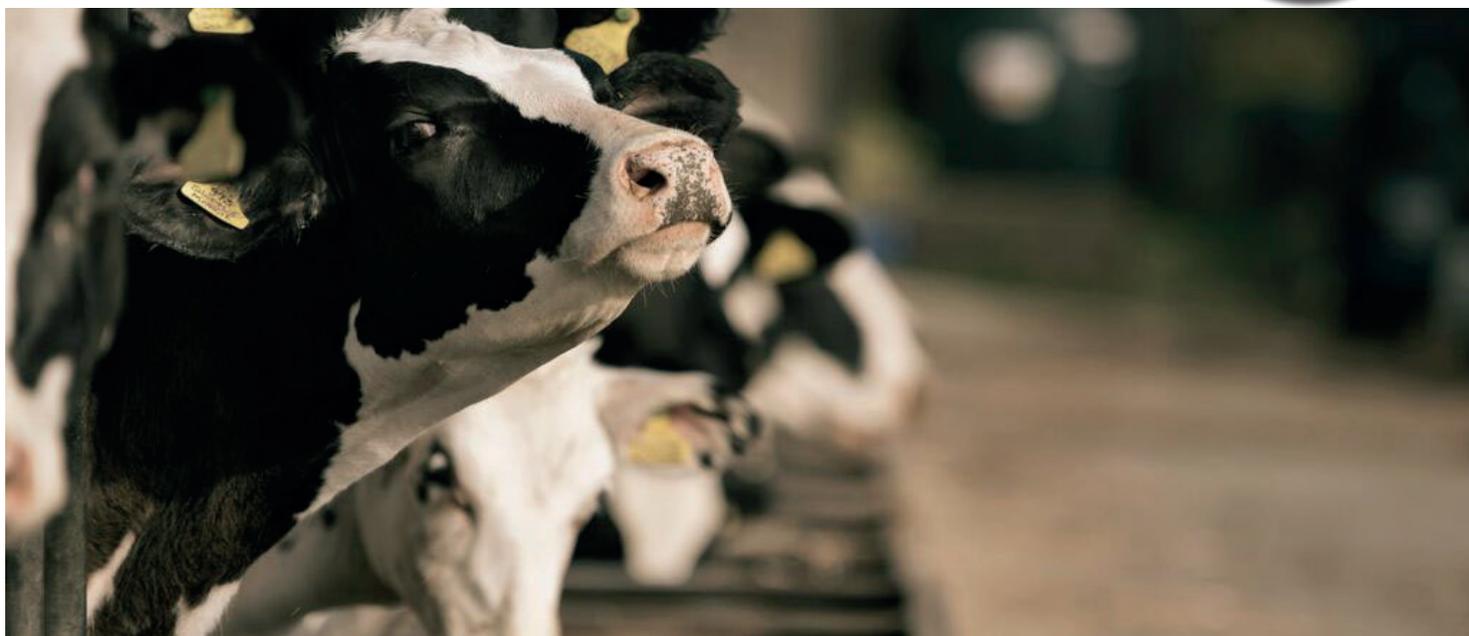


Gamma Blood Testing For TB in Cattle

David Aggett BVMS MRCVS



From April this year new TB control measures have been introduced in the High Risk Areas (HRA), which includes the counties of Dorset, Somerset and Wiltshire. For those farms within the North Dorset badger cull zone this means that Gamma blood testing will now be compulsory where there is a new herd breakdown AND the reactor cattle removed either have lesions at post mortem, or samples taken at post mortem are later culture positive for TB.

What is a new herd TB breakdown?

A new herd TB breakdown is defined as occurring only when reactors are found at 6 Month, 12 Month or Contiguous Tests. Thus farms which were already under restriction prior to April and undergoing Short Interval Testing (2 monthly), will not be subjected to a Gamma blood test at this time.

What happens if reactors are found which have no visible lesions (NVL) and are culture negative at these tests?

In these cases Gamma testing will not be implemented, instead skin testing will be used alone. However farmers can request private Gamma blood testing should they want to.

Which animals will be Gamma blood tested?

Only cattle over 6 months old are eligible for a Gamma blood test.

Why is the Gamma blood test been introduced now?

Gamma blood testing is an additional TB control measure to be used alongside the skin test. Its use should maximise the probability of detecting all TB infected animals in a herd, thus shortening the duration of TB breakdowns and reducing the likelihood of recurrent breakdowns in a herd at 6 month and 12 month follow up tests.

For those farms not in the North Dorset badger cull zone, there are also 2 new TB control measures which can also result in compulsory Gamma blood testing. Firstly if an APHA veterinary investigation of a breakdown concludes that the most likely cause of the breakdown is contact with infected cattle, be that purchased stock, contact with contiguous cattle or residual cattle infection from a previous TB breakdown. And secondly herds where repeated skin testing fails to resolve the TB breakdown.

Again in both these situations above, compulsory Gamma blood testing will only be employed where reactor cattle have visible lesions at post mortem or samples taken at the time of the post mortem are later culture positive.

Please call APHA on 03000200301 if you would like more information or clarification on anything to do with Gamma testing.

Pre and Post Milking Dips Eleanor Price BVSc MRCVS, Veterinary Surgeon

| | PREDIP | POSTDIP |
|--------------------------|---|---|
| Purpose | Against environmental organisms. Avoiding bacteria in the milk, avoiding liner contamination and avoiding autoinfection. | Against contagious pathogens picked up during milking from the machine. |
| Cleaning Vs Disinfection | Cleaning activity-the physical removal of dirt from the teat skin and some disinfection. | Disinfection-the killing of the bacteria on the teat skin. |
| Preparation | A foam provides the best cleaning activity and is the easiest to wipe off before attachment of the clusters. Dry teats when attaching units leads to less liner slip and thus teat end damage. A foam also means that there are no losses as opposed to spray which can miss the teats. | Dip is better than spray. Dip guarantees all round coverage of the teat as opposed to spray which is more hit and miss. Dip also helps to close teat sphincter due to viscosity. |
| Kill Time | Rapid-the optimal duration for pre dip on the teat is 30 seconds so bacterial kill must be achieved within this window | The teat end sphincter is open for 30-90 minutes after the end of milking (depending on yield of cow). Contagious bacteria must be killed within this time. Iodine and Chlorhexidine require 5 minutes contact time to work properly. This reduces their suitability as pre dips. |
| Milk Residues | Must have no residues in milk or cheeses. Lactic acid has no residue. Iodine has risk of residues in milk if used as a predip. | Must leave no residues in milk or cheeses. |
| Emollient | Bad in predip. It's hard to wipe off properly due to its moisturising characteristic. This increases chance of liner slip. | Must be as close to the natural skin pH as possible. Complexed Iodines have a pH which is very close to skin pH. PVP and free Iodine have pH's lower than ideal. |
| What about water? | Water is worse than no pre dip routine as it spreads bacteria and as it runs down the teat it encourages bacteria towards the open teat end. | |

We would strongly recommend against using one product for both pre and post dips. The characteristics required for each are quite different and in only using one significant compromises are made.

We would recommend a Lactic Acid predip and an Iodine postdip. The best form of Iodine is complexed which means that it is stable for the longest, it has a pH as close as normal to the skin and it can contain a high emollient content. If using free Iodine or PVP Iodine the concentration must be less than 5000 PPM otherwise it will be too aggressive to the teat skin.

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