

Milker backflushing helps control mastitis

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Bacteria on the inner surfaces of milking machine clusters can cause new mastitis infections when the clusters are transferred from the infected quarters of one cow to the uninfected quarters of another during milking. These bacteria come from the milk from infected quarters, from the teat skins, their lesions and from dirt in the environment, including everpresent cow manure.

We used to fight bacteria in the milking machine clusters by dipping teat cups in germicidal rinses, hot solutions or even steaming them. Two approaches to dipping are now considered effective for mastitis control: 1) dipping the cups of milking machine clusters between cows during milking and 2) dipping the teats of each cow after she has been milking.

Teat dipping is a more recent and very successful development, while dipping of teat cups has been a standard practice for years—especially in stanchion barns before the development of milking

parlors.

With the increased automation of milking parlors, a backflush system for disinfecting teat cups has come into use. This system uses a germicidal solution, clean rinse and hot air drying cycles to destroy possible mastitis-causing bacteria in the teat cups after milking one cow and before attaching them to another. This practice has reduced bacteria numbers on the liners by nearly 100 percent.

Field surveys show that backflushing is more effective for mastitis control than manual teat cup dipping. This has also been our experience with the University of Delaware herd, and we now routinely backflush our milking machines morning and night between all cows.

A recent Kentucky study investigated more systematically the effects of backflushing on 40 cows. The results showed the

practice to be very effective in reducing the spread from cow to cow of *Staphylococcus aureus* and *Corynebacterium bovis*—both very contagious mastitis-causing microorganisms.

Backflushing also significantly reduced the total number of bacteria harbored in the teat liners after as many as 1200 milkings, while bacterial numbers increased on liners which were not backflushed. Since teat dipping was not used on cows in this herd, the study constituted a more severe test of backflushing than otherwise.

Even when teat cups are backflushed, however, cows which must pass through muddy barnyards would greatly benefit, in terms of mastitis control, if mud and manure were removed before milking—either by passing through washstands or by washing in the holding area.

In larger herds and in herds in

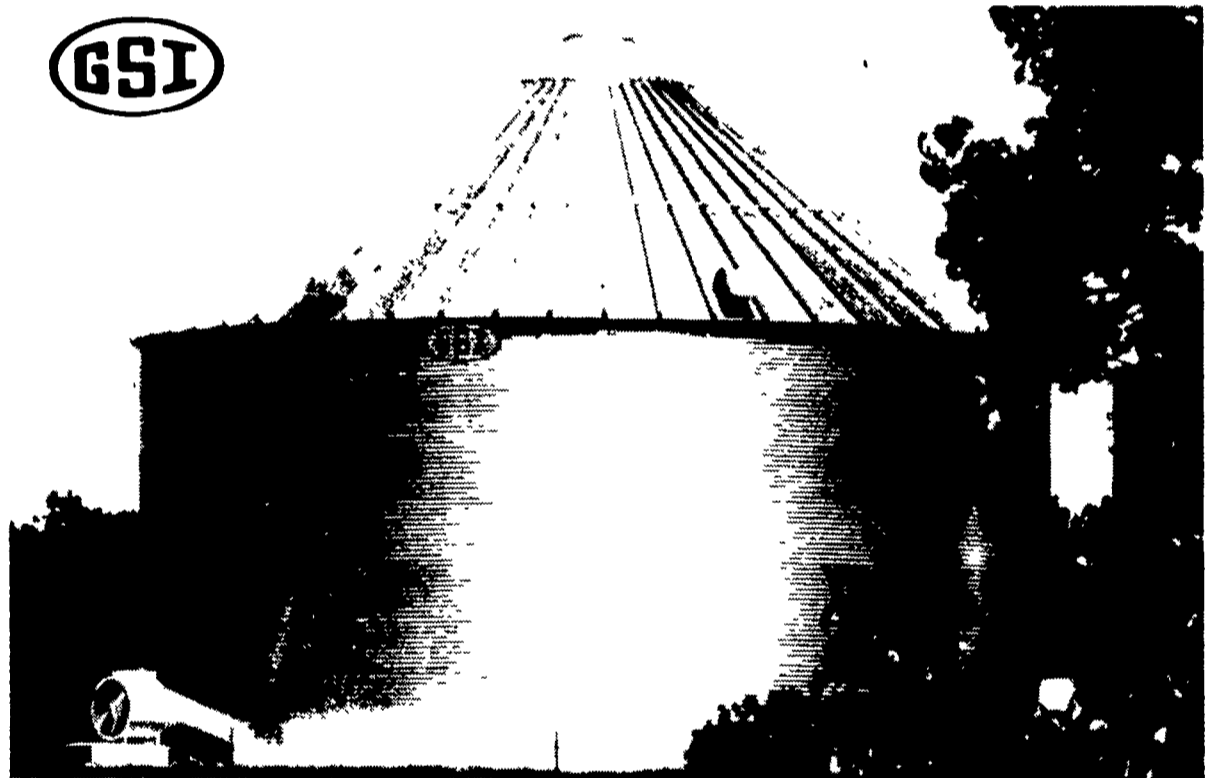
the South this is fairly easy to do, though in colder climates like ours, some different engineering is required to prevent chilling the cows or even forming ice when they're washed. A better solution would be to allow the herd access to grass lots where cows can lie down without getting too dirty. In a freestall or total confinement system there should be enough stalls for every animal in the herd so none need to lie down in the aisles. In stanchion or comfort stalls, renew bedding often during the day so udders and flanks stay clean.

Despite its advantages, automatic backflushing is not for everyone. Farmers with smaller herds or temporary cash flow concerns may find installing a system fairly expensive to consider. In this case, teat dipping each cow at every milking combined with a careful dry cow

treatment program handled by the herd owner or herdsman—in other words, not delegated to hired help—plus a dry, clean barnyard, a grassy exercise lot, clean free stalls or well-bedded stables will go a long way towards maintaining effective control of mastitis, especially subclinical infections.



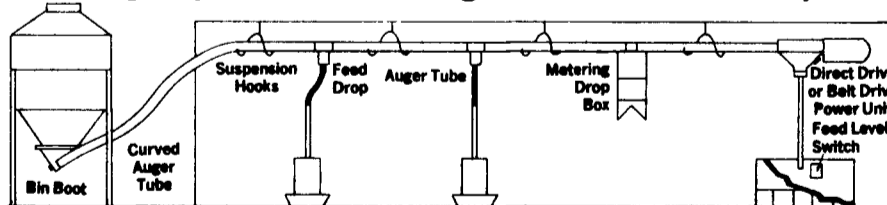
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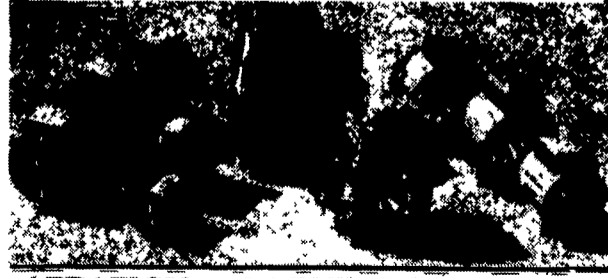
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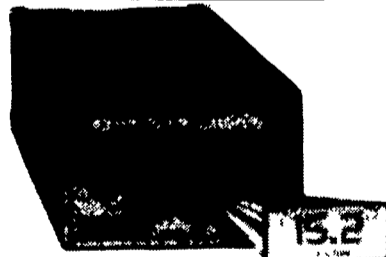
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