



Bodrwnsiwn Veterinary Group Ltd

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Detecting

Anthelmintic Resistance

The presence of anthelmintic resistance can be detected in flocks in a number of ways. These vary in terms of their cost, complexity and robustness and are outlined below in terms of this hierarchy, starting with the cheapest and most simple, the Drench Test.

1. Post-dosing faecal egg counts ("Drench Tests")

A quick indication of the efficacy of an anthelmintic can be gauged by laboratory testing faecal samples from 10 sheep following after treatment. The time after treatment depends on the anthelmintic used: **7 days after 2-LV, 10-14 after 1- BZ and 14-16 days after a 3-ML**. In practice, this means checking either 7 days for 2-LV, or 14 post treatment for 1-BZ and 3-ML products. The test is merely an indicator of anthelmintic inefficacy and not necessarily anthelmintic resistance per se, as many other factors can influence test results. The usefulness of this test is improved if faecal samples from 10 sheep in the dosed group are collected and submitted on the day of dosing, to provide a rough estimate of the reduction in FEC achieved (and to confirm there was a measurable egg before treatment).

2. Faecal Egg Count Reduction Tests (FECRT)

A more structured on-farm test can be conducted in which a number of different anthelmintic are tested against a control. Fifteen to twenty ** sheep are randomly allocated to control or treatment groups, (one for each class to be tested) and a pre-treatment FEC taken for each groups as the baseline. FECs are then repeated on at least 10 of the control sheep and the 2-LV group (if used) after 7 days, followed by FECs from the control sheep and the 1-BZ and 3-ML groups after 14 days. AR is suspected if the percentage reduction in FEC of a test group compared with the controls is < 95%. Results may differ according to whether arithmetic or geometric means are used in the calculations. Where necessary, the advice of an expert should be sought with interpretation of the results.

In a simplified version of the FECRT, pre-dose FECs are not performed, and results are just based on the percentage reduction in mean FEC in the treatment groups compared to the controls.

**NB. Sheep that have not been dosed within 30 days (or longer if MOX has been previously used), and a mean FEC of 200 egg or more is recommended before starting the trial.

3. Larval Development Tests (LDTs) and Egg Hatch Assays (EHAs)

A range of in-vitro tests has been developed to avoid the use of animals in testing for resistance. The two most commonly used are the egg hatch assay (EHA) for the 1-BZ anthelmintic, and the larval development test (LDT) for 1-BZ and 2-LV classes. There are currently no in-vitro tests yet available for 3-ML resistance. Farm visits are not necessarily required and the samples can be sent by post direct to the laboratory. However, currently these tests are relatively expensive, precluding their widespread use. Sensitivity is generally considered higher than with the FECRT so AR may be detected when the frequency of resistant alleles within the worm populations is still low. Interpretation is, however, not straightforward and requires expert input. Although not reversible, the presence of AR is dynamic. Detection of AR on a farm will vary according to season, the worm species present at the time a test was applied and the test's specificity and sensitivity in detecting resistant alleles within the worm populations. It is important, therefore, we do not assume we have full knowledge of the situation on an individual farm on the basis of one test. Tests should be repeated at intervals and as a part of the on-going monitoring with a health plan in flocks.

DATES FOR YOUR DIARY

MSD Meeting 21st Sept on BRD & IBR, further details to follow.

DAIRY DAY TRIP 13th Sept leaving Mona.

SUMMER MASTITIS

Is defined as intramammary infection of the non-lactating udder, usually in the warmer months. The disease has not changed over the years, affecting the same farms year after year and often just certain fields within those holdings. Very few affected quarters will recover, so any treatment is salvage.

MAIN SIGNS

- > An animal standing apart from the others. Often lame, dull, anorexic and with a raised temperature.
- > Teats swollen and there can be a large number of flies feeding around them.
- > The disease progresses until the whole udder is swollen, hard and producing foul-smelling, thick yellow secretions. Left untreated abortion or death can follow.
- > Outside of the fly season and in milking cows less typical cases will occur. A heifer "blind" in one quarter and having suffered no obvious disease. Efforts to open the teat canal will prove useless and it is highly likely that many of these cases will be due to summer mastitis

TREATMENT

Includes antibiotics to combat infection and anti-inflammatories to counter the swelling and reduce temperature. Stripping should be discarded safely and not on the ground

PREVENTION

Intramammary dry cow therapy can be administered. Silicone teat sealants have revolutionised management of the dry cow and are easy to apply and last for the whole dry period.

FLY CONTROL

The sheep head fly, *Hydrotoea irritans* also carries the bacteria causing summer mastitis but it is probably only a secondary factor after something else has started the outbreak. Fly control can be done by using pour-ons or impregnated fly tags.

GOOD PASTURE MANAGEMENT

Thistle and nettle growth will cause scratching and udder irritation. This can cause excessive licking behaviour.

Check for teat skin lesions, good teat condition will reduce or eliminate infection. The initial source of summer mastitis is usually infection tracking into the teat-end from a sore harbouring the organism.

If you would like further information on this subject ask one of our vets or pick up the Summer Mastitis Factsheet from Mona.

TB Update

Following the recent consultation on Welsh Government tb policy, The "New Approach" has been announced.

The main conclusions were to press ahead with the regional framework. High, Intermediate and Low risk areas have been allocated as shown by the diagram.

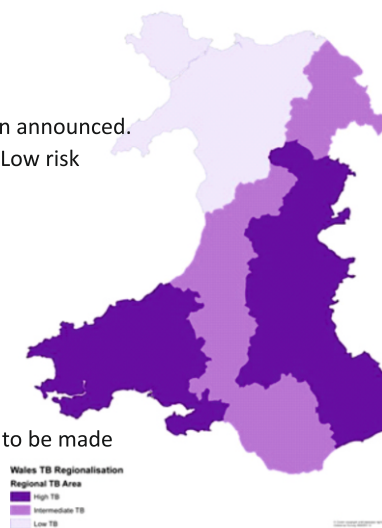
These regions, presumably, will be the basis for future policy changes.

The most notable changes are the new rules for pre movement testing.

- **High Risk Areas;** no change, premovement testing only.
- **Intermediate risk areas;** premovement testing continues. Additionally, post movement testing will be enforced from late next year.
- **Low risk areas;** no more compulsory tb testing, mandatory postmovement testing to be introduced by October 1st 2017.

There is also a clear desire for the government to introduce compulsory herd tb information to be made available at markets and the point of sale. A method has not been designed so nothing will be implemented yet, though we should expect it at some point.

- Tb compensation will be capped at £5000.
- Six monthly testing, the clearing test not counting as a premovement test and compulsory removal of IRs from restricted herds are not being brought in on a blanket regional basis. However, a decision on these measures will be made on a herd by herd basis. Chronic herd breakdowns (greater than 18 months?) and persistently recurrent herds are likely to be affected. Cattle bought in under license on restricted herds will be subject to 50% compensation should they go down with tb.
- The found dead badger survey will continue.
- Any badger culling will be on a small, individual farm basis. This will probably be only on chronic breakdown farms after testing confirms identical tb strains in the badgers and the cows.



BVD ERADICATION SCHEME IN WALES

An announcement was made at the Royal Welsh Show in regard to the BVD eradication scheme in Wales. Farm activity will start from September 1st 2017 and the project is based around taking young stock blood samples at the TB test to establish a status for the herd as a whole. 5 blood samples from each group of animals, 9-18 months old and the samples will be sent to a lab.

The result should be back in time to discuss at the reading of your TB test.

Further information please ask.

Source SCOPS

EARLY TOXOVAX ORDERS

Last Ordering Date for the extra 5% on Toxovax is Aug 24th.
After that date the extra 5% discount will not be given
Get your order in now!

