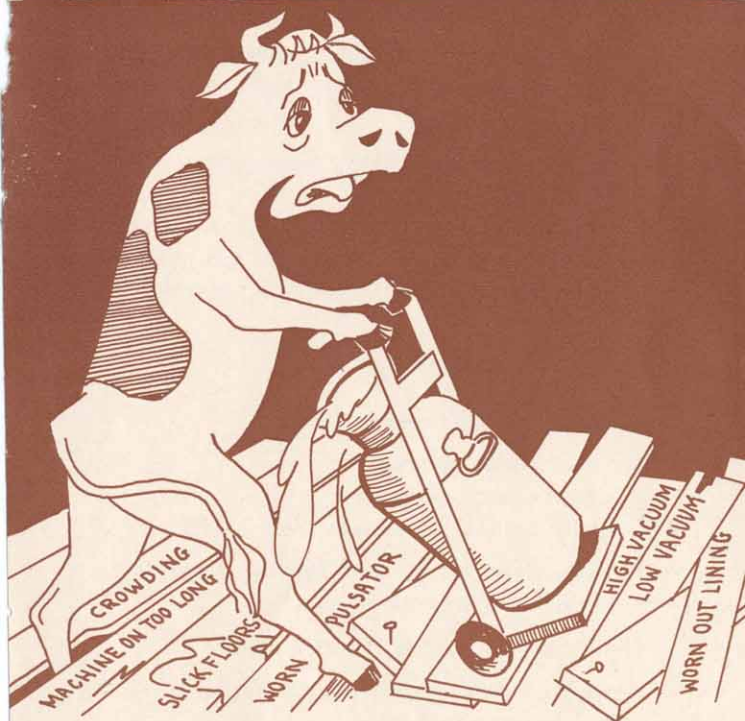




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You CAN PREVENT MASTITIS

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MASTITIS CUTS PROFITS

USDA estimates mastitis cost at \$19.30 per cow per year. Included are cost of drugs, veterinary fees, milk discarded, loss of milk production, and loss of cows.

CAUSES OF MASTITIS

Teat or udder injury from

Obstructions such as
high steps or deep gutters
rocks, stumps and machinery
down fences and brush

Falls on slick surfaces
floors, ramps, ice

Crowding in
barns, loafing sheds and at
feed racks and waterers

Fast movement of milking herd caused by
dogs, horses, kids, boss cows

Milking procedure
insufficient washing, massaging,
stimulation
putting milking machine on too soon
leaving milking machine on too long
improperly operating milking machine

PREVENTING MASTITIS

Avoid abrupt changes in feeding

Provide a loafing area
clean, uncrowded, dry,
well ventilated and free from drafts

Provide clean corrals and feeding areas
out of mud and out of wind

Eliminate slick floors, ramps and ice.

Keep accurate breeding records on all cows
Isolate cows in heat

When purchasing animals
have them checked by a veterinarian
use care in loading, hauling and unloading,
isolate from milking herd for one week

When raising heifers
select heifers from cows with good, well
attached udders
keep calves from nursing each other
don't feed mastitis milk to calves
keep calves clean and dry
Dehorn all dairy animals.

MILKING PROCEDURE:

Wash and massage udder with warm water
and use strip cup about **one minute** before
attaching machine.

Attach milker as soon as milk let-down occurs.

Remove milker as soon as milk flow stops.

Remove teat cups as each quarter is milked out.
One operator can handle only two or three
milking units. Not more than four units should
be handled by one man even with the best
pipeline milker and herringbone stalls.

Milk regularly each day with the same inter-
vals between milkings.

Avoid the unusual at milking time.

MILKING MACHINES:

In any way that milking machines can bruise
or irritate the teat and udder tissues, they can
contribute to mastitis.

Adequate vacuum capacity is a must.

Vacuum pump capacity is measured in cubic
feet per minute (cfm).

Needed is 4 cfm for each bucket milker unit
or 8 cfm for each pipeline milker unit. This
includes enough vacuum for accompanying
releasers, controllers and milk valves.

With vacuum pumps in good condition motors of the following size will supply adequate air flow:

Size of Motor Recommended

No. of Units	Buckets	Pipeline
2	1/2 HP	1 HP
3	3/4 HP	2 HP
4	1 HP	3 HP
6	2 HP	5 HP

Vacuum level is measured in **inches of mercury**. Use a vacuum gauge and keep the vacuum level at the number of inches recommended by the manufacturer. Vacuum level should not vary more than 2 inches during milking.

The vacuum controller is best located between the vacuum supply and the point of first vacuum use, not at the end of the line. It should be large enough and operate smoothly so that during milking a steady hiss can be heard as air enters the system through the controller. Keep screens and air openings clean. Maintain proper weights or spring adjustments for required vacuum level. See that moving parts operate freely.

A vacuum-reserve tank of 5 gallons per unit is recommended for pipeline milkers.

Vacuum lines. Use large size galvanized or plastic pipe for vacuum lines. Keep them clean by flushing with lye water regularly. Keep fittings to a minimum. Each fitting — elbow, tee, union, reducer or coupling — offers as much resistance to air flow as 20 to 30 feet of straight pipe. Use plastic pipe to reduce the number of fittings.

Size of vacuum line.

For pipeline milkers up to 6 units

Pump to reserve tank	1½" pipe
Tank to Tee	1½" pipe
Tee to Receiver	1¼" pipe
Tee to Pulsator line	1¼" pipe

Pulsator lines should be

- 1" pipe for 1 to 4 units
- 1¼" pipe for 6 units and
- 1½" pipe for 8 units.

Tap stall cocks directly into 1¼" or larger pipes.

Pulsated pipe—for master pulsators.

Use ¾ inch pipe not longer than 12 feet from pulsator. Each single master pulsator should operate not more than 3 milking units, 2 is better.

Milk Pipeline:

Slope 1½ inch in 10 feet

Eliminate risers

Keep it low—minimum of 5' above udder

Milk valves should be turned so milk enters the upper half of the pipe.

Do not use in-line-filters

Keep all couplings tight

Pulsators:

Clean at regular intervals

Renew or replace worn parts at regular intervals

Operate at from 50 to 60 pulsations per minute

Keep stall cocks clean, free operating, non-leaking.

Inflations or liners:

Narrow bore recommended. Keep teat cups from creeping up. A firm hold on the bottom half of the teat is sufficient. Replace at regular intervals based on number of milkings:

700 to 1000 milkings for natural rubber

1500 to 2000 milkings for synthetic rubber.

When roughness or stretched shape is noticeable, some harm has already been done.

Replace liners at higher number of milkings if 2 sets are used alternately with 1 set being soaked in a lye solution while the other is in use.

Replace liners at lower number of milkings if only one set of liners is used.

Calculate liner replacement schedule as follows:

$$\text{Life} = \frac{\text{No. units x recommended life}}{2 \times \text{Ave. No. Cows.}}$$

Example: How frequently should liners be replaced on a farm milking 20 cows with 2 bucket units? Assume 2 sets of synthetic rubber liners are used alternately.

$$\text{Life} = \frac{2 \times 2000}{2 \times 20} = 100 \text{ days. Thus each set of liners should be replaced every 3 months.}$$