



Quality Watch

By Dean Letter

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On-Farm Pasteurizer Performance Monitoring Program

Some of our members are augmenting or replacing their milk replacer with waste milk from the parlor. The thought behind this stems from not wishing to “waste” their waste milk, but to utilize the nutrition in waste milk to grow their calves. This is a great idea on the surface, but is laden with pitfalls.

There are three areas of concern that I would like to address: safety, nutrition, and consistency. Safety may be the concern that most people would think of because waste milk usually comes from cows that have or are recovering from a health problem, usually mastitis. Some mastitis pathogens, such as mycoplasma, can easily be transferred through waste milk. Common scours pathogens may also be present.

Additionally, diseases such as Johne’s can also be spread through waste milk. Clinical signs of these diseases may not be detectable until the calf has entered into production. By then, over a \$1,000 has been invested into getting the animal into production and the disease may have infected many other animals.

Some members have begun pasteurizing their waste milk to mitigate this problem. Other than apparent calf health, how does one determine the effectiveness of their pasteurizer? What benchmarks should be used to provide reasonable assurance that the milk is safe?

Unlike waste milk, milk replacers have a tag on the bag that guarantees the nutrition value of the product in the bag. If the replacer is fed according to directions, the calves would get a prescribed

amount of nutrition for a targeted rate of growth. Without testing and perhaps supplementing the waste milk, the calves may not get adequate nutrition.

This brings up the last concern: consistency. What assurance does a calf raiser have that the product they are feeding to their calves is consistently safe and consistently provides adequate nutrition for their target growth rate? Drastic changes in calf nutrition because of highly variable waste milk nutrient content may also cause “non-infective” scours. Unless someone on the farm is closely watching the calves’ growth rates and health, it may be difficult to tell until it is too late.

Waste milk quality assurance plan

Feeding a quality milk replacer is the easiest way to provide a safe and nutritious product consistently, with monitoring. It may also be possible to do this by feeding pasteurized waste milk. MMPA now offers our members a variety of tests to provide a level of assurance that their pasteurized waste milk is safe. Additionally, we (through our arrangement with Universal Labs) can provide nutritional information on the pasteurized waste milk that members send in. Members can provide this information to their nutritionists to determine if the waste milk needs to be supplemented to meet the calves growth rate goals.

MMPA suggests sampling the waste milk at various points in pasteurization/feeding program to assure proper equipment sanitation, pasteurization, and milk storage.

Bacteria counts can be performed on milk prior to pasteurization, immediately post pasteurization, and when the milk is dispensed to the last calf. If the equipment is sanitary, proper pasteurization took place, and the milk is kept cold, the bacteria counts should be less than 20,000 colony forming units (cfu)/ml.

Another indicator used to assure complete pasteurization is the alkaline phosphatase test (FAP). Alkaline phosphatase is a naturally occurring enzyme in raw milk that is neutralized through pasteurization. Meeting the FAP test goal provides a high degree of assurance that pathogens detrimental to calf health, such as Johne’s, have been killed.

Members may also wish to culture their waste milk (post pasteurization) through the Diagnostic Center for Population and Animal Health (DCPAH). This is another opportunity to determine whether or not potential pathogens have been killed. DCPAH can culture for such pathogens as *e. coli*, *listeria*, and *mycoplasma*.

It is possible to use waste milk as a source of nutrition for unweaned calves. However, to provide adequate nutrition safely and consistently requires constant monitoring. MMPA has positioned itself to be our members’ partner in this endeavor. If you would like more information about the On-Farm Pasteurizer Performance Monitoring Program, please contact your member representative or me at the Novi office.