15 minutes  
Cook Time: 15 minutes  
Makes: 5/8 cup

- 4 garlic cloves
- 1/8 t olive oil
- 1/2 cup butter, softened
- 2 T Parmesan
- 1 T sun-dried tomatoes, minced
- 1 T chives, minced

1. Preheat oven to 400°F. Place garlic cloves on a piece of foil, drizzle with olive oil, and wrap up; roast for about 15 minutes, or until garlic is tender. Remove from oven and let cool. When cool enough to handle, mash into a paste.  
2. In a small bowl, combine butter, Parmesan, sun-dried tomatoes, chives, and roasted garlic. Roll into a log, wrap in wax paper or plastic wrap, and refrigerate until ready to use.

### Cranberry Merlot Butter

Prep Time: 10 minutes  
Cook Time: 5–7 minutes  
Makes: 5/8 cup

- 1/2 cup butter, softened
- 1/4 cup dried cranberries, minced (orange-juice sweetened)
- 1/3 cup Merlot wine

1. In a small bowl, combine butter and cranberries; set aside.  
2. In a small pan, bring Merlot to a simmer, reduce heat to low, and cook for 5–7 minutes, until wine is reduced in half.  
3. Cool for a few minutes, then add Merlot to the bowl with the butter and cranberries and mix well. Roll into a log, wrap in wax paper or plastic wrap, and refrigerate until ready to use.

### Fig, Maple & Vanilla-bean Butter

Prep Time: 15 minutes  
Makes: 5/8 cup

- 1/2 cup butter, softened
- 3 T dried figs, minced
- 1 T maple syrup
- 1 vanilla bean, seeded
- 1/4 t cinnamon
- zest from half an orange

1. In a small bowl, combine butter, figs, maple syrup, vanilla-bean seeds, cinnamon, and orange zest. Roll into a log, wrap in wax paper or plastic wrap, and refrigerate until ready to use.



# Colby-Jack

Can be made using **thermized** or **pasteurized** or **raw** milk.

Colby-Jack cheese is the combination of two distinctly American cheeses. Colby is dense and slightly squeaky, and Monterey Jack is creamy and moist. Both cheeses are washed-curd cheeses (see Monterey Jack), and the colby is dyed with annatto to create the marbled look of Colby-Jack cheese.



If using pasteurized milk, add calcium chloride, p. 24.

- 1 Create two double boilers, putting 1/2 gal of milk into each of the smaller pots and water in the larger pots. Heat milk to 90°F. Add 2 T of cultured buttermilk to each of the double boilers. Cover and let ripen for 30 minutes.
- 2 Add annatto (for color) to one of the double boilers, and whisk in until the color is even.
- 3 In two separate 8-oz canning jars, dilute 1/8 t rennet in 2 T distilled water. Add one jar of diluted rennet to each of the double boilers. Whisk in, using a back-and-forth motion. Cover and let sit until a clean break forms (p. 63)—about 30 minutes.
- 4 Using a kitchen knife rather than a curd knife, cut the curds into 1/2" cubes. Let them rest for 10 minutes.
- 5 Slowly heat the curds to 100°F, gently stirring with a perforated spoon. Using a ladle, remove some of the whey from both of the pots so it's level with the curds. Add 1 cup distilled water to each pot.
- 6 Reheat to 100°F and hold this temperature for 10 minutes, stirring occasionally.

(continued)



- ♥ **Level:** Intermediate
- ♥ **Prep Time:** 2 hours, 20 minutes
- ♥ **Pressing Time:** 18 hours, 15 minutes
- ♥ **Aging Time:** 2–3 months
- ♥ **Makes:** 1 to 1 1/4 lbs
- ♥ **Ingredients:** (p. 25)
  - 1 gal **whole** or **cream-line** milk
  - 1/4 cup cultured buttermilk, divided (p. 43)
  - 5 drops liquid annatto
  - 1/4 t liquid animal rennet, divided
  - 2 1/4 cups distilled water, divided
  - 1 T non-iodized salt
- ♥ **Equipment Needed:** (p. 26–31)
  - two 4-qt stainless-steel pots with lids
  - 8-qt stainless-steel pot
  - 12-qt stainless-steel pot
  - stainless-steel measuring cups
  - stainless-steel measuring spoons
  - assorted canning jars
  - wire whisk
  - floating dairy thermometer
  - thermometer
  - kitchen knife
  - stainless-steel perforated spoon
  - ladle
  - cheesecloth
  - 7-qt stainless-steel colander
  - latex gloves
  - 4.9" cheese mold
  - draining tray
  - exercise weights: 5+2 1/2+1 1/4 directly on follower
  - 4-qt stainless-steel pot
  - 2-qt stainless-steel bowl dedicated to cheese wax
  - cheese wax
  - cheese wax brush

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## Hand Milking

Once I'm done with the pre-cleaning of the cow and her udder (p. 211), I wash and dry my hands (think surgically clean!) and I put on a pair of nitrile gloves. (I find the gloves not only keep everything cleaner—hands harbor a plethora of different bacteria—but they make it easier for me to grip the teat.) Then I take a seat and get into position. A 5-gallon bucket turned upside-down works just fine for a stool. I milk two teats (two quarters in dairy jargon) at a time—the two on the side closest to me—and then I milk the other two teats either by moving around to my cow's other side or by staying in the same place and reaching past the first two teats. Some beginners find it easier to milk just one teat at a time until they get the hang of it. Also, if you lean into your cow with your head, you'll be able to feel (sense?) her muscles tightening before she actually moves, enabling you to grab the bucket should she decide to lift or move a foot and spill your hard-earned treasure. Once she settles again, you can proceed. You should consider hobbling her rear legs so you're not crying over spilled milk (p. 212).

When hand milking, the object is to pinch off the back flow of milk from the teat back into the udder at about the same time you begin squeezing the milk trapped in the teat down and out through the teat duct.

First, position the teat where it attaches to the udder into the crook of your thumb and forefinger.

Next, grip the teat with your thumb and forefinger in order to pinch off back flow going from the teat back up and into the udder.

In the same motion that you're using to close off any back flow, squeeze the milk trapped in the teat down and out of the teat using your other fingers. Depending on the length of the teats, your ring and little fingers might not serve any function at all other than to stay out of the way of the stream of milk squirting into your bucket.

Finally, open your hand to let the teat fill up with milk again and continue, pulling down gently. Repeat. Did I say repeat? Repeat MANY times.

Be patient with yourself. It'll take a while to get a rhythm down. Go slowly at first. Take your time. Don't look at your watch.

Just go with the flow! If you're getting a strong, steady stream of milk each time, then you're probably getting it right. As you do it more, you'll figure out your own particular motion and what works best for you. Everyone seems to do it a little differently. For the comfort and health of your cow's udder, it's important not to pull or squeeze too hard (that can damage the tissues in the teats) and to keep an even, steady pace.

When I first started milking, it would take me a full hour to milk my cow dry. After half an hour, my hands were tired. But within a couple of weeks, my hands got stronger and faster and I was down to 45 minutes. It speeds things up if you can get a helper to milk the other side at the same time. That's what good friends are for! Or spouses. Or children.



## Machine Milking

While there are different types of milking machines to choose from, they all operate under the same principle—vacuum pressure sucks the milk out of the teat. **Here's my milking protocol using a NuPulse milking machine** (the basics will be pretty much the same for other brands of machines).

### Clean your cow (p. 211).

Make sure the hose that leads to the milking claw is clamped shut, then **turn on the pump and wait for it to reach the right pressure** (or follow the instructions that come with the machine you've chosen).

Wash and dry your hands and put on a pair of **nitrile gloves**. If you have big hands (I don't), take the claw in one hand and hold it so that all four hoses going to the inflations (the rubber thingies inside each metal tube) are pinched off. Open the clamp on the main milk hose to start the suction to the claw, and one by one, unpinch the hoses and put an inflation on each of the four teats.

If you have small hands like I do, this is where another 6-quart, stainless-steel bowl comes in (not the bowl you used to clean her udder and teats). My bowl method also comes in handy for milking cows that are short and lower to the ground like my mid-size Jerseys. I nestle the claw into the bowl with each inflation plugged using the red stoppers that came with my machine. (See p. 220 for how to milk a mini-cow.)

If you have all four inflations sucking air when you open up the main valve, you'll be sucking hair and other debris into your milk tank. Not a good idea! Using my nitrile-gloved (AKA clean!) hands, **I make sure the hose to each inflation is pinched off while I pull out its red stopper and drop it into the bowl**. In other words, I'm putting them on one at a time while the other inflations rest in the clean bowl and not on the ground. I also like using the red stoppers because I can take an inflation off and leave the others still sucking, should a particular teat run dry before the others. This will happen if you're letting a calf nurse on your cow.



It can damage teat tissue for a dry teat to continue to be sucked for too long. I can tell if a teat has gone dry with my NuPulse because the four tubes going into the mixing chamber are see-through. To remove an inflation, simply pinch off the small black hose going directly to it and gently remove it from the teat. Once removed, put the red stopper in while the others continue to extract milk.

Now back to the big-hand method! **One by one, attach an inflation to each teat**. When you attach the inflations, make sure to keep the hose to each inflation pinched off until the teat is aligned in the opening, about a half-inch down into it. Then, unkink the hose and the teat will suck down into the inflation. Again, the reason you want to keep the hose pinched off until the moment it's in position to suck the teat down into the inflation—rather than bring an already sucking inflation to the teat—is because the air will suck in dust particles and hair (think of them as powerful mini vacuum cleaners).

**After all four inflations are on her teats, let the machine do the work**. How long it takes depends on the cow and how much milk she's producing. I can get as much as 3 gallons in 3–5 minutes.

**When there's no more milk coming into the see-through chamber, she's done!**

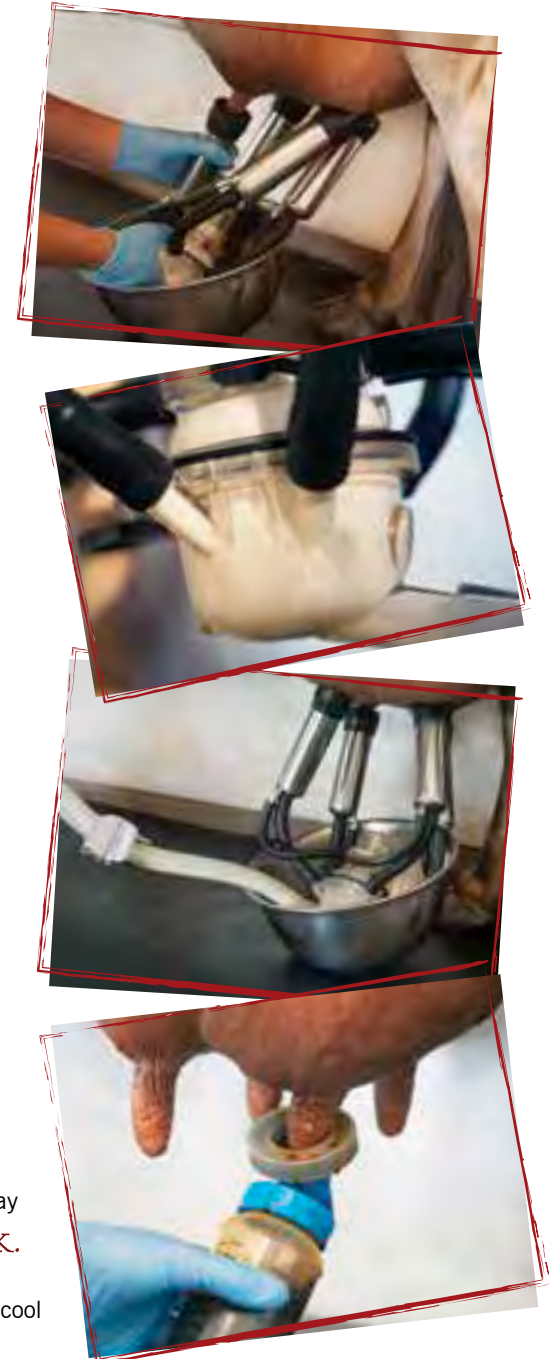
**Secure the claw with one hand and set the metal clamp closed on the main hose using your other hand**. Once the suction is clamped off, the claw and the inflations will easily drop off into your hand. Bring the claw to the milking machine at the same time you're coiling the hose. **Hang it on the hook on the side of the milk tank**.

**Turn off the pump**.

**Give all four teats a post-milking iodine dip with fresh iodine**, not the same batch of iodine you used for the pre-dip. You've discarded that. You do a post-dip because there will be a slight capillary action in each teat that will cause it to uptake a smidgen of protective iodine before she heads out into the manure scene again.

**Now, let her teats air dry**. It's good for her to stand for a bit after milking so the wax-like seal of the teat orifice seals back up. Post-dipping has been proven to dramatically reduce udder infections. Teat dips are allowed under organic standards, and I highly recommend them. They have glycerin added to condition the teats and the iodine is stable and has a long shelf life.

Give your girl a loving pat. Tell her you love her and send her on her way back outside. **Then, away you go to process the milk**. You'll come back to clean the area where you've milked after you've processed the milk and cleaned the milking machine. It's important to cool the milk immediately and clean the machine so that you don't end up with a deposit of fats and proteins on the various parts of the machine.



### More on Milking Machines ...

Even though I bought a 7-gallon milk bucket for my NuPulse milker, they also offer a 3-gallon. My machine without milk weighs 28 lbs. A gallon of milk weighs around 8 lbs. If you're not producing more than 3 gallons of milk in one milking, you should buy the 3-gallon bucket so it isn't as heavy. (Keep in mind, if your cow ever produced more than 3 gallons and it backed up into the machine, you'd have a problem on your hands.) So if you add up 28 lbs and the weight of the milk, you have a bit of poundage to haul around. My milking parlor is a good jaunt from where I process my milk, so I haul my machine on a dolly that I customized with a strap and a bottom plate that's a tad wider than it was originally. As it turns out, my milk dolly has been put to use in a dozen different ways around the farm. I also use it to haul around my 50-lb sacks of organic alfalfa pellets.

