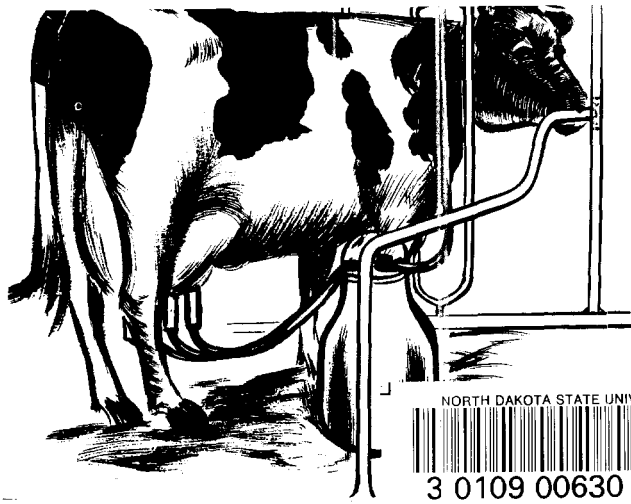


# Milking Practices THAT PAY

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## ADJUSTING AND MAINTAINING THE MILKING MACHINE

Correct milking is possible only when the milking machine and the man operating it are doing their best.

Here are several things to do to keep your milking machine in near perfect working order:

1. Make sure there is enough vacuum (negative air pressure) to operate the machine properly. A gauge showing 15 inches of vacuum does not always indicate the machine will function properly. There may be a sufficient level of vacuum as shown on the gauge and still the machine will not work properly. There are two main causes for this:

(a) The vacuum pump may not remove enough air from the line in a given amount of time. (This usually is expressed as cubic feet of air removed per minute.) It should remove a minimum of 2-1/2 cubic feet of air per minute, just to operate many kinds of the vacuum-operated pulsators on the market. In addition to this, air must be removed when the machines are moved from one cow to the next. Check the requirements of your machine and adjust to the capacity of your vacuum pump. These requirements vary widely.

(b) Part of the vacuum line may be partially blocked or plugged with dirt of one kind or another. This may be checked by use of an air flow gauge. If there is a gradual decline in readings as you check the stall cocks first at the vacuum pump and then moving away from the vacuum pump, something must be done to clean the

line. In severe cases the line may have to be taken down and brushed out, but drawing a strong lye solution through each stall cock usually will clear the line. (1 13 oz. can of lye to 3 or 4 gallons of hot water usually is used.)

2. Proper pulsator action is necessary to insure proper milking machine operation. The pulsator controls the action of the inflation as shown here:

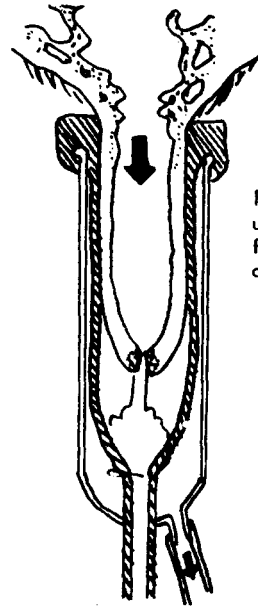


Fig. 1. Milking stroke (vacuum is created between inflation and shell as well as on the teat.)

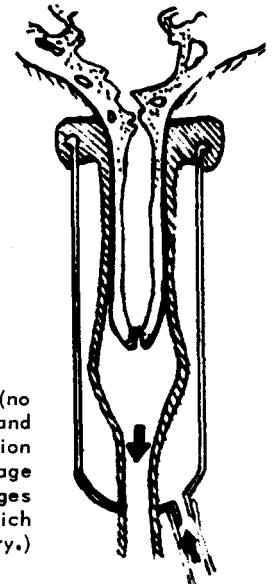


Fig. 2. Massage stroke (no vacuum between shell and inflation, causing inflation to collapse and massage the teat. This encourages blood circulation which protects teat from injury.)

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Preventive maintenance is the best way to care for the pulsator. Trained servicemen can usually save time and money for the dairyman. It is too late to prevent all the damage if repairs are delayed until pulsator action becomes slow or stops entirely.

3. Rubber parts must be clean and in good repair to function properly.

Proper care (Circular A-405) will lengthen life of inflations and help prevent mastitis. Discard inflations which become out of shape or rough inside. Damaged inflations cause mastitis. Many farmers use two complete sets of rubber inflations for each machine and change them each week. When not in use, inflations should be cleaned thoroughly and stored in a cool dry place. Clean rubber inflations milk faster and last longer. Inflations should not be used for more than 1500 milkings.

#### COW PREPARATION AND MILKING PRACTICE

Udder stimulation is essential to good milking.

1. Washing with warm water (130-140°F.) and massaging the udder stimulate milk "let down" or release of the milk by the udder. Washing is essential if we are to produce a quality dairy product.
2. Milking out a few squirts (3 to 5) of milk from each teat into a strip cup is an aid to detecting any abnormal milk. Ropy or stringy milk usually is one of the first signs of mastitis. This practice also helps reduce sediment and the bacteria count of the milk.
3. Be as regular as possible -- it is not necessary to be on a 12-hour schedule. Milking at 6:00 A.M. and 5:00 P.M. may be satisfactory but it must be regular as cows become very accustomed to a routine.
4. Most cows respond to washing and removing a few squirts of milk from each teat in about one minute. The best time to place the milking machine on the cow is at this time. You can not wash very many cows in advance (one or two) and obtain maximum milk flow. Most cows will milk out in from 3 to 5 minutes, if the machine is placed correctly on the cow at the proper time after stimu-

lation. The teats usually have a shiny, distended appearance when milk "let down" has occurred.

5. Cows will milk out fast (3 to 5 minutes). You have no time to do other chores while milking. The next cows to be milked must be prepared, the cows being milked must be watched.

When milk flow stops, remove the teat cups promptly. Continued milking may injure the sensitive tissue lining of the teats and the lower portions of the udder. Then, the conditions are right for the organisms causing mastitis to start an infection.

Pay particular attention to cows that milk out rapidly or have one quarter that milks out more rapidly than others. It is very easy to forget and leave the milking machine on the easy-milking quarters or easy-milking cows after the milk flow has stopped.

When cows are drying-off, the milk production is low. It is especially easy then to forget that you need less time for milking than when the cows are milking heavily. And, if you fail to remove the milking machine in time, mastitis may follow. When production is 5 pounds of milk or less per milking, stop milking with the milking machine.

Fast milking is important but care must be taken to do a complete job if maximum milk production is to result. While it is safer to "undermilk" rather than "overmilk" a cow, milk production can be lowered if enough milk is left in the udder to build up pressure. This pressure will cause the milk producing cells to quit secreting milk earlier than need be in the lactation.

When milked in a parlor, the cows should be let into a well protected holding area for a short time after milking. This helps cut down on the frequency of frozen teats which may occur if the cows are turned outside too soon after milking in extremely cold weather.