

27th November 2012

Adrian Moore
TH White Ltd
Nursteed Rd,
Devizes
SN10 3EA

Dear Adrian

Hartpury College – AirWash-Plus Testing 20th November 2012

I tested the plant towards the end of milking, and hence each liner had milked at least 8 cows prior to the samples being taken. . The AirWash-Plus turned off before the ‘pre flush’ liner swabs were taken, one swab per cluster, using a standardised procedure that allows us to compare between plants. The Airwash-Plus was then turned back on, the liner flush system was triggered manually at each point, and the ‘post flush’ samples were taken. The swab numbers refer to the position of the cluster in the parlour.

Individual liner results are shown on the attached sheets. As one might expect, there is a good deal of variation between individual liners in the initial level of contamination. This will depend on the cleanliness of the cows milked. Pre flush coliform numbers were low, and this suggests good premilking teat preparation. It does not permit an accurate figure for percentage reduction in the counts however.

Overall result for the 10 swabs are summarised in the following table. I think a reduction of bacterial levels of over 90% should be considered highly satisfactory. I have no specific reason why the strep count in cluster 3 was not reduced better than this, especially as the staph count reduced well. I did not ask about the age of the liners, but if the liners were new you might have achieved even better results.

The mean reduction in bacterial counts was

| Mean values of 10 clusters (40 liners) | Total bacterial count cfu/ml | Total staph count cfu/ml | Total coliforms cfu/ml | Total streps cfu/ml |
|----------------------------------------|------------------------------|--------------------------|------------------------|---------------------|
| Pre flush | 6,820 | 1476 | 4 | 3112 |
| After flush (A) | 101 | <20 | <10 | 66 |
| Reduction in bacterial numbers | 6719 | 662 | | 3046 |
| %reduction | 98.5% | 100% | 100% | 98% |

In later batches of cows I examined the level of dip application as the clusters were removed. A total of 60 teats were examined, and in 4 (7%) I could see no evidence of dip on the ends of the teats. Two of these four were in heifers with very short teats. It would be interesting to repeat the monitoring to see if the 'missed teats' were specific to one milking point.

As we have discussed previously, I remain uncomfortable with the fact that only the very tip of the teat is covered with dip, but I accept that so far there has been no increase in mastitis in the plants where AirWash-Plus is in operation. I understand from Les that since the installation of AirWash-Plus the level of mastitis has fallen from 6 cases per week to 3 or 4 cases. In the 260 cows in milk, this is equivalent to a reduction from 120 to 60 cases per 100 cows per year. Its early days yet however, so continual monitoring is needed.

Yours sincerely

Roger Blowey FRCVS