

Flame-clipping Udders on Dairy Cows

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Mastitis is the single most expensive disease to the dairy industry, contributing to large financial losses due to decreased quantity and quality of milk. It's essential to develop and implement a mastitis control program to keep mammary glands healthy and reduce infection in the herd. Removing the hair from a milk cow's udders helps promote a healthy mammary gland, essential to the production of large quantities of high-quality milk.

Unclipped udders (Figure 1a) accumulate more dirt, take more time to clean and prepare for milking, make it more difficult to properly sanitize the teats, and increase the likelihood of incomplete drying. Hair left long around the teat can be drawn into the teat cup along with the teat during milking, carrying with it millions of mastitis-causing organisms.

In contrast, udders with short hair are cleaner (Figure 1b), so milking preparation is easier and faster and there is less risk of cows developing mastitis. Clean udders can easily be prepared for milking without water, thus eliminating a source of the microorganisms that cause mastitis. With clean udders, there also is much less chance of milk contamination from dirt and manure.

Milking cows with clean udders is a goal of most programs, but it can be a challenge to keep udders clean during winter, when barnyards are wet and hair on udders grows quickly. For many years, clipping with electric clippers has been a way to maintain clean udders, but this practice is very time-consuming and difficult in some herds. Moreover, most cows are not accustomed to the noise of electric clippers and may be nervous when the clippers are running, thus posing a hazard to the person clipping.



Figure 1a.—An udder before hair removal.



Figure 1b.—An udder after hair removal.



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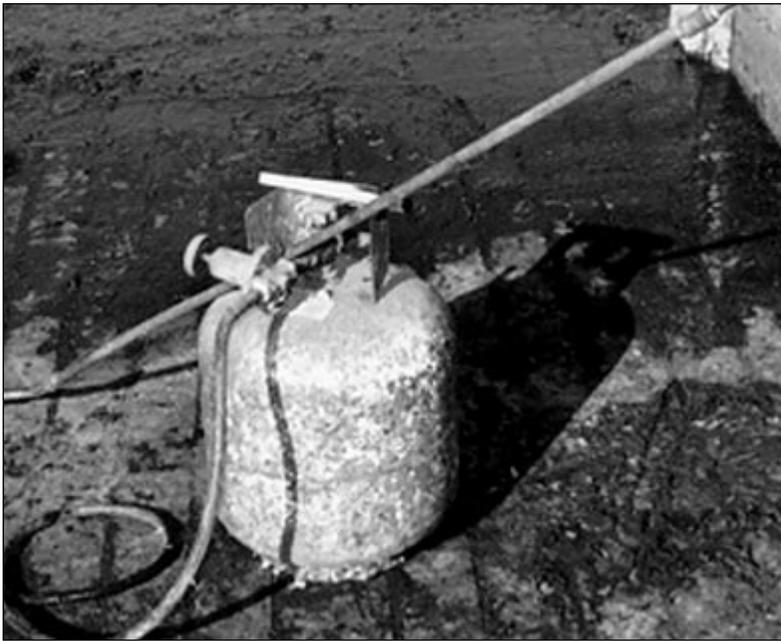


Figure 2.—A commercially available weed-burning torch can be modified to flame-clip udders. Either flatten and tape the tip (Figure 3) or construct your own tip (Figure 4).

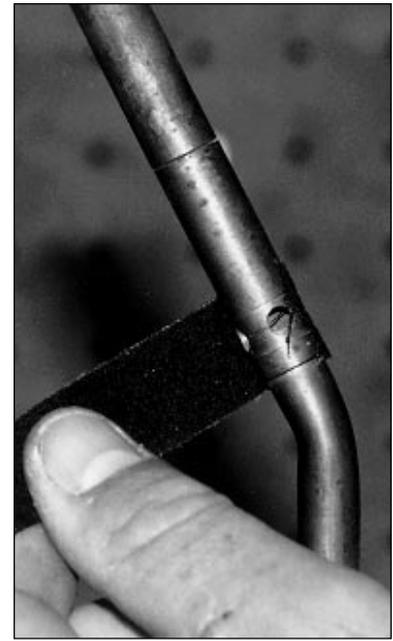


Figure 3.—Taping the tip excludes air and maintains a cooler flame.

What is flame-clipping (flaming)?

Using flame to singe hair from udders is a fairly new practice that has been developed to replace electric clipping. Flame-clipping is similar to singeing the hair off your arm. You don't burn your arm because of the quick, short exposure to the flame.

With flame-clipping, hair on the cow's udder is removed with a propane torch using a cool flame. The flame is passed quickly under the udder to singe the hair off. It must be done correctly to remove hair thoroughly without burning the skin on the udder or teats.

Although the idea of running a flame around the udder of a valuable cow may seem foolish at first, flame-clipping udders is safe and very effective when done correctly. Many dairy producers have found flame-clipping to be easier than electric clipping, taking less investment in equipment and less effort. Because of this, they are more likely to flame udders on a regular basis throughout the winter, when they may not have used electric clippers.

Flame clipping can be done in the milking parlor or in the larger feeding area. It takes only a few seconds per cow and should be done every 4 to 5 weeks.



Figure 4.—A new tip can be constructed using a $\frac{3}{8}$ -inch pipe nipple and coupler. Note the end of the nipple has been smashed flat, creating an opening of about $\frac{3}{8}$ inch for the flame. This allows the gas to burn cool with no aeration. Remove the end of the weed burner and attach the new tip to the end of the torch.

What equipment do I need?

To flame-clip udders, you need a few low-cost items that you can find on the farm or at a local hardware store:

- A 20-lb propane tank on a wheeled cart (If you are flame-clipping in the milking parlor, you might wish to substitute a smaller, hand-held propane bottle.)
- A propane hose, 10 to 12 ft long, attached to a 4- to 5-ft handle
- A gas flow regulator
- A flattened torch tip
- Electrical or cloth tape

The tip must be flat to spread the flame and reduce heat. If you use a commercially available propane torch (Figure 2), it's important to flatten the tip. Also, most torches have air inlets along the tip to add oxygen to the flame, increasing the heat. Tape these air holes shut to exclude air (Figure 3).

Alternatively, you can make your own tip (Figure 4).

The flame should be cool, small (4 to 6 inches long), yellow, and quiet. An aerated, blue flame is too hot.

How to flame-clip udders



Limit cows' movement by locking them up in a row of stanchions. Cows react if they see the flame, so keep the flame out of their sight.



Move the flame quickly beneath the udder, singeing the hairs around the teats. It is important that the flame be small (less than 6 inches) and yellow in color. Hold the flame about 2 inches from the skin. Several passes are required to remove all of the hair. Keep a flame striker with you because you'll probably need to light the flame repeatedly.

Flame-clipping hints



When flame-clipping a cow for the first time, you may need to go over the udder more than once to singe the fine, fuzzy hairs. You might have to singe the hair, rub off the singed hair with your hand, and then singe again.



Never flame-clip around any combustible material such as straw, hay, paper, or wood.

Ordering instructions

If you would like additional copies of EM 8755, *Flame-clipping Udders on Dairy Cows*, send \$1.00 per copy to:

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