

Ask the Expert

How can we ensure our udder prep cloth towels are truly clean and sanitized?

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In the 1997 NMC February newsletter, Washington State University researchers concluded one of the following three practices were necessary to successfully clean cloth prep towels. Performing two of the three would add an extra margin of safety to insure sanitized towels

- 1- Hot air drying
- 2- Hot water washing
- 3- Bleach

2005 field experience shows initial towel samples consistently culture bacterial growth (both coliforms and environmental Staph and streps). Was the Washington State research wrong, or have things changed in towel laundering practices since 1997?

The greatest challenge to laundering udder cloths is the huge amount of organic material typically on each towel. This organic load must not only be loosened and removed from the fabric matrix itself, it must be rinsed out of the machine completely without re-contaminating the clean towels.

Consider the following laundering practices to assist with cleaning, sanitizing udder prep towels:

1. Type of equipment used.

Top-loading washing machines are less expensive initially, but do not handle heavy loads of organic material. Therefore, do not clean and rinse as effectively as front loading machines.

2. Overloading machines.

Cloths get cleaned by moving and rubbing against each other during the wash cycle. Cloths packed tight do not move, and are therefore not cleaned. This also prevents an effective rinse cycle to remove bacteria laden organic material.

3. Not drying.

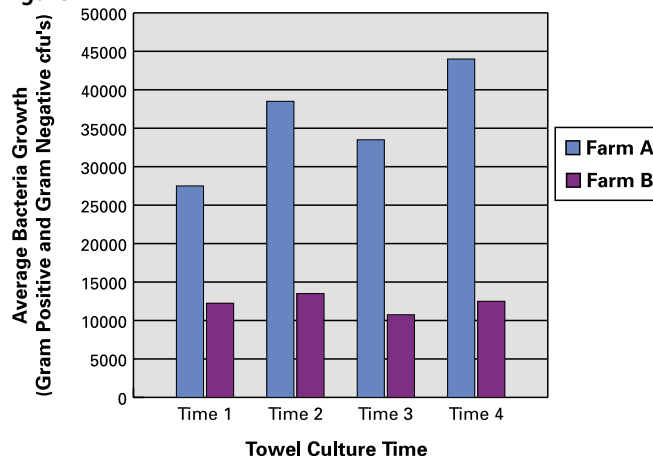
Money is saved from no drying costs and the need for fewer towels (towels are not tied up in a dryer). Bacteria (colony forming units (cfu's)) counts are higher on wet towels than dry towels.

Figure 1 shows 2 farms towel cleaning practices and bacteria growth results. Farm A used a commercial washer, not towel drying, no bleach, sanitizing detergent, and average load sizes. Farm B used a commercial washer, towel drying regular detergent, but had severe overloading.

Drying is an excellent way to kill bacteria. Poor washing practices leaves heavy organic material/bacterial load on the towels and drying cannot complete the sanitization process.

Some milkers like wet towels because they wipe "cleaner" and are easier to hold. Typically milkers struggle to clean teats with a pre-dip that

Figure 1



has been on too long and dried. A pre-dip with a fast kill time will still be moist when wiped off. To quote Dr Andy Johnson, "If our goal is to attach milkers to teats that are clean, DRY, and well stimulated, how can we produce dry teats with a wet towel"? Enough said!

4. Wash water temperature.

Many dairies struggle to have "hot" water for CIP cleaning, let alone for multiple laundry loads. Towels are not consistently washed in water >160 degrees. Combined with overloading, this problem creates a very "dry" mass of towels due to a lack of water for the size of the load further reducing water temperature.

5. Transport baskets.

Baskets must be kept clean inside and out. The parlor storage and handling system represents a high risk for manure contamination of clean towels. Aprons or "kangaroo pouches" are excellent at increasing parlor efficiency, but must be kept clean. Closed topped transport baskets prevent manure from splattering onto clean towels. Do you know where your clean towels are right now?

6. Micro-Fiber towels.

These new towels have some advantages in drying speed and life expectancy, but it is more important not to over-fill machines with this type of towel. If compressed in a machine, it is difficult to sanitize.

7. Bleach or Sanitizing Detergent.

Too much organic material can interfere and the bleach and detergent "fight" with each other chemically. Bleach during the rinse cycle is very effective, but not practical.



All three towels cultured a heavy growth of both Gram Positive and Gram Negative bacteria

Part 2 of the towel sanitation question will be continued in the Spring 2006 Breeders Journal. 🐄