EU audit of TB control in the UK 27-28 March 2012

Conclusions

The subgroup recognises the large effort and vast resources applied to the control of TB in cattle in UK. There has been improvement since the group last visited UK in 2009 (before EU co-funding). In particular, the holistic approach is appreciated as well as the view that TB in badgers must also be dealt with, alongside cattle.

It is however of utmost importance that there is a political consensus and commitment to long-term strategies to combat TB in badgers as well as in cattle. The Welsh eradication plan will lose some impetus as badger culling will now be replaced with badger vaccination. This was not part of the original strategy that consisted of a comprehensive plan that has now been disrupted. There is no scientific evidence to demonstrate that badger vaccination will reduce the incidence of TB in cattle. However there is considerable evidence to support the removal of badgers in order to improve the TB status of both badgers and cattle. UK politicians must accept their responsibility to their own farmers and taxpayers as well as to the rest of the EU and commit to a long-term strategy that is not dependent on elections. The TB eradication programme needs continuity and it must be recognised that success will be slow and perhaps hard to distinguish at first. There is a lot of skill and knowledge among the veterinary authorities and they must be allowed time to use it.

The eradication goal of the programme is now clearly stated, which is appreciated. The creation of the TB liaison group was a good initiative that seems to have helped to achieve better co-ordination.
The adherence to pre-movement testing is good and all exemptions to this testing should be discontinued. The plan to sever the links between holdings in different areas is commended and needs to be prioritised.
The replacement of test intervals based on parish data with annual testing in the entire high-risk area, with 2-year testing in buffer zones is a great improvement. However annual testing in the buffer zones as well would add considerable confidence as a control measure in order to have earlier detection of spread from the endemic areas (see below).
The planned studies on biosecurity as regards badger contacts will be important for prevention of disease transmission as well as for farmer compliance.
The new computer system will allow for more efficient use of resources and data, as well as more thorough epidemiological evaluation and monitoring of performance.
Veterinary disease report visits and local epidemiological investigations are important and should be continued.
The use of culture and/or pathology for confirmation of TB is good. However, some additional information may be used to classify herds, see recommendations below.
Slaughterhouse submission rates are much improved (the number of submissions has increased 10-fold since 2009). It must still be recognised that slaughterhouse monitoring is not ideal for sensitive surveillance, and the current submission rate is only as high as what is expected in a region without TB (i.e. corresponds to the expected prevalence of macroscopic lesions caused by agents other than TB).

Recommendations

While the need to deal with wildlife is recognised, the focus on TB in cattle must be maintained. If this is not already done, a number of performance indicators that allow for monitoring of the efficiency of surveillance and on-farm eradication may be used. These include testing history (i.e. detailed test results) of breakdown herds, testing history and results of follow-up tests in herds detected at slaughter, pathology of index animals from herds detected at slaughter, number of herds detected by tracing from infected herds, testing history and results of follow-up tests in herds detected by tracing from infected herds, testing performance of individual veterinarians, trends in prevalence and incidence (by various calculations) and differences in these trends, slaughterhouse submission rates, time to clearance of infected herds etc.

As regards the calculation of incidence and prevalence, different methods should be used for different objectives, and trends based on each method evaluated separately. This may already be done, but in all communication care should be taken to clarify the numerator and denominator. It would also be useful to calculate the results for all different surveillance activities and combine them with methods suited for this purpose, to obtain an overall estimate of the sensitivities and results obtained from different surveillance activities.

Increased test sensitivity is needed in particular for pre-movement tests from high-prevalence areas to low-incidence areas. Also in herds with confirmed infection sensitivity should be prioritised above specificity. This may be best achieved by using the single test with only bovine tuberculin instead of the comparative test.
The single test should be used as pre-movement test from the high-prevalence area to other areas.
In addition, γ-IF may be used as an ancillary test. If this is not possible in all instances, the severe interpretation (meaning no IRs, all animals not regarded as negative interpreted as positive reactors) of the comparative test should be applied in all confirmed breakdown herds. γ-IF could be used more in the high-prevalence area. However, we recognise the need to deal with the wildlife source in order to achieve farmer compliance with this strategy.

The differentiation between OTFW and OTFS herds is questioned, in particular as the OTFS herds are released after only one standard interpretation test and there is still a high risk that these herds are truly infected. We recommend that either all breakdown herds be regarded as OTFW (best option), or that additional epidemiological information is used as a basis for the classification. This means that OTFS herds in the high prevalence areas or with multiple reactors, a history of confirmed TB, a history of introduced animals form confirmed herds etc. be regarded as OTFW.
We acknowledge that this is already applied to some extent, but would recommend that it be extended further.
If OTFS herds are to be released after only one negative herd test, at least the severe interpretation should be applied at this test.

Whole-herd testing in all herds should be implemented as planned. The issue of links between herds must be addressed so that all animals in any linked herds are identified

and also tested, regardless of location. All links between herds located in areas with a different incidence of TB should be removed as soon as possible.

A paratuberculosis prevalence of 30% is high. There is a risk that it interferes with tuberculin test sensitivity (as *M. paratuberculosis* will provoke an avian reaction that may conceal a bovine reaction). The instructions to veterinarians on how to use their discretion in test interpretation should be amended so that it is clear that known paratuberculosis infection in a herd is a reason for using the severe test interpretation or single testing with only bovine tuberculin.
Vaccination against paratuberculosis in cattle should not be allowed as it interferes with the tuberculin test sensitivity in a similar way.

In order to properly evaluate the situation, a snapshot in the form of testing all herds one year (i.e. also in the 2-yearly and 4-yearly testing areas) is recommended. In view of the fact that the high-prevalence area appears to be expanding and there is an on-going discussion about the possibility of obtaining OTF status for some areas, this information is clearly needed.
Annual testing in the buffer zone would allow for an earlier detection of further expansions of the high-risk area.
The application of the tuberculin test is critical to the successful diagnosis of TB and further efforts should be made to ensure the consistent application of the test in compliance with EU legislation. The performance of each OV should be monitored and in particular the testing of unidentified animals should cease. Some of these efforts have already been initiated and are thus encouraged.
The movement towards a more risk-based approach to testing around infected herds, instead of parish-based calculations, in the low-incidence area is encouraged.
This could all be part of a strategy for future OTF status of some regions. It is however advisable to first make sure that there is no undetected source of infection in those areas.

Animals from restricted herds must not be moved from the herd other than directly to slaughter. All other movements from restricted herds (or to restricted herds) are not in compliance with EU legislation. However, the use of officially controlled special fattening units, with strict biosecurity, for fattening animals from restricted herds that then only move directly to slaughter is acceptable from a disease control point of view.
The movement of animals from restricted herds via slaughter markets is however regarded as a higher risk and not suitable for exemption. Quarantine units for animals from restricted herds that then go on to other herds as livestock are also regarded as a high risk. We advise that detailed data on animals that have been moved within this system are compiled to evaluate the risk and provide an argument for such a practice, if it were to be reintroduced or kept in place.
The view of the group is that any system that allows testing of a collection of animals from TB restricted herds in order to regain TB freedom for this group (allowing such animals to go anywhere but directly to slaughter) involves a high risk of spreading TB and must be avoided.

The nomenclature herd, holding and epidemiological unit should be sorted out in the databases and all necessary hierarchical structures applied so that it is possible to easily retrieve information about what animals are epidemiologically linked and what geographical locations are involved. This is also a priority in the work with linked holdings.