



Northern Ireland
Assembly

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Bovine TB - Biosecurity measures

1 Background and context

The eradication of Bovine TB has been a priority for DARD (and its predecessor departments) since 1964. The disease, which is caused by the *Mycobacterium bovis* affects the health and welfare of cattle, lowers productivity and fertility and consequently impacts on herd keepers' profitability.

Based upon worldwide experience, it is generally accepted that the control and ultimate eradication of Bovine TB is dependent upon the development, delivery and adherence to a range of measures that either reduce or eliminate the risk of exposure to the disease.

This briefing paper is in response to a request from the Committee for Agriculture and Rural Development for information on biosecurity measures developed across the world to tackle Bovine TB. The paper draws upon a previous research paper on Bovine TB – comparative models for compensation and eradication/control (NIAR 245-22).

In producing this paper it is important to realise that there is no commonly used definition of either biosecurity or what can be constituted as a biosecurity measure. The United Nations Food and Agriculture Organization (FAO) promulgated a definition for biosecurity as follows,

'Biosecurity is a strategic and integrated approach that encompasses the policy and regulatory frameworks (including instruments and activities) that analyse and manage risks in the sectors of food safety, animal life and health, and plant life and health, including associated environmental risk. Biosecurity covers the introduction of plant pests, animal pests and diseases, and zoonoses, the introduction and release of genetically modified organisms (GMOs) and their products, and the introduction and management of invasive alien species and genotypes. Biosecurity is a holistic concept of direct relevance to the sustainability of agriculture, food safety, and the protection of the environment, including biodiversity¹.'

In promoting this definition the FAO acknowledged that biosecurity was still an emerging and evolving term that had varying usage among countries.

The data contained within table 1 is presented in this context and as a result should be viewed as an indicative rather than definitive view of biosecurity measures employed to control and eradicate Bovine TB in the identified countries.

2 A comparison of Bovine TB biosecurity measures

Country	Biosecurity measures
Australia	The Department of Agriculture, Fisheries and Forestry publish biosecurity advice including cleansing guidelines, managing the movement of farm visitors, quarantining new animals and the maintenance of records. ² Past and current measures include: <ul style="list-style-type: none"> • Quarantining and repeated testing of infected herds; • Movement controls in place; • Reviewing & revising herd surveillance schemes; • Utilising herd surveillance programs.
Canada	<ul style="list-style-type: none"> • Control of movement out of province's that lose TB-free status; • All imported animals must originate from a TB free country/zone/herd and be tested for TB prior to import and be accompanied by an official veterinary health certificate; • Animal imports from Mexico are banned; • Ban on baiting or feeding elk & deer; • Hay to be removed from fields to be eligible for crop insurance; • Prescribed burns to improve elk habitat; • Barrier fencing of hay storage & feeding yards on 95% of farms in proximity to deer and elf habitat.
England	Biosecurity and husbandry advice is published is by DEFRA. It includes guidance on good ventilation in cattle housing, not overstocking cattle, following guidelines on cleansing and disinfecting and providing cattle with a balanced diet. ³ Other measures include: <ul style="list-style-type: none"> • Pre-movement testing policy in place; • Expansion of routine testing; • Investing in development of a cattle vaccine & lobby the EU to lift current ban on TB vaccination of cattle;

¹ [Committee on Agriculture, United Nations Food and Agriculture Organization, Seventeenth Session, Biosecurity in Food and Agriculture, Rome 31 March-4 April 2003](#)

² Australian Government, Department of Agriculture, Fisheries and Forestry, *Animal Biosecurity*. Available at: http://www.daff.gov.au/animal-plant-health/pests-diseases-weeds/biosecurity/animal_biosecurity

³ DEFRA, *Biosecurity and husbandry*. Available at: <http://www.defra.gov.uk/animal-diseases/a-z/bovine-tb/animal-keepers/biosecurity/>

Country	Biosecurity measures
	<ul style="list-style-type: none"> • Consultation on a badger cull to prevent the spread of the disease – progressed to proposals to conduct trail cull – decision now subject to judicial review; • BCG badger vaccine available – Gloucestershire Wildlife Trust pilot; • Work on development of an oral badger vaccine;
Ireland	<ul style="list-style-type: none"> • Annual routine screening test of all herds – paid for by farmer; • Pre-movement testing; • Controls on movement of animals; • Restriction of holdings; • Focused badger population control where they have been implicated as a cause of TB; • On-going development & introduction of a vaccine to prevent TB in badgers.
New Zealand	<ul style="list-style-type: none"> • Regular testing programme and associated classification/register of herd status; • Movement Control Areas developed. Cattle or deer over 90 days old and inside a MCA must have a pre-movement test within 60 days prior to being moved outside the MCA; • Control of wild animal species through surveys of populations, ground and aerial baiting with poison and trapping to remove infected wildlife;
Northern Ireland	<ul style="list-style-type: none"> • Annual testing of all herds is mandatory • A full Cleansing and Disinfection is required after any herd depopulation; • Movement control for all herds, at all times, is controlled by a combination of the OT herd status and status reason applicable to the herd. As all movements must be recorded on APHIS, including those to market and abattoir, immediate movement control is applied; • A TB Biosecurity Study is currently underway in a TB high incidence area in Co. Down. The Study is designed to compare farm characteristics in both herds that have recently had a TB breakdown and those that have had no recent history of a breakdown in this TB high incidence area – final report due Summer 2012 • All herdkeepers are currently sent an advisory booklet on biosecurity measures⁴
Scotland	<p>The Scottish Government has published advice on biosecurity practices for animal health. This includes guidance on separation and isolation, hygiene and slurry management.⁵ Other measures include:</p> <ul style="list-style-type: none"> • Legal requirement for cattle over 42 days old that move from 1 or 2 yearly testing parishes into a Scottish herd to have Pre & Post movement tests. The Pre-movement test must occur within 60 days prior to entering a Scottish herd and the post-movement test between 60-120 days of their arrival. All pre and post movement tests must be arranged and paid for by the herd owner; • Farmers importing cattle from Northern Ireland to carry out post-movement testing at their own expense, as is already the case for cattle coming to Scotland from high incidence bTB areas of England and Wales; • Testing prior to movement for cattle from low incidence areas in England and Wales; • Importers pay for pre-import testing; • Pre-export tuberculin testing of cattle over 42 days of age.
USA	<ul style="list-style-type: none"> • Approach adopted in USA is characterised as being based on detection and removal; • Live herds subject to skin tests; • Collaboration with Mexico to advance the country's eradication program thus helping to reduce the risk to imports to the USA.
Wales	<p>The Welsh Government has published advice on biosecurity measures including maintaining fences, good hygiene and pest control programmes.⁶ Past and current measures include:</p> <ul style="list-style-type: none"> • TB Health Check Wales 2008 – every cattle herd tested to establish a baseline;

⁴ DARD, Biosecurity code booklet http://www.dardni.gov.uk/biosecurity_code_booklet_for_northern_ireland_farms.pdf

⁵ The Scottish Government, *Biosecurity Practices for Animal Health*. Available at: <http://www.scotland.gov.uk/Topics/farmingrural/Agriculture/animal-welfare/Diseases/15721>

⁶ Welsh Government, *Biosecurity*. Available at: <http://wales.gov.uk/topics/environmentcountryside/ahw/biosecurity/?lang=en>

Country	Biosecurity measures
	<ul style="list-style-type: none"> • Improved animal husbandry; • All herds of cattle are tested annually for TB; • Regional TB Eradication Boards - development of local biosecurity plans; • Government published literature for farmers advising how they can improve biosecurity measures; • Pre-movement testing; • Proposed culling of badgers within pilot Intensive Action Area (IAA) – proposal abandoned in favour of a badger vaccination programme in 2011 but still within IAAs • Cattles farmers within IAA have the option of veterinary assistance in assessing biosecurity measures; • Development of badger and cattle vaccines.

Table 1: Selected biosecurity measures employed or proposed in selected countries