

## Evaluating Teat Sanitation

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From time to time, it is worthwhile to evaluate common day-to-day practices on the farm. It is not uncommon to apply protocols and procedures, but years later, not re-evaluate to ensure they remain effective. This is particularly true of pre and post dipping of teats at milking time.

Every dairy person understands the fundamentals for applying a teat dip. It is logical that if a food grade product and healthy udder are desired, harvesting milk is to be done in the most sanitary way possible. Teat dipping, spraying, or brushing with a germicidal solution before and after milking is one of the most effective ways to reduce the risk of new intramammary infections. Additionally, the goal of a teat dip is to maintain good skin health. Remember that these teat ends are being exposed 2-3 times a day, 7 days a week. Chapped, raw teats may lead to a less than enjoyable milking experience for both cow and human.

What is it that we are applying to the teat? It may be a product that was the most suitable ten years ago, but is it still? A long list of approved products currently exist on the market. These have a huge variability in required contact time, mixing instructions, efficacy, and cost. It is imperative that the most appropriate product is being applied to achieve the full benefit. With a large availability of options, here are some of the important things to consider.

- Are we consistently getting good teat coverage?
- Are we achieving the required contact time?
- Is it a ready-to-use product or does it need to be mixed daily?
- If it needs to be mixed daily, is it mixed properly and how do we know the solution is consistently effective?
- What types of mastitis pathogens are we dealing with?
- What effect does it have on skin health?
- What skin conditioners and emollients are incorporated in the solution?
- What is the cost per year? Per cow?

Iodine based teat dips have been the go-to product for a long time. These typically come as a ready-to-use solution and provide broad spectrum germicidal activity. Iodine pre-dips require a contact time of 30-45 seconds and are quite effective on heavily soiled teats. Elevated concentrations of iodine can have damaging effects on skin, leaving teats dry and chapped. For this reason, iodine teat dip concentrations range from 0.25-1% and usually contain glycerin and lanolin as skin protectants.

Hydrogen peroxide teat dips have become more common with the rise of robotic milking systems. Hydrogen peroxide is another broad spectrum germicide that can be combined with lactic acid. These teat dips are convenient in that they usually come as a ready-to-use solution. Hydrogen peroxide requires a contact time of approximately 45 seconds to

thoroughly disinfect a teat. As a pre-dip, it can be a challenge to get appropriate disinfection if teats are heavily soiled or contact time is not suitable.

Acidified sodium chlorite/chlorine dioxide teat dips are created by combining sodium chlorite and a weak acid. This class of teat dip provides a broad spectrum of activity that works well on heavily soiled teats. Chlorine dioxide, depending on the concentration, requires 15 seconds of contact time to properly sanitize teats. These dips typically require daily on-farm mixing of ingredients and each manufacturer has its own set of guidelines on mixing and its shelf life. Proper attention must be taken to ensure the product is active and doing the job intended.

Chlorhexidine teat dips are a commonly used post-dip. This class of dip adheres well to teat skin and provides long-lasting germicidal activity. Due to its slow, prolonged activity, this dip may not be suitable as a pre-dip. Additionally, in heavily contaminated settings, there are a few groups of bacteria that can survive and serve as potential mastitis pathogens.

Take the time to read the label on your current product. Identify the class of teat dip being used and evaluate how the product fits into your udder health program. It may be beneficial to re-evaluate current milking procedures to boost effectiveness of the pre and post dips.