FS 201
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So You Own a Cow . . . Now What?

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Rev.

People living in the suburbs and owning a small acreage often select dairy cattle or dairy goats as a means of harvesting and using their forage. Goats, especially, will help control brush and weeds and keep the area from becoming unsightly, and through milk production goats can reduce the family grocery bill.

If you already own a cow or goat, good luck. If you are still choosing, remember there is a tremendous variation in the capacity of individual dairy cows and goats to produce milk.

Selecting animals

Buy animals from a producer who keeps production records. Select an animal with the desired level of production, or a calf or kid from a dam (female parent) with an acceptable production record. In most cases, a long milk production period is more important for family use than very high production. An animal with poor lactation abilities that milks for only a short period after calving often will cost more to keep than the value of the milk produced.

Choose the proper size. A big cow, such as a Holstein, will eat much more than a smaller cow such as a Jersey. A goat requires much less forage than a cow. To estimate forage needs, a milking animal will eat about 3 percent of her body weight in air-dry feed (hay) every day. For example, a 1,000-lb. cow will need 30 pounds of hay or pasture dry matter per day. Select the most appropriate animal to meet family needs, using the pasture supply you have available. In addition to this, a cow may need supplemental grain or purchased feed daily for higher milk production.

Feeding

There are many bulletins and books on feeding dairy animals. Extension agents, feed suppliers, and others can give advice for your specific situation. A well-fed animal will produce more milk than one fed poorly. Often, when a family cow produces more milk than needed, her production can be adjusted downward by reducing her grain ration. This may be desirable when the extra milk cannot be used, but there are limits, of course, and you cannot stop the delivery during your vacation.

Breeding

Cows or goats should be bred to calve (or kid) at approximate 12-month intervals. You may breed them to your own or a neighbor's males, or you can be more sure of top quality by using an insemination service. Semen and insemination service are available through several businesses. The use of their service ensures superior, disease-free semen, and eliminates the necessity of keeping a male. Your county Extension agent can provide addresses and telephone numbers of the semen services in your area.

Use of the milk produced

One problem in keeping a family cow or goat is that often more milk is produced than can be used by the family. Some would like to sell this surplus. There are provisions to allow the owners of not more than two producing cows or three producing goats to sell their surplus milk. Before planning to sell, however, you should apply to the:

Division of Food and Dairy
Oregon Department of Agriculture
635 Capitol Street, N.E.
Salem, Oregon 97310
(503) 378-3790

To sell fluid milk, the producer must be licensed and must meet sanitation and structural requirements for the milking area and milk room to ensure high quality, safe milk. Unless you can meet these requirements, you will have to find other ways to use surplus milk. A few suggestions follow.

Fluid milk

Fluid milk is the simplest and most obvious way to use surplus milk. All milk, even from your own cow or goat, should be pasteurized. Though your cows or goats are tested and known to be free of brucellosis or tuberculosis, milk can potentially be a dangerous medium for the transfer of other diseases such as pathogenic *E. Coli.*

Milk also can transfer diseases from one person to another, such as from the milker to the consumer. Typhoid fever, septic sore throat, paratyphoid fever, scarlet fever, and gastroenteritis can be transferred by milk. All of these organisms are readily destroyed by pasteurization, hence all responsible individuals will recommend this food safety practice.

There are small, commercial pasteurizers available, or you can pasteurize milk in a double boiler by heating to 165° F, stirring the milk while heating. When the milk reaches 165° F, put the top of the double boiler in cold water and cool as quickly as possible. Store pasteurized milk in a refrigerator until used. Do not store or process milk in direct sunlight, since this causes an off flavor and nutrient loss.

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Cleanliness in all phases of milking and milk handling is important. Churns, separators, and milk handling equipment should be washed thoroughly and sanitized with chlorine (bleach) or iodophor (iodine) solution. These are available from most farm or dairy supply stores or mail order firms. Follow instructions on the container.

As with most household and farm chemicals, store sanitizer concentrates out of reach of children and use the sanitizers only as directed.

Making butter at home

You can make high quality butter from pasteurized sweet cream. Butter made from old cream or cream that has soured exhibits a strong off flavor and does not keep well. Save the well cooled cream skimmings for 3 to 4 days before churning. Churning uses mechanical means to aerate, dash, or agitate the cream until the minute globules of milk fat in the cream adhere to each other and form butter granules (about pea size).

The most common churn for making small quantities of butter is a 1-gallon glass churn equipped with wooden paddles. Fill the churn only one-third to one-half full. Churning incorporates air into the cream and causes it to increase in volume. After 30 to 40 minutes of churning, butter granules should form and liquid buttermilk separate out.

Butter granules form best when the cream is at a temperature of 54 to 58° F in summer and 58 to 62° F in winter. Stop churning when the butter granules are about the size of corn kernels. Remove the granules of butter from the buttermilk and wash them with water about the same temperature as the buttermilk or slightly cooler. After draining the waste water, add salt at the rate of 1 tablespoon to each pound of butter. Then work the butter with a paddle until the salt is evenly distributed and the buttermilk is extracted.

It will be necessary to use a cream separator to make goat butter since goat cream does not separate from milk by itself.

Homemade yogurt

For 3-plus quarts of yogurt, prepare the yogurt base in a 4-quart saucepan or double boiler.

3 quarts of fresh whole milk or non-fat milk
1 ½ cups of non-fat dry milk or
1 can of evaporated milk

Heat the yogurt base to 180° F and hold for 10 to 15 minutes. This changes the properties of the milk protein and results in a firmer, more custard-like body and texture in the finished product.

Cool the heated milk to 110° F. (You will need a good thermometer.) Inoculate the tempered milk with approximately ½ cup yogurt (plain commercial or your own yogurt starter). Pour into yogurt containers (clean, sanitary jars or plastic cottage cheese cartons).

Set the yogurt containers on a tray in the oven for incubation at 110° F (permissible range is 100 to 115° F). Turn the oven on to the lowest temperature to help maintain the desired incubation temperature.

Continue checking the temperature every hour, turning the oven on or off to maintain a temperature as close to 110° F as possible. *Do not exceed 115° F* or the culture will be inactivated. Maintain a 100° to 110° F temperature for 3 to 4 hours. When the yogurt base coagulates and reaches the consistency of commercial sour cream, refrigerate immediately.

Try to avoid excessive vibration of the yogurt base in the late stages of incubation and when transferring to the refrigerator. This will help ensure a smoother, more custard-like consistency.

Yogurt should keep for 1 or 2 weeks, depending on the degree of care exercised in making it. Use of well cleaned, sanitized containers will greatly aid shelf-life.

A more satisfactory yogurt culture can be maintained if a special ½-cup container is prepared and *reserved* for inoculating the next batch of yogurt. This minimizes the introduction of some unwanted or undesirable microorganism.

Cheese

A number of different types of cheese can be made at home. Instructions can be obtained through your local Extension office.

Animal feed

Excess milk can be used for animal feeds. A few suggestions are:

- *Calves or kids.* Milk, of course, is the natural food for calves or kids. It should be limited to 8 percent of the body weight of young calves or kids, to avoid digestive disturbances.
- *Pigs.* Skimmed milk, buttermilk, or whey are excellent feed.
- *Chickens.* Milk is an excellent feed supplement for chicks. It is somewhat laxative and may cause wet litter when birds are confined.
- *Miscellaneous.* Milk can be fed to a variety of young animals such as puppies, lambs, foals, or kittens. If puppies develop diarrhea, stop feeding them milk until the stool is normal.

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