CALVING EASE

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Sam Leadley (Attica Veterinary Associates) and Pam Sojda (Offhaus Farms)

CLEANING PLASTICS QUESTIONS AND ANSWERS

Cleaning Plastics was the topic of an earlier issue. We described how to clean plastics exposed to milk and milk products. Perhaps you recall the five basic steps: (1) Rinse, (2) Wash, (3) Rinse, (4) Dry, and (5) Sanitize. Since then we have talked with many readers about their trials and successes in keeping plastics clean. The questions and answers below are a sample of these concerns of calf raisers.

Question: Why is rinsing before washing needed if I am doing a good job of scrubbing when I wash plastics?

Answer: First, let's remember that prewash rinsing is best done with lukewarm water. Excessively hot water for rinsing will strengthen the bond between the scum and the plastic.

Second, the primary purpose of prewash rinsing is to flush away organic solids prior to placing the plastics into the wash water. Calf raisers usually give "organic solids" names like "milk," "scum," "grain," "mud," and "manure." For example, after feeding a bottle of milk we sit it on the ground. When we take it in to be washed it has manure and mud on the bottom and maybe a tablespoon or so of milk inside. Rinsing flushes away most of, but not all, the mud, manure and milk.

Third, prewash rinsing is recommended as a way to reduce the volume of contamination of our wash water. Just as a guess, would you agree that rinsing flushes away well over ninety percent of the junk and milk on our plastic pails and bottles? That's the idea! Our wash water usually contains either a mild chlorinated alkaline detergent or a chlorine liquid bleach. The chlorine helps by removing milk fat and by killing bacteria. But! Chlorine is rapidly neutralized by organic solids. The greater the solids load (milk, mud, manure) in our wash water, the faster the effectiveness of the chlorine goes down.

Question: I don't have a drying rack for my calf pails after they are washed. I just stack them on the floor in a big triangle, one on top of the two below it. Isn't that good enough?

Answer: Good enough for what? Let's just say that you have fifteen pails. If you draw a diagram of how they look stacked up in your triangle you will find that five of the pails are on the floor, four pails in the second layer and so on to fifteen pails total. That means you have one-third of your pails on the floor (we assume you probably mean a concrete milk house-like floor).

Ever notice what you see when you pick up these bottom layer pails? Often, there will be some standing water captured within the pail that runs away across the floor. Also, the pails' insides appear what we call "sweaty." These are beads of moisture clinging to the plastic surface.

Let's review the basics for bacterial growth. You must have at least a few bacteria to start with. Then certain conditions need to be present. Some of these conditions are the proper pH, temperature, food, presence or absence of oxygen depending on the bacteria and moisture. Although two-thirds of your pails may have dried adequately to either slow or stop bacteria growth, one-third of them may have remained moist enough to have growth sufficient to give diarrhea to the calf fed from that pail.

By the way, does this question suggest that you are skipping the rinse step after your wash? The primary purpose of this rinse is the remove the alkali cleaner (soap) and chlorine. No need to dose the calves fed from those pails with soap and chlorine.

The not so obvious benefit of a post-wash rinse is exposure to very hot water. One of our readers uses five gallons of plain very hot water for a rinse. She drops one pail into the rinse while she washes the next one. Then out comes number one pail, and in goes number two. She makes this workable by wearing rubber gloves and keeping the water level low enough so she can grab the pails with her fingertips to pull them out of the very hot rinse water.

Question: By the time the parlor wash cycle is done I don't have very hot water for my wash. I would guess it's not much more than lukewarm. Could I just use extra soap and bleach along with lots of elbow grease to make up for the lower water temperature?

Answer: It depends on what you are trying to accomplish by washing your bottles and pails. If you are trying to kill bacteria, long enough exposure at a high enough concentration of chlorine will kill them even if the water is lukewarm. Also, the chlorine will help remove the milk fat. The alkali from the soap will help remove the milk proteins. When these are not removed from a plastic surface a "scum" formed by these two, fat and protein, often forms and is a nutrient base on which bacteria can thrive.

Unfortunately, when wash water is below 120F the milk solids you scrub off plastics are immediately redeposited on the bottles and pails we are washing. We diligently scrub them off a pail and before we can get the pail out of the lukewarm water the "scum" is re-stuck on its surfaces. The pails have a dull appearance and often feel slick or slimy to one's finger when touched even when dry.

Boy, what a tough question! Using hot water is always the best bet. But in this case can you change the timing of washing up? Or, is there a chance you could use this letter to argue for a larger hot water heater? Hot water is really an essential part of effective cleaning.

Question: I really think sanitizing bottles and pails just before use is a waste of time. I've always washed my bottles and buckets just like my dishes in the house. I don't sanitize and I've never had any trouble. Why to you recommend extra work?

Answer: More power to you! Clearly you get your plastics really squeaky clean and completely dry. Some of us, however, don't do as good a job as you do. Perhaps we don't rinse as well as

needed before washing and lots of organic solids end up in our wash sink. Perhaps our wash water towards the end of wash up gets pretty cool and some "scum" gets redeposited on our bottles. Perhaps our pails are scratched up on the inside and these cuts and grooves don't get completely cleaned out. In all these cases, using a chlorine household bleach at the recommended rate of 100 parts per million (2.5 oz. / 10 gallons, 5 oz. / 20 gallons) will knock down the bacteria population just prior to feeding and reduce bacterial diarrhea.

If you know of someone that doesn't currently receive **Calving Ease** but would like to, tell them to **WRITE** to Calving Ease, 11047 River Road, Pavilion, NY 14525 or to **CALL** either 585-591-2660 (Attica Vet Assoc. office) or 585-343-8128 (Offhaus Farms Office) or **FAX** (585-591-2898) or **e-mail** sleadley@frontiernet.net or pams91@2ki.net . A limited number of back issues may be accessed on the Internet at www.calfnotes.com and clicking on the link, Calving Ease.