

Raw Milk Consumer Guide
How to Choose Your Raw Dairy Farmer
Questions to Ask and Red Flags

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with input from some of the smartest farmers and consumers in the movement

Please provide your input:
<http://www.Traditional-Foods.com/sourcing/raw-milk>

1. Using This Guide

You may use this guide to find the great, safety-oriented raw dairy farmers in your area, but we do recognize the huge variety in circumstances in the United States. Your mileage with this guide may vary but you should find some bits of information helpful to you in your circumstances.

Ask Politely Using This Guide

We hope that you find a tool in these pages to help you know your farmer. We encourage you to meet your farmer and check things out. We discourage you from asking a laundry list of questions. Start with some of the questions most important to you and if you find that the farmer is not conversant in some of the basic questions, consider moving on and find another farmer. Keep in mind, though, that some of us are more social than others and we all have bad days. Use your judgment.

There have been some bad apples in the raw milk world and “caveat emptor” has become the Latin phrase of the day. Do not treat the farmer like a bad apple because most of the barrel is still good, but ask wise questions, keep your eyes wide open, and make the best decision you can.

Choosing a Big vs. Small Dairies Using This Guide

Much of the advice here applies more to larger, better-funded dairies than to operations with just a few cows. As you can see, there is a lot of equipment involved in keeping a clean and safe operation, from a sink in the milk house (or, better yet, two sinks) to a milk house plumbed with hot water for cleaning tanks. Tim Wightman outlines these well in his handbook we cite here. While his guide is for small dairies, some dairies are really “itty-bitty.” This is not to say that you should not buy from a three-animal operation, but it is to inform you of the difference in safety measures you will find there. It is up to you to use the information you find in this report and elsewhere to decide if it is right for your circumstances.

Keep in mind too that with a smaller operation, the farmer is pretty busy farming and he or she may not have a lot of time or desire to answer your questions. At bigger operations, a marketing person may take charge of consumer education. At smaller farms, you might have to rely on your own information and good sense. This guide and the other resources we cite should arm you with tools to do an unobtrusive and polite farm visit to help you in your decision.

Asking at a Farmers Market Using This Guide

Many times at a farmer’s market, you will encounter an employee of the farm rather than the actual farmer. Ask the same questions but know that they might respond with “Let me check on that.” A good operation will have employees that do follow up and educate themselves on the issues important to their customers.

2. Basic Organic Questions

Many small dairies follow the spirit of organic standards, even if they are not certified organic. You can ask them specific questions about their practices.

“Is your **feed** certified organic?” If no, “Do your cows get **genetically modified** (GM) grains or other feed?”

Feed is extremely expensive these days, particularly organic feed. Your farmer may not use organic feed, but if he or she does not, you should know that it is difficult these days to source non-GM grains that are not certified organic. If your farmer does not feed organic feed but says it is not GM, he or she is likely to have quite a story about how they get it. It is worthy of asking about it. If the farmer does not appear to have a story, do not assume that the non-organic feed is GMO-free.

“Do your cows receive **soy** in their diet?”

Many raw milk consumers are concerned about the increase in soy in animal foods. Ask your farmer this question. If you do not receive a specific answer, do not assume the animal’s diet is soy-free. It is difficult to find a pre-mixed feed without soy.

“Do you give your cows **antibiotics**?” If not, “How do you care for sick cows?” If yes, “Do you cull the cow from the herd if she needs antibiotics?”

In organic standards, cows have to be culled if they receive antibiotics. A non-organic farmer may allow the cow to rest and recover for some time before she is integrated back into the milk herd. This is not necessarily a health and safety issue for the milk. A bigger issue is routine use of low dose antibiotics, a practice not used in the dairy industry.

In this economy, many farmers are probably using conventional feed. An honest and direct answer is best.

Red flags:

- The farmer or the dairy’s marketer is not conversant in these basic issues and “has to check” and “will get back to you.” (A farm employee may “have to check” and that is not a problem.)

3. Grass Feeding

Many consumers are seeking raw milk from grass-fed cows, but it is unusual for a dairy to have its cows on grass all the time all year round. A dairy that does feed 100% fresh grass probably has quite a story about it. Listen carefully to its story to understand how they are able to carry it off.

One dairy in a state with a perpetual water shortage is quite up-front about only grazing its cows during the growing season when pastures are irrigated by rainfall, not by irrigation water. The feed it uses the rest of the year was also likely produced by rainfall, not irrigation. In a state stretched for water, it is hard to argue with this perspective. As a customer, just keep in mind that there is no black-and-white in most decisions, including how grazing is managed by a raw dairy.

However, most raw milk consumers are looking for product from a grass-based operation and may wish to verify the amount of grass in a cow's diet. As a consumer, you may be aware that a dairy provides pasture access to its cows, but to determine how much fresh grass cows actually receive, you can ask the farmer these questions:

“What portion of your cows' diet comes from grain?”

“What portion from dry grass and legumes?” (e.g., hay, including alfalfa)

“What portion comes from pasture?”

The answer to these questions should vary by the season and that, in itself, should **not** be a red flag for consumers. In fact, a farmer who is trying to educate his or her consumer would likely clarify, “In the spring, pasture grass makes up 80% of the diet of my herd but in the summer, it is only 20%.” You will probably find that the flavor of the milk will change over these periods.

Red flags for consumers:

- The farmer cannot give you a ballpark answer on the questions above.
- Feeding ratios do not vary by season.

3a. Cows Per Acre: Visiting Your Grass-Based Farm

To educate yourself about the feeding practices through a farm tour, it would be tempting to look for a hard-and-fast rule about how many cows or goats can live on one acre of pasture grass. The problem is that the answer always depends on the pasture itself. (For an academic look at this issue, see this cooperative extension paper [[PDF](#)].) However, consumers must begin their search somewhere.

In the organic dairy community, pasture access has been a big issue. Some dairies have lost certification over not allowing their lactating cows access to pasture at all. Others have had far too little pasture for their herd. As a general rule, organic proponents suggest that 3 cows per acre of pasture is a ceiling – more cows per acre do not provide the cows with meaningful pasture access. Keep in mind, however, that National Organic Program standards only require cows to receive 30% of their dry matter intake from pasture during the growing season. This cows-per-acre formula is for herds that are not entirely grass-based.

To help you understand the farm you are buying from, consider these questions:

“How big is your milk herd and how many acres of pasture do they graze on?”

(Keep in mind that all dairies also have dry cows, young heifers, and calves, all of which have their own needs and should be discussed separately. You want to know the acres for the *lactating cows*, not the entire acreage of the farm.)

Follow-up questions:

“How many acres does your farm have?”

“How many acres are dedicated to the lactating cows?”

“How many acres are devoted to the rest of your herd?”

“What do you grow on the rest of your acreage?”

Visually speaking, when you visit a farm, consider that an acre is just a bit smaller than a football field and there should only be fewer than three cows in that space. However, this advice is complicated by a farmer’s use of “rotational grazing” where a herd is moved every day or so to a different patch of pasture. In this case, you will see a lot of cows in one spot. This is not a problem at all -- this is a very efficient grazing practice. Consider the entire pasture where these cows might graze, not just the small area they are herded in at the moment.

Red flags for consumers seeking grass-fed dairy products:

- There are more than three cows per acre (and two is really pushing it – look for one to two acres per cow for a grass-based dairy).
- The farmer quotes the same acreage for the entire farm as for the lactating cow pasture.
- The grass itself is eaten down throughout the pasture every time you visit.
- The grass in the front area of the dairy is far greener than that in the back.

4. Product Safety Testing

Increasingly, raw dairy farmers are testing their products for pathogens and benign bacteria (like coliform) that may serve as an indirect measure of contamination. As a consumer, keep in mind that small dairy farmers are not likely to test because of the expense of testing. This does not mean that they do not care about safety. It is up to you to consider other evidence of safety in this situation.

Increasingly, the standard for testing in the raw dairy community is weekly testing for coliform bacteria, standard plate count, and somatic cell count. Some dairies will also do monthly testing for pathogens.

However, if your farmer does test his or her product, be aware that testing is no guarantee of safety. Monthly testing allows a farmer to take a sample once a month and examine its bacteria counts. In a 30-day month, there were 29 days of milk that were untested. From a dairy milking twice a day, there were likely 59 batches untested. Even in the tested batch, pathogens and bacteria are not evenly distributed. The collection tank could have a pathogen and the test could be negative because the sample was pathogen-free. There are many other issues as well, but the point is that testing does not guarantee a safe product, but testing is a sign that a farmer is concerned about creating a safe product and that is a good thing. Furthermore, a farmer should be using a bad result to improve his or her practice.

You will occasionally hear in the news that the state or county has found a pathogen in a raw dairy's product even though the dairy itself found none. This discrepancy may be due to any number of factors (they had different samples, one of the tests may have been more sensitive than another). The safe response from the farmer is to use the finding to make safety improvements at the dairy.

Consider these questions:

“Do you test your milk? How often and for what?”

“When you get a high bacteria count, what do you do?”

(We want to see farmers using the testing information to clean tanks, lines, etc.)

Red flags:

- A farmer never receives a bad test result. (Life is dirty, cows get stressed, and high bacteria counts happen.)

5. On-Farm Safety Checks

We highly recommend that consumers read a handbook designed for producers written by raw milk farmer Tim Wightman. Download a [PDF](#) version for free (or buy a hard copy there).

Wightman's audience is small raw milk producers and includes an excellent description of safety measures a farmer should take in producing raw milk. Read the handbook to inform yourself about what a "clean" dairy should look like. As it is, we have had a number of dairies involved in outbreaks that would be considered "dirty" by these standards and it does beg the question: Had consumers been more informed about dairy hygiene, would those farmers have kept a tighter ship? Would the raw milk movement been able to avoid bad press? It is hard to say, but make sure you are buying from a clean operation for your own safety.

Some of the highlights from Wightman's handbook that you can easily observe at a dairy, include the following:

- The floor of the milking area should be an impermeable material, usually concrete.
- The milking area should be clean! Cleanliness is a relative term, but at a minimum, do not allow other animals in the milking area—no chickens, pigs, birds, dogs, etc., during milking or at any other time.
- The key to fly control is keeping the milking and holding areas scrupulously free of manure.
- It is a good idea to have a hand-wash sink separate from the wash vats of the milking system, in order not to contaminate the wash vats with whatever you are washing off your hands.

Do be sure to read his 45-page handbook.

6. Storage/Transport

Your raw milk is more likely to spoil if has not been kept cold. Maintaining a cold temperature is critical for the milk's shelf life. Temperature is also critical to safety: on the long chance that your milk has E. coli O157:H7, those cells can grow in warm milk.

Temperature at the farm: You farmer should cool your milk immediately. Larger dairies milk right into cooling tanks that are designed to get your milk cold, fast. Very small farms might milk into a bucket, pour the milk into a jar, and put the jar in their refrigerator. The milk does not cool as quickly in this case, though farmers may work to cool the milk faster by putting it into smaller containers in the refrigerator. Wightman's handbook goes into some detail on this issue and is worthy of reading.

Temperature on the road: If your farmer or co-op manager brings milk to a market, make sure the milk is kept cool in transit. Larger operations use refrigerated units; smaller businesses may use coolers. If you are buying milk out of a cooler, assume that the cold chain has been broken. Consider how long the milk has been in the cooler when making your buying decision.

Temperature in your home: Keep your milk in the coldest part of your refrigerator.

It is also a best practice to keep the milk separate from other foods, such as raw meat. Raw meat juices should be contained unto themselves from all other foods – milk and produce as well.

Consider these questions:

“How do you cool your milk after milking?”

“Do you keep the milk cool during transport?”

7. Closed Herd and Animal Testing

When I first became interested in organic dairy systems, I thought the closed herd was just an ideal that was not all that important. A closed herd simply means that the dairy grows all of its own cows – it keeps some heifer calves and raises them to replace dairy cows or to grow its herd. Alternatively, a dairy will buy a grown animal when it needs to add a cow to its milk herd. It is cheaper to let someone else tend to dairy heifers and focus your efforts on your milk herd and most dairies do just that. However, a closed herd turns out to be an important part of a safe raw dairy infrastructure.

Cows can develop diseases that can be passed through their milk. Tuberculosis and brucellosis are the most common concerns, but farmers may also test for leptospirosis and Johne's Disease. How big of a concern these diseases are to consumers depends on who you ask. There is a growing segment of raw milk consumers concerned about Johne's Disease and the possible link to Crohn's Disease in humans.

To ensure that a herd is free of these diseases, the farmers must test the animals. The safest herd will be one that tests for the disease and brings no new animals into the herd. Herds that are not closed can test any incoming cows, but those new animals should be carefully quarantined until they are clear. To get a sense of the role of the closed herd and animal testing, check out [this resource](#) for farmers on Johne's Disease.

Questions for your farmer:

“What kind of testing do you do on your herd?”

“Do you have a closed herd?”

8. Your Questions and Comments

Please ask questions and make your own recommendations on [this page](#). As you do so, I just ask that you not comment on specific farming operations.