



EUROPEAN COMMISSION
HEALTH & CONSUMERS DIRECTORATE-GENERAL
Unit 04 - Veterinary Control Programmes

SANCO/3770/2008

*Programmes for the eradication, control and monitoring of certain
animal diseases and zoonoses*

Surveillance and Eradication programme of Bluetongue

Approved* for 2009 by Commission Decision 2008/897/EC

Ireland

* in accordance with Commission Decision 90/424/EEC

IRELAND'S PROGRAMME FOR BLUETONGUE IN 2009

BLUETONGUE MONITORING AND SURVEILLANCE PLAN

1. RANDOM SEROLOGICAL SURVEILLANCE

- 1.1 Random serological surveillance has been carried out in Ireland since 2007.
- 1.2 The random surveillance programme is based on the Commission guidelines for Bluetongue monitoring and surveillance (SANCO/10581/2006 Rev 4) and Annex I, Section 2 of Commission Regulation 1266/2007.
- 1.3 The samples used are those submitted under the annual Brucellosis Testing Scheme (i.e. females over 12 months and male breeding animals).
- 1.4 The sample size was estimated based on the following criteria:
 - Test sensitivity of 90%
 - Test specificity of 99%
 - Minimal prevalence of 2%
 - Confidence level of 95%
 - Cattle population of 5 million
- 1.5 The estimated sample size was 607 animals. This was increased to 2000 to account for samples that might be missed for various reasons e.g. herds not tested at appropriate time or insufficient animals in the herd.
- 1.6 The 2000 samples are randomly selected from 57 geographical units (45 x 45 km grids), with the number of animals per grid weighted in proportion to the total number of animals within the grid (see grid map in Annex 1). The number of animals tested per herd is 5. In view of the low sero-prevalence detected in herds in the UK, the number of samples to be tested per herd in 2009 will be 10.
- 1.7 Sampling is carried out between January and April, in order to detect animals that may have been exposed in the previous vector season.
- 1.8 The following test is used: eELISA (VMRD, USA).

See below

2. POST-IMPORT SEROLOGICAL AND VIROLOGICAL TESTING

2.1 Ireland has been post-import testing all ruminants destined for breeding or further production imported from BT affected regions since August 2006.

2.2 The following tests are used: eELISA (VMRD, USA) and RT-PCR.

2.3 The number of animals imported each year from the different Member States has been affected by the disease status e.g. BSE, FMD. It is estimated that the following numbers of breeding/production cattle and sheep will be imported in 2009:

- Continental Member States: 1000
- Great Britain: 2000
- Northern Ireland: 26,250

2.4 Therefore the estimated number of animals requiring post-import testing is 29,250

2.5 It is estimated that a further 750 follow-up tests will be required in 2009, in view of the increasing numbers of sero-positive animals that are now being traded. Therefore the total number of post-import tests for 2009 is estimated to be 30,000.

3. Passive surveillance for Bluetongue infected animals

3.1 It is estimated that Ireland will carry out around 100 tests for BT in clinical samples submitted for screening to the CVRL. The numbers are expected to increase as the disease spreads closer to Ireland.

3.2 The following tests are used: eELISA (VMRD, USA) and RT-PCR.

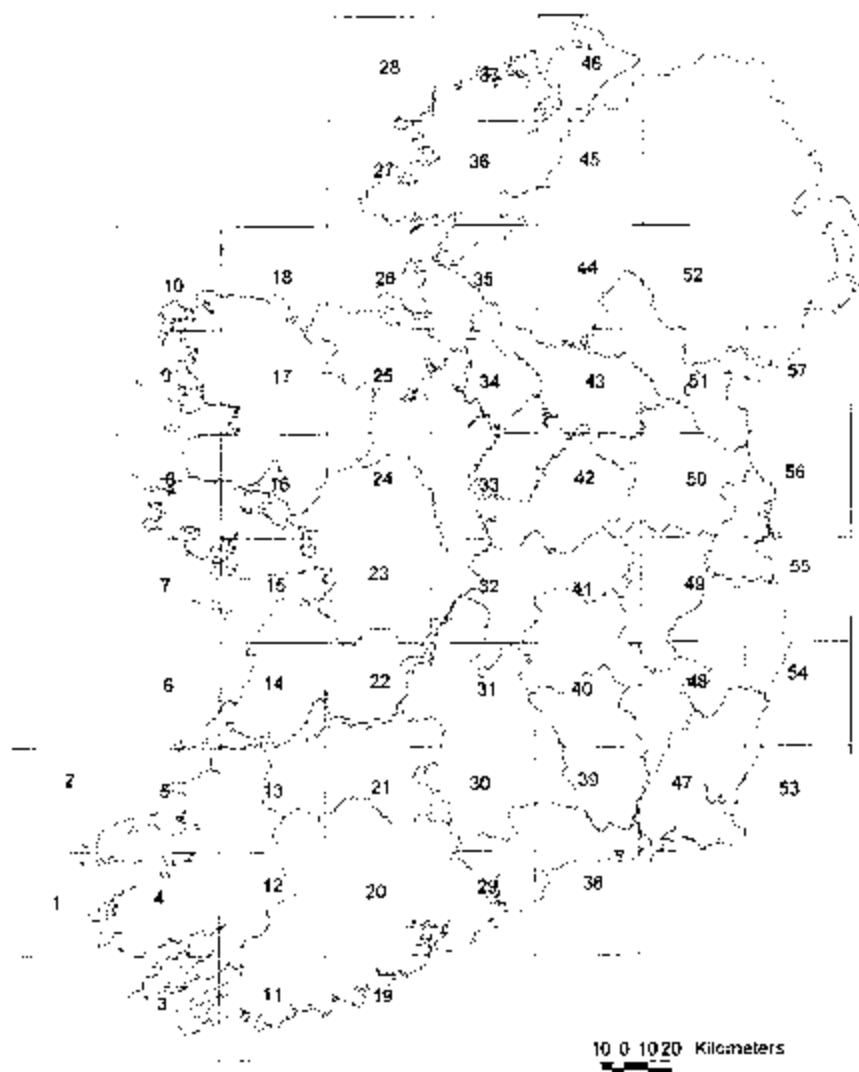
4. Vector monitoring programme

4.1 A 3-year national BTV vector surveillance programme was initiated in Ireland in April 2007. The programme was designed in accordance with Commission guidelines for Bluetongue monitoring and surveillance (SANCO/10581/2006 Rev 4) and Annex I, Section 2 of Commission Regulation 1266/2007. Entomological sampling protocols are similar to those adopted in other EU Member States. The objective is to provide better knowledge of the Irish *Culicoides* species (especially BTV vector forms), to establish their geographical distribution in the country and to record their seasonal and between year population dynamics.

- 4.2 A series of 34 randomly distributed farmland sites are being sampled, using specially designed Underspoort-type UV light traps (see locations in **Annex II**). These are monitored on a weekly basis, 52 weeks per year, by DAFF staff from the local District Veterinary Offices. Environmental data, logged during sampling, and preserved samples of the insects captured are sent to a dedicated Vector Ecology Unit at the National University of Ireland, Galway, for analysis.
- 4.3 The combined samples (1,100) obtained in 2007 included nearly 500,000 *Culicoides*, and of these, over 90,000 were identified to species or species complex level. A series of 10 randomly designated Index Sites were examined in greatest detail, and the samples from these sites were subjected to full taxonomic analysis, with all their *Culicoides* being identified to species/species complex level. Selected samples from all other sites were similarly examined. Other samples were analysed in less detail, with total numbers of *Culicoides* per site being recorded on a weekly basis to provide a better national perspective on questions relating to seasonality of midge activity and for defining vector free periods.
- 4.4 Samples are counted and species identified using microscopy.

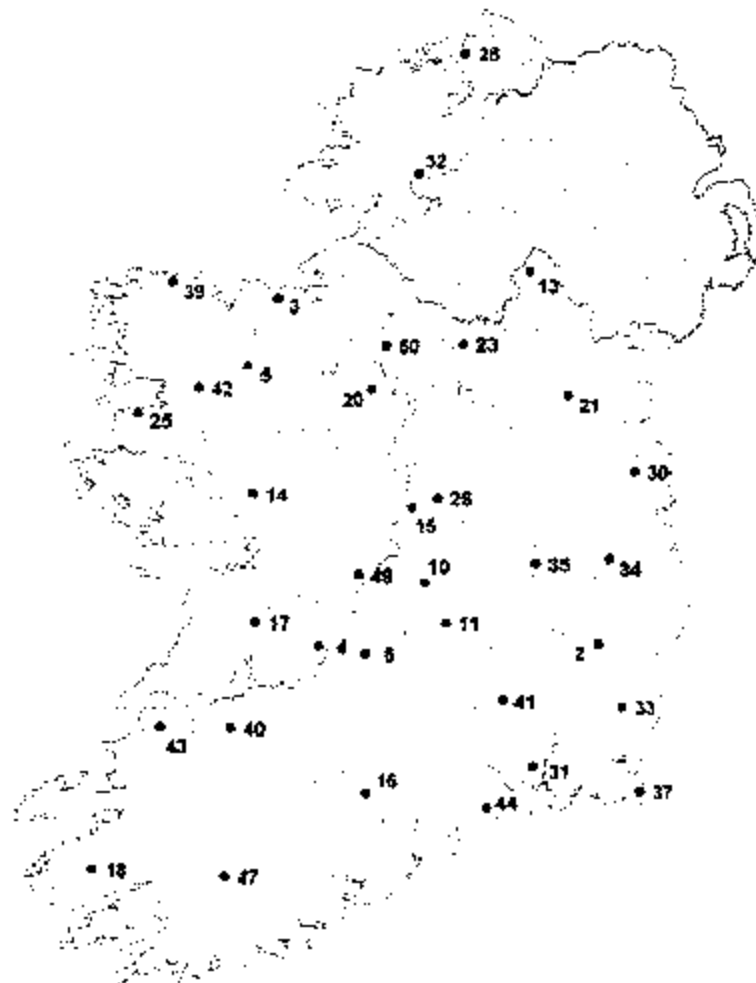
ANNEX I

Geographical units (45x 45 km grids) used in the Bluetongue random serological surveillance programme



ANNEX II

Locations of the 34 vector monitoring sites (with the 10 index sites shown in red)



BLUETONGUE VACCINATION PLAN

- 1. Ireland will only carry out vaccination for BT in the event that BTV is introduced in 2008. In this case, an emergency vaccination plan will be submitted under Article 3 of Council Decision 90/424/EEC.**
- 2. The full details of the vaccination plan will be included in the emergency vaccination plan.**
- 3. If vaccination commences in 2008, then Ireland will plan to re-vaccinate all cattle and sheep in the country in 2009 and 2010.**

4. Measures of the submitted programme

4.1. *Summary of measures under the programme*

Duration of the programme:

First year: 2009

Last year: 2010

Control

Eradication

Testing

Testing

Slaughter of animals tested positive

Slaughter of animals tested positive

Killing of animals tested positive

Killing of animals tested positive

Vaccination

Extended slaughter or killing

Treatment

Disposal of products

Disposal of products

Monitoring. Other measures (*specify*): Surveillance, (Revaccination in the event of emergency vaccination being introduced in 2008)

4.2. *Organisation, supervision and role of all stakeholders⁶ involved in the programme:*

(1.) Entomological Surveillance:

Entomological traps are set by DAFF staff at 34 randomly selected sites and are monitored one night per week, 52 weeks per year. The entomological samples are submitted to the Vector Monitoring Unit at National University of Ireland, Galway for identification, counting and speciation.

(2.) Serological Surveillance:

(a) All ruminant imports are post-import tested by DAFF staff and samples submitted to DAFF Central Veterinary Regional Laboratory (CVRL)

(b) Random samples are selected from the blood samples submitted for Brucellosis testing and tested in CVRL.

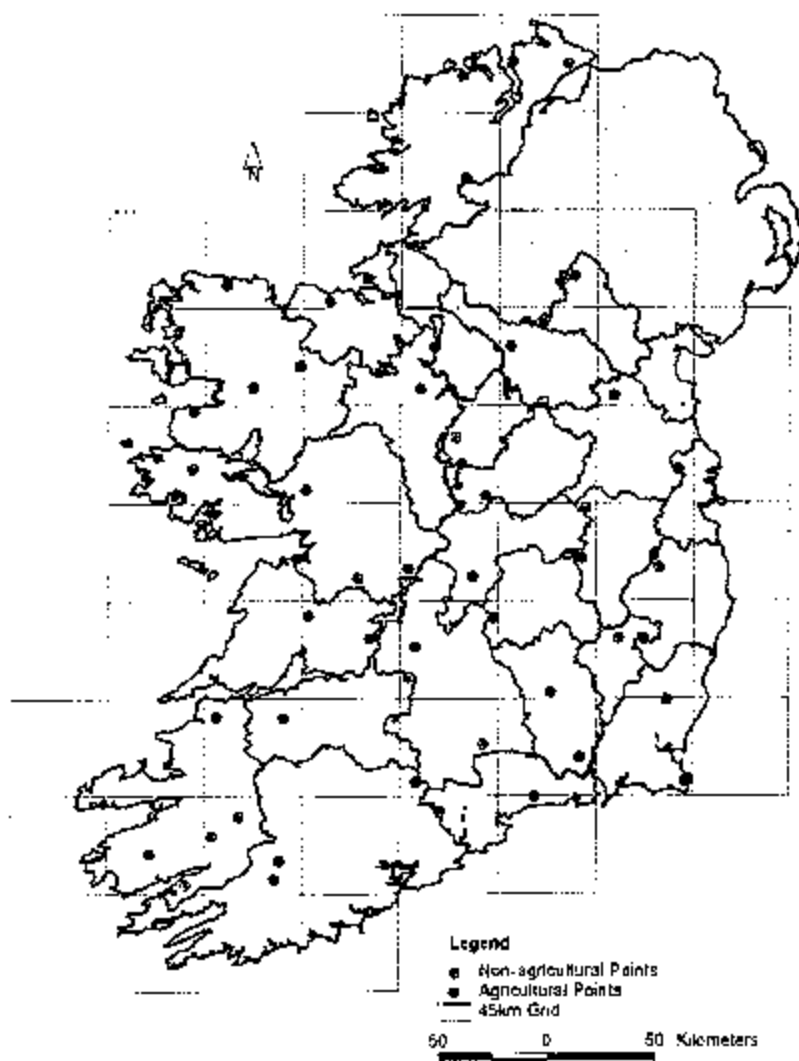
(3.) Virological Surveillance:

All imported ruminants are sampled in addition to any suspect investigation

⁶ Describe the authorities in charge of supervising and coordinating the departments responsible for implementing the programme and the different operators involved. Describe the responsibilities of all involved.

4.3. Description and demarcation of the geographical and administrative areas in which the programme is to be implemented⁷:

The programme is implemented in all areas of the country. The country is divided into 57 geographical units (45 x 45 km grids). The grids and the 34 vector monitoring sites are shown in the map below. Random surveillance is carried out throughout the country.



⁷ Describe the name and denomination, the administrative boundaries, and the surface of the administrative and geographical areas in which the programme is to be applied. Illustrate with maps.

4.4. *Description of the measures of the programme⁸: See Information provided at 4.2*

4.4.1. Notification of the disease: Compulsory notifiable disease under Diseases of Animals (Notification and Control of Animal Diseases) Order 2008 S.I. No. 101/2008.

4.4.2. Target animals and animal population: Cattle: 7 million. Sheep 4 million

4.4.3. Identification of animals and registration of holdings: Cattle are individually tagged and the herds and individual tag numbers are registered on the Animal Health Computer System (AHCS). Sheep flocks are registered on AHCS. Sheep tag numbers are recorded in the farm's flock register.4.4.4. Qualifications of animals and herds⁹: N/A

4.4.5. Rules on the movement of animals: N/A

4.4.6. Tests used and sampling schemes: Antibody ELISA and RT-PCR.

4.4.7. Vaccines used and vaccination schemes: In the event that BTV is introduced into Ireland in 2008, inactivated BTV vaccines will be used. Doses as specified by the manufacturer.

4.4.8. Information and assessment on bio-security measures management and infrastructure) in place in the holdings involved: Advice regarding vector protection and treatment of vector sites.

4.4.9. Measures in case of a positive result¹⁰: In the event of animals being found positive on post-import testing or on random sampling, follow-up testing in the herd/flock (and if necessary in other herds/flocks in the surrounding area) will be carried out.

4.4.10. Compensation scheme for owners of slaughtered and killed animals: N/A

4.4.11. Control on the implementation of the programme and reporting:

⁸ A comprehensive description needs to be provided of all measures unless reference can be made to Community legislation. The national legislation in which the measures are laid down is mentioned.

⁹ To mention only if applicable.

¹⁰ A short description is provided of the measures as regards positive animals (slaughter, destination of carcasses, use or treatment of animal products, the destruction of all products which could transmit the disease or the treatment of such products to avoid any possible contamination, a procedure for the disinfection of infected holdings, the therapeutic or preventive treatment chosen, a procedure for the restocking with healthy animals of holdings which have been depopulated by slaughter and the creation of a surveillance zone around the infected holding.).

5. **Benefits of the programme**¹¹:

Early detection of infected animals in order to establish if BTV has been introduced in Ireland. Entomological surveillance is to determine the presence of competent vectors and collect data for relevant analysis.

(Vaccination for control and eradication of BTV in the event that emergency vaccination is introduced in 2008).

¹¹ A description is provided of the benefits for farmers and society in general.

6. Data on the epidemiological evolution during the last five years¹² (N/A IRELAND IS CURRENTLY FREE OF BLAETONGUE (April 2008))

6.1. Evolution of the disease¹³

6.1.1. Data on herds^(a) (one table per year and per disease/species)

Year:

Situation on date:

Disease^(b):

Animal species:

Region ^(c)	Total number of herds ^(d)	Total number of herds under the programme	Number of herds checked ^(e)	Number of positive herds ^(f)	Number of new positive herds ^(g)	Number of herds depopulated	% positive herds depopulated	INDICATORS		
								% herd coverage	% positive herds Period herd prevalence	% new positive herds Herd incidence
1	2	3	4	5	6	7	8 (7.5)x100	9 = (4.5)x100	10 (5.4)x100	11 = (6.7)x100
Total										

(a) Herds or flocks or holdings as appropriate.

(b) Disease and animal species if necessary.

(c) Region as defined in the eradication programme of the Member State.

(d) Total number of herds existing in the region including eligible herds and non-eligible herds for the programme.

(e) Check means to perform a herd level test under the programme for the respective disease with the purpose of maintaining or upgrading, the health status of the herd. In this column a herd must not be counted twice even if has been checked more than once.

(f) Herds with at least one positive animal during the period independent of the number of times the herd has been checked.

(g) Herds which status in the previous period was *Unknown*, *Not free-negative*, *Free*, *Officially Free* or *Suspended* and have at least one animal tested positive in this period.

¹²

The data on the evolution of the disease are provided according to the tables below where appropriate.

¹³

No data to provide in case of rabies.

6.1.2. Data on animals (one table per year and per disease/species)

Year:

Situation on date:

Disease^(a):

Animal species:

Region ^(b)	Total number of animals ^(c)	Number of animals ^(d) to be tested under the programme	Number of animals ^(e) tested	Number of animals tested individually ^(f)	Number of positive animals	Slaughtering		INDICATORS	
						Number of animals with positive result slaughtered or culled	Total number of animals slaughtered ^(g)	% coverage at animal level	% positive animals Animal prevalence
1	2	3	4	5	6	7	8	9=(3/4)x100	10=(6/4)x100
Total									

(a) Disease and animal species if necessary.

(b) Region as defined in the approved eradication programme of the Member State.

(c) Total number of animals existing in the region including eligible herds and non-eligible herds for the programme.

(d) Includes animals tested individually or under bulk level scheme.

(e) Include only animals tested individually, do not include animals tested by bulk level samples (for instance: milk bulk tank tests).

(f) Include all positive animal slaughtered and also the negative animals slaughtered under the programme.

6.2. Stratified data on surveillance and laboratory tests

6.2.1. Stratified data on surveillance and laboratory tests (one table per year and per disease/species)

Year: _____ Disease^(a): _____ Animal species/category: _____

Description of the used serological tests:

Description of the used microbiological or virological tests:

Description of the other used tests:

Region ^(b)	Serological tests		Microbiological or virological tests		Other tests	
	Number of samples tested ^(c)	Number of positive samples ^(d)	Number of samples tested ^(c)	Number of positive samples ^(d)	Number of samples tested ^(c)	Number of positive samples ^(d)
Total						

- (a) Disease and animal species if necessary.
- (b) Region as defined in the approved eradication programme of the Member State.
- (c) Number of samples tested..
- (d) Number of positive samples..

6.5. Data on vaccination or treatment programmes¹⁵

Year: _____

Disease^(a): _____

Animal species: _____

Description of the used vaccination, therapeutic or other scheme: _____

Region ^(a)	Total number of herds ^(a)	Total number of animals	Information on vaccination or treatment programme:					
			Number of herds ^(a) in vaccination or treatment programme	Number of heads ^(b) vaccinated or treated	Number of animals vaccinated or treated	Number of doses of vaccine or treatment administered	Number of adults ^(d) vaccinated	Number of young ^(d) animals vaccinated
Total								

(a) Disease and species if necessary

(b) Region as defined in the approved eradication programme of the Member State

(c) Herds or flocks or holdings as appropriate

(d) Only for Bovine brucellosis, Ovine and Caprine brucellosis (*B. melitensis*) as defined in the programme

¹⁵ Data to provide only if vaccination has been carried out.

6.6. Data on wildlife¹⁶

6.6.1. Estimation of wildlife population

Year:

Method of estimation^(a):

Regions ^(b)	Estimation of the population of the concerned wild species	
	Species:	Species:
Total		

(a) The hunting bag is considered to be the standard method of estimation. If other method is used, explain

(b) Region as defined in the approved eradication programme of the Member State

¹⁶ Data only to provide in case the programme comprises measures as regards wildlife or if the data are epidemiologically relevant for the disease.

7. Targets

7.1. Targets related to testing (one table for each year of implementation) 2009

7.1.1. Targets on diagnostic tests

Disease^(a): Bluetongue **Animal species: Cattle and sheep**

Region ^(b)	Type of the test ^(c)	Target population ^(d)	Type of sample ^(e)	Objective ^(f)	Number of planned tests
Whole territory	Antibody ELISA	Imported ruminants	Blood	Post-import testing of ruminants from BT infected areas	30,000
Whole territory	RT-PCR	Imported ruminants	Blood	Post-import testing of ruminants from BT infected areas	30,000
Whole territory	Antibody ELISA	Cattle sampled under Brucellosis testing scheme	Blood	Random surveillance	4000
Whole territory	Speciation, counting & identification	Culicoides midges	Insects	Vector monitoring	1768 samples (1500 (600 midges)
Total					

(a) Disease and species if necessary

(b) Region as defined in the approved eradication programme of the Member State

(c) Description of the test (for instance SN-test, AB-ELISA, RBT, ...)

(d) Specification of the targeted species and the categories of targeted animals (for instance sex, age, breeding animal, slaughter animal, ...)

(e) Description of the sample (for instance blood, serum, milk, ...)

(f) Description of the objective (for instance qualification, surveillance, confirmation of suspected cases, monitoring of campaigns, seroconversion, control on deleted vaccines, testing of vaccine, control of vaccination, ...)

7.1. Targets related to testing (one table for each year of implementation) 2010

7.1.1. Targets on diagnostic tests

Disease ^(a) , Bluetongue	Animal species: Cattle and sheep	Region ^(b)	Type of the test ^(c)	Target population ^(d)	Type of sample ^(e)	Objective ^(f)	Number of planned tests
		Whole territory	Antibody ELISA	Imported ruminants	Blood	Post-import testing of ruminants from BT infected areas	30,000
		Whole territory	RT-PCR	Imported ruminants	Blood	Post-import testing of ruminants from BT infected areas	30,000
		Whole territory	Antibody ELISA	Cattle sampled under Brucellosis testing scheme	Blood	Random surveillance	4000
		Whole territory	Speciation, counting & identification	Culex mosquitoes midges	Insects	Vector monitoring	1768 samples (500,000 midges)
Total							

(a) Disease and species if necessary

(b) Region as defined in the approved eradication programme of the Member State

(c) Description of the test (for instance SN-test, AB-Elisa, RBT, ...)

(d) Specification of the targeted species and the categories of targeted animals (for instance sex, age, breeding animal, slaughter animal, ...).

(e) Description of the sample (for instance blood, serum, milk, ...)

(f) Description of the objective (for instance qualification, surveillance, confirmation of suspected cases, monitoring of campaigns, seroconversion, control on deleted vaccines, testing of vaccine, control of vaccination, ...)

7.1.2.2. Targets on the testing of animals

Disease^(a):

Animal species:

Region ^(b)	Total number of animals ^(c)	Number of animals ^(c) under the programme	Number of animals ^(c) expected to be tested	Number of animals to be tested individually ^(d)	Number of expected positive animals	Slaughtering		TARGET INDICATORS	
						Number of animals with positive result expected to be slaughtered or culled	Total number of animals expected to be slaughtered ^(e)	Expected % coverage at animal level	% positive animals (I-spected animal prevalence)
1	2	3	4	3	6	7	8	$9 \text{ (43)} \times 100$	$10 \text{ (64)} \times 100$
Total									

(a) Disease and animal species if necessary.

(b) Region as defined in the approved eradication programme of the Member State.

(c) Total number of animals existing in the region including eligible herds and non-eligible herds for the programme.

(d) Includes animals tested individually or under bulk level scheme.

(e) Include only animals tested individually, do not include animals tested by bulk level samples (for instance milk bulk tank tests).

(f) Include all positive animals slaughtered and also the negative animals slaughtered under the programme.

7.2. Targets on qualification of herds and animals¹⁸ (one table for each year of implementation)

¹⁸ Data to provide only for bovine tuberculosis, bovine brucellosis, ovine and caprine brucellosis (*B. melitensis*), enzootic bovine leucosis (EBL) and Aujeszky's disease

7.3. Disease^(a): Animal species:

Region ^(b)	Targets on the status of herds and animals under the programme ^(k)													
	Total number of herds and animals under the programme		Expected unknown ^(d)		Expected not free or not officially free from disease		Expected free or officially free from disease status suspended ^(g)		Expected free from disease ^(h)		Expected officially free from disease ⁽ⁱ⁾			
	Herds	Animals ^(j)	Herds	Animals ^(j)	Last check positive ^(e)	Last check negative ^(f)	Herds	Animals ^(j)	Herds	Animals ^(j)	Herds	Animals ^(j)		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Total														

- (a) Disease and species if necessary
- (b) Region as defined in the approved eradication programme of the Member State
- (c) At the end of the year
- (d) Unknown: No previous checking results available
- (e) Not free and last check positive: Herd checked with at least one positive result in the latest check
- (f) Not free and last check negative: Herd checked with negative results in the latest check but not being *Free* or *Officially Free*
- (g) Suspended as defined for the respective disease in Community or national legislation where appropriate or according national legislation.
- (h) Free herd as defined for the respective disease where appropriate in Community or national legislation where appropriate or according national legislation
- (i) Officially free herd as defined for the respective disease where appropriate in Community or national legislation where appropriate or according national legislation
- (j) Include animals under the programme in the herds with the referred status (left column)
- (k)

7.3. Targets on vaccination or treatment (one table for each year of implementation) (IRELAND WILL ONLY BE VACCINATING FOR BT IN THE EVENT THAT BTV IS INTRODUCED IN 2008. IN THIS CASE AN EMERGENCY VACCINATION PROGRAMME WILL BE SUBMITTED IN 2008 AND REVACCINATION WILL BE CARRIED OUT IN 2009 AND 2010).

7.3.1. Targets on vaccination or treatment¹⁹ 2009

Disease^(a): Bluetongue Animal species: Cattle and sheep

Region ^(b)	Total number of herds ^(c) in vaccination or treatment programme		Targets on vaccination or treatment programme				
	Total number of animals in vaccination or treatment programme	Number of herds ^(c) in vaccination or treatment programme	Number of herds ^(c) expected to be vaccinated or treated	Number of animals expected to be vaccinated or treated	Number of doses of vaccine or treatment expected to be administered	Number of adults ^(d) expected to be vaccinated	Number of young animals expected to be vaccinated
Whole territory	13 m	150,000	150,000	1.1m	31m		
Total							

(a) Disease and species if necessary

(b) Region as defined in the approved eradication programme of the Member State

(c) Herds or flocks or holdings as appropriate

(d) Only for Bovine brucellosis and Ovine, Caprine brucellosis (*B. melitensis*) as defined in the programme#

¹⁹ Data to provide only if appropriate.

7.3.1. Targets on vaccination or treatment²⁰ 2010 (IRELAND WILL ONLY BE VACCINATING FOR BT IN THE EVENT THAT BTV IS INTRODUCED IN 2008 or 2009. IN THIS CASE, AN EMERGENCY VACCINATION PROGRAMME WILL BE SUBMITTED IN 2008 AND REVACCINATION WILL BE CARRIED OUT IN 2010).

Disease^(a): Bluetongue Animal species: Cattle and sheep

Region ^(b)	Total number of herds ^(c) in vaccination or treatment programme	Total number of animals in vaccination or treatment programme	Targets on vaccination or treatment programme					
			Number of herds ^(c) in vaccination or treatment programme	Number of herds ^(c) expected to be vaccinated or treated	Number of animals expected to be vaccinated or treated	Number of doses of vaccine or treatment expected to be administered	Number of animals expected to be vaccinated	Number of young ^(d) animals expected to be vaccinated
Whole country	150,000	11 m	150,000	130,000	11m	11m		
Total								

(a) Disease and species if necessary

(b) Region as defined in the approved eradication programme of the Member State

(c) Herds or flocks or holdings as appropriate

(d) Only for Bovine brucellosis and Ovine, Caprine brucellosis (*B. melitensis*) as defined in the programme

²⁰ Data to provide only if appropriate.

8. Detailed analysis of the cost of the programme (one table per year of implementation) 2009

Costs related to	Specification	Number of units	Unitary cost in €	Total amount in €	Community funding requested (yes/no)
1. Testing					
1.1. Cost of the analysis					Yes
	Test: Antibody ELISA	34,100	€5.05	€172,205	
	Test: RT-PCR	30,100	€10.10	€30,401	Yes
	Test: Speciation, counting & identification of <i>Culicoides</i> midges	1768 samples 500,000 midges	Total amount is for expertise in counting & identification	€58,326	Yes
1.2. Cost of sampling					
1.3. Other costs					
2. Vaccination or treatment					
2.1. Purchase of vaccine/treatment	BT inactivated vaccine	11 m	€1	€11m	Yes in the event of emergency vaccination

					being introduced in 2008
2.2. Distribution costs					
2.3. Administering costs	Private veterinary practitioner	7 m cattle 4 m sheep	€3/head €1.50/head	€21 m €8 m	Yes In the event of emergency vaccination being introduced in 2008
2.4. Control costs					
3. Slaughter and destruction	N/A				
3.1. Compensation of animals					
3.2. Transport costs					
3.3. Destruction costs					
3.4. Loss in case of slaughtering					

Detailed analysis of the cost of the programme (one table per year of implementation) 2010

Costs related to	Specification	Number of units	Unitary cost in €	Total amount in €	Community funding requested (yes/no)
1. Testing					
1.1. Cost of the analysis	Test: Antibody ELISA	34,100	€5.05	€172,205	Yes
	Test: RT-PCR	30,100	€10.10	€30,401	Yes
	Test: Speciation, counting & identification of <i>Culicoides</i> midges	1788 samples 500,000 midges	Total amount is for expertise in counting & identification	€59,326	Yes
1.2. Cost of sampling					
1.3. Other costs					
2. Vaccination or treatment					
2.1. Purchase of vaccine/treatment	BT inactivated vaccine	11 m	€1	€11m	Yes In the event of emergency vaccination

						being introduced in 2008/9
2.2. Distribution costs						
2.3. Administering costs	Private veterinary practitioner	7 m cattle 4 m sheep	€3/head €1.50/head	€21 m €6 m	Yes In the event of emergency vaccination being introduced in 2008/9	
2.4. Control costs						
3. Slaughter and destruction	N/A					
3.1. Compensation of animals						
3.2. Transport costs						
3.3. Destruction costs						
3.4. Loss in case of slaughtering						

