



EUROPEAN COMMISSION  
HEALTH & CONSUMERS DIRECTORATE-GENERAL

Unit 04 - Veterinary Control Programmes

SANCO/10255/2009

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

## **Surveillance and Eradication programme of Bluetongue**

**Approved\* for 2010 by Commission Decision 2009/883/EC**

**Sweden**

\* in accordance with Council Decision 2009/470/EC

## ANNEX I

**Standard requirements for the submission of national programmes for the eradication, control and monitoring of the animal diseases or zoonoses referred to in Article 1(a)<sup>4</sup>**

### **1. Identification of the programme**

Member State: **Sweden**

Disease(s)<sup>5</sup>: **Bluetongue**

Request of Community co-financing for<sup>6</sup>: **2010**

Reference of this document: Dnr 33/5181-09

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### **2. Historical data on the epidemiological evolution of the disease(s)<sup>7</sup>:**

In 2007, bluetongue serotype 8 was spread to the near vicinity of Sweden, in north of Germany and in Denmark. Due to the Danish case in October 2007, all dairy herds in the most southern county (Skåne) were tested with bulk milk ELISA in November 2007. All tested herds were negative. Enhanced surveillance was again initiated in the most southern parts of Sweden by monthly bulk milk ELISA testing of all dairy farms from July 2008. One such test was found positive in September and after the first PCR positive animal was found, a total of 30 herds in south of Sweden were found to have encountered the BTV-8 virus (20090414). The positive herds found in September and October 2008 were spread across an area of approximately a 100-150 km radius. In addition to the testing within the national surveillance programme, animals were individually tested in order to assess regional prevalence and in-herd prevalence. Over 100 clinical suspicions were investigated all across Sweden in 2008, all negative for bluetongue. One clinical case was seen during vaccination in a herd. The animal was PCR positive for bluetongue serotype 8. 785 wild ruminants were tested for bluetongue during the hunting season. One seropositive moose was found. During the vector free period additional surveillance with bulk milk ELISA was done in the area outside the vaccination. Two additional PCR positive animals were found that resulted in an extension of the restriction zone and the

<sup>4</sup> In the case of the second and subsequent years of a multi-annual programme that has already been approved by a Commission Decision, only section 1, section 7 and section 8 need to be completed.

<sup>5</sup> One document per disease is used unless all measures of the programme on the target population are used for the monitoring, control and eradication of different diseases.

<sup>6</sup> Indicate the year(s) for which co-financing is requested.

<sup>7</sup> A concise description is given with data on the target population (species, number of herds and animals present and under the programme), the main measures (testing, testing and slaughter, testing and killing, qualification of herds and animals, vaccination) and the main results (incidence, prevalence, qualification of herds and animals). The information is given for distinct periods if the measures were substantially modified. The information is documented by relevant summary epidemiological tables, graphs or maps.

vaccination area. One of the PCR positive animals was a calf born in December, well into the vector free season, and was most likely a transplacentally infected calf.

Two days after the first case vaccination was initiated in the county of Halland in a radius of 100 km from the first case. As cases were soon found in a wider area, a decision was taken to vaccinate a larger area. Vaccination of the whole area was completed in April 2009 and during summer vaccination of calves and vaccination of lambs including revaccination of sheep will be done. In autumn revaccination will start in November (2<sup>nd</sup> year vaccination).

All imports have been investigated and no apparent link can be found to the bluetongue cases. There is a correlation with strong winds from Denmark/Germany during a period before the cases were found that may have transferred infective vectors.

Since the vaccination campaign has been very successful there is high probability that the disease will be eradicated from Sweden. Because there were no apparent clinical cases and only a few animals tested positive the infection was most likely discovered in a very early stage. The vaccination campaign was launched immediately and the spread of the disease was stopped by the vector free period in November.

### 3. Description of the submitted programme<sup>8</sup>:

Main objective: eradication of the BTV-8 serotype through systematic vaccination and surveillance. A positive case is an animal that tests positive for bluetongue with PCR testing.

The vaccination plan for 2008 is designed, and amended in part, to achieve and maintain a protection in at least 80% of the susceptible population. The strategy will undergo revision also during 2009 in order to become more cost-effective. Cattle and sheep are the primary targets of the vaccination programme. It is estimated that vaccination for no more than 3 years will be sufficient to eradicate BTV-8 from the current restriction zone in Sweden and to stop the spread to other areas. The programme may be subjected to changes depending on the state of bluetongue in the rest of EU.

The vaccination and the yearly revaccinations of cattle will be mostly executed during wintertime when the animals are stabled. Thus the vaccination each year continues into next year. The first year vaccination 2008 ended 31 March 2009.

The report on testing for 2008 is not optimal using the tables provided in this application due to the outbreak and separation of areas a few months into the surveillance program. The positive cases resulted in a revised and extended sampling strategy where it is not possible to know the exact number of herds involved in the testing. Due to the nature of the disease the testing was done on an individual level. A more correct picture of the whole testing is seen in the table 6.2.1.

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<sup>8</sup> A concise description of the programme is given with the main objective(s) (monitoring, control, eradication, qualification of herds and/or regions, reducing prevalence and incidence), the main measures (testing, testing and slaughter, testing and killing, qualification of herds and animals, vaccination), the target animal population and the area(s) of implementation and the definition of a positive case.

#### 4. Measures of the submitted programme

##### 4.1 *Summary of measures under the programme*

Duration of the programme:

First year: 2008

Last year:

Control **Yes**

Eradication

Testing **Yes**

Testing **Yes**

Slaughter of animals tested positive

Slaughter of animals tested positive

Killing of animals tested positive

Killing of animals tested positive

Vaccination **yes**

Extended slaughter or killing

Treatment

Disposal of products

Disposal of products

Eradication, control or monitoring **Yes**

Other measures (*specify*):

##### 4.2. *Organisation, supervision and role of all stakeholders<sup>9</sup> involved in the programme:*

The Swedish Board of Agriculture (SBA) has, according to the Swedish regulation on epizootic diseases (1999:65 2§), the responsibility for preventive measures and for combating all diseases listed in the Swedish epizootic legislation which include bluetongue.

The National Veterinary Institute (SVA) is designated according to the governmental ordinance on instructions for the SVA (1999:341 §3) to execute diagnostic investigations and other tasks ordered by the SBA, such as epidemiological investigations.

The County Administrative Board (CAB) is the authority responsible for control of compliance with restrictive measures.

Vaccination is compulsive in the vaccination area. Vaccinations have in 2008 and 2009 been organized and administered by the Board of Agriculture. The District Veterinary Organisation (DVO) within the SBA, private veterinarians as well as other recruited personnel has been used for the vaccination in 2008.

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<sup>9</sup> 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.

As agreed by SBA from April 2009 stakeholder organizations will also be recruited to administrate and perform the vaccinations. The organizations will have a clear directive. The vaccinations will as before be registered in the central bovine and ovine registers. At the moment it is not finalized which organizations will be involved.

*4.3. Description and demarcation of the geographical and administrative areas in which the programme is to be implemented<sup>10</sup>:*

The restricted area as of 2009-04-16 is seen in map 1. The smallest possible administrative areas are the counties. County administration is responsible for control functions, such as control of movements of live animals and animals for slaughter. Administration and control of the vaccination program, the legislation and testing of animals is carried out centrally at the SBA for the entire restriction area. The vaccination and restriction areas do not follow the borders of whole counties or municipalities, therefore in order to simplify the administrative processing, reporting on vaccinations and testing will be done as a merged area and not by counties as stated in previous applications.

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<sup>10</sup> 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 programme<sup>11</sup>:

##### 4.4.1. Notification of the disease:

According to Commission regulation 1266/2007.

According to the epizootic law suspected or confirmed cases of bluetongue are immediately notifiable to the SVA. (Föreskrifter om ändring i statens jordbruksverks föreskrifter (SJVFS 2008:42 om åtgärder med anledning av fall av blåtunga. Statens jordbruksverks föreskrifter om provtagning av idisslare för att kartlägga förekomst av blåtunga och om obligatorisk vaccination.)

##### 4.4.2. Target animals and animal population:

Bovines and ovines

##### 4.4.3. Identification of animals and registration of holdings:

All holdings are registered at SVA. CDB (bovine data base) has information and localization of every bovine in Sweden. CDB is currently used to register bovines that have been vaccinated for bluetongue. The vaccinated bovines are recorded in this database, and the CDB can be used to supervise the movement of animals out of the restriction zone. The CDB register also includes vaccination information on an individual level. An individual register on sheep is used for the registration of vaccination.

##### 4.4.4. Qualifications of animals and herds<sup>12</sup>:

N/A

##### 4.4.5. Rules on the movement of animals:

According to Commission Regulation 1266/2007.

##### 4.4.6. Tests used and sampling schemes: According to Commission Regulation 1266/2007. Tests and sampling methods are adapted to the situation in Sweden.

A real time PCR system specific for BTV-8 ("the Hoffman rRT-PCR") is used for the detection of viral RNA in whole blood or internal organs. Commercial

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<sup>11</sup> 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.

<sup>12</sup> To mention only if applicable.

ELISA tests from ID-VET are used for the detection of antibodies in milk and serum (ID Screen® Blue Tongue Competition and ID Screen® Blue Tongue Milk, respectively).

Sampling: Three different schemes for 2009-2010 for the present restriction area. Designed to detect at least a prevalence of 0,5% with 95% confidence.

National sampling outside the risk area: Approximately 7100 beef herds and 2600 dairy herds are included in the selection of samples. 800 of the beef herds will be tested with serology with 1-3 tests/herd. 400 dairy herds will be tested with bulk milk ELISA.

Sampling in the risk area outside the vaccination area will be made with monthly bulk milk ELISA during vector active season, in total 5000 tests.

Sampling in the vaccination/infected area: modified sentinels in form of testing of 200 non-vaccinated calves.

Tests on wild ruminants in the restriction area: 800 serum ELISA.

Testing of clinical suspicions with ELISA and PCR tests.

Extended testing will be performed if a case is found outside the current restriction zone.

#### 4.4.7. Vaccines used and vaccination schemes:

Merial BTVPUR AtSap inactivated vaccine. Compulsive vaccination of all bovine and ovine herds with more than 10 animals. Additional vaccination of calves and lambs. Goal: to keep 80% of the ruminant population vaccinated for 3 years in order to eradicate the disease. The first vaccination year 1 (vinter 2008-2009) has been successfully performed. Structural changes in the organization are being made and vaccination will be outsourced in order to cut costs, however, the final organization has not been set. Detailed description of the vaccination strategy with animal data is available for 2009.

#### 4.4.8. Information and assessment on bio-security measures management and infrastructure) in place in the holdings involved: N/A

#### 4.4.9. Measures in case of a positive result<sup>13</sup>:

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<sup>13</sup> 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

PCR positive animals are not allowed to be moved for 60 days.

Implementation of movement restrictions if the case involves a new area.

#### 4.4.10. Compensation scheme for owners of slaughtered and killed animals:

A few animals were culled in 2008. Owners were compensated according to national regulations. No culling of animals in 2009 or 2010.

4.4.11. Control on the implementation of the programme and reporting: Lists of farms and animals are obtained from the central databases and brought to the farms. All animals that are vaccinated at those farms are reported back by the vaccinator to the central registers for cattle and sheep. A second system with separate weekly reports directly from the vaccination centers serves as a control that the vaccination quota for that specific area are met in time.

CAB is responsible for control of animal movements from the restriction zone.

## 5. Benefits of the programme<sup>14</sup>:

The programme is designed to eradicate the disease, the primary benefit is direct in terms of not having a new disease in the herds with unknown consequences. The second goal is to lift the restriction zones. Both these goals are highly dependent on the policy of the rest of the EU in terms of vaccinating and stopping spread of other circulating serotypes.

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restocking with healthy animals of holdings which have been depopulated by slaughter and the creation of a surveillance zone around the infected holding.),

<sup>14</sup> A description is provided of the benefits for farmers and society in general.



6. Data on the epidemiological evolution during the last five years<sup>15</sup>

6.1. Evolution of the disease<sup>16</sup>

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

6.1.1.1. Data on herds<sup>(a)</sup> (one table per year and per disease/species)

Year: 2007

Situation on date: 20071231

Disease<sup>(b)</sup>: Animal species: bovines, targeted for surveillance for BT according to regulation L266/2007/EC

Region <sup>(c)</sup>	Total number of herds <sup>(a)</sup>	Total number of herds under the programme	Number of herds checked <sup>(a)</sup>	Number of positive herds <sup>(a)</sup>	Number of new positive herds <sup>(a)</sup>	Number of herds depopulated	% positive herds depopulated	% herd coverage	INDICATORS		
									% positive herds	% new positive herds	Herd incidence
1	2	3	4	5	6	7	8 = (7/5) x 100	9 = (4/3) x 100	10 = (5/4) x 100	11 = (6/4) x 100	
Surveillance zone from 20071013 (Skåne county)	N/A	N/A	662	0	0	0	N/A	N/A	0	0	
Total	3099	N/A	662	0	0	0	N/A	N/A	N/A	N/A	N/A

6.1.2.

Year: 2008

Situation on date: 20081231

<sup>15</sup> The data on the evolution of the disease are provided according to the tables below where appropriate.  
<sup>16</sup> No data to provide in case of rabies.

**Disease<sup>(b)</sup>: Bluetongue serotype 8**

**Animal species: Bovines and ovine**

Region <sup>(c)</sup>	Total number of herds <sup>(d)</sup>	Total number of herds under the programme	Number of herds checked <sup>(e)</sup>	Number of positive herds <sup>(f)</sup>	Number of new positive herds <sup>(g)</sup>	Number of herds depopulated	% positive herds depopulated	INDICATORS			
								% herd coverage	% positive herds Period herd prevalence	% new positive herds Herd incidence	
J	2	3	4	5	6	7	8 = (7/5) x 100	9 = (4/3) x 100	10 = (5/4) x 100	11 = (6/4) x 100	
restriction zone	14967 cattle and 8349 sheep	3845	3845	28	28	N/A	N/A	100%	0,7%	0,7%	
Free area	9853 cattle 6395 sheep	580	580	0	0	N/A	N/A	100%	0	0	
Total				28	28						

(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.

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

Year: 2007

Situation on date: : 20071231

Disease<sup>(b)</sup>:

Animal species: bovine

Region <sup>(a)</sup>	Total number of animals <sup>(c)</sup>	Number of animals <sup>(a)</sup> to be tested under the programme	Number of animals <sup>(a)</sup> tested	Number of animals tested individually <sup>(c)</sup>	Number of positive animals	Slaughtering		INDICATORS	
						Number of animals with positive result slaughtered or culled	Total number of animals slaughtered <sup>(b)</sup>	% coverage at animal level	% positive animals Animal prevalence
1	2	3	4	5	6	7	8	$9 = \frac{7}{8} \times 100$	$10 = \frac{6}{2} \times 100$
Skåne county surveillance zone	218 818	662 herds (bulk milk)	33 000	0	0	0	0	N/A	0
Total	218818	662	33 000	0	0	0	0	N/A	0

6.1.4.

Year: 2008

Situation on date: 20081231

Disease <sup>(a)</sup>	Animal species: bovine and ovine						Slaughtering		INDICATORS	
	Region <sup>(b)</sup>	Total number of animals <sup>(c)</sup>	Number of animals <sup>(d)</sup> to be tested under the programme	Number of animals <sup>(d)</sup> tested	Number of animals tested individually <sup>(e)</sup>	Number of positive animals	Number of animals with positive result slaughtered or culled	Total number of animals slaughtered <sup>(b)</sup>	% coverage at animal level	% positive animals Animal prevalence
1		2	3	4	5	6	7	8	$9 = \frac{4.3}{8} \times 100$	$10 = \frac{6.4}{100}$
Restriction zone		989754 cattle	N/A	192 935	5935	68	30		N/A	0.114%
		217617 sheep								
Free area		594719 cattle	N/A	29 300	300	0			N/A	0
		186721 sheep								
Total		1 988 802		222 235	6235	68	30			

(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: 2007 Disease<sup>(a)</sup>: bluetongue Animal species/category: bovine sentinel herds

#### Description of the used serological tests:

Commercial ELISA tests from ID-VET are used for the detection of antibodies in milk and serum (ID Screen® Blue Tongue Competition and ID Screen® Blue Tongue Milk, respectively).

#### Description of the used microbiological or virological tests:

#### Description of the other used tests:

Region <sup>(b)</sup>	Serological tests		Microbiological or virological tests		Other tests	
	Number of samples tested <sup>(c)</sup>	Number of positive samples <sup>(d)</sup>	Number of samples tested <sup>(e)</sup>	Number of positive samples <sup>(f)</sup>	Number of samples tested <sup>(g)</sup>	Number of positive samples <sup>(h)</sup>
Surveillance zone, skane county	662	0	0	0	0	0
Total	662	0	0	0	0	0

### 6.2.2.

Year: 2008 Disease<sup>(a)</sup>:  Animal species/category: bovine and ovine

Description of the used serological tests: Commercial ELISA tests from ID-VET are used for the detection of antibodies in milk and serum (ID Screen® Blue Tongue Competition and ID Screen® Blue Tongue Milk, respectively).

Description of the used microbiological or virological tests: A real time PCR system specific for BTV-8 (® the Hoffman "RT-PCR") is used for the detection of viral RNA in whole blood or internal organs.

Description of the other used tests:

Region/1	Serological tests		Microbiological or virological tests		Other tests	
	Number of samples tested <sup>(a)</sup>	Number of positive samples <sup>(b)</sup>	Number of samples tested <sup>(c)</sup>	Number of positive samples <sup>(d)</sup>	Number of samples tested <sup>(e)</sup>	Number of positive samples <sup>(f)</sup>
In non-restricted area whole year	Bulk milk ELISA 617 (580 herds) Serology 684	Bovines 0				
Monthly bulk milk ELISA in risk areas before 1 <sup>st</sup> case	Bulk milk ELISA 1534 (1048 herds)	Bovines 1				
In restriction zone after 1 <sup>st</sup> case	Bulk milk ELISA 7806	Bovines 17	5167	Bovines 62 Ovines 9		
Clinical suspicions whole country	Serology 9452	Bovines 51 Ovines 0				
	Serology 141	Bovines 0 Ovines 0	162			
Total	20234	69	5329	71		

- (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.



### 6.3. Data on infection (one table per year and per disease/species)

Year: 2008 until 200902

Disease<sup>(a)</sup>:

Animal species: Bovine and ovine

Region <sup>(b)</sup>	Number of herds infected <sup>(c)</sup>	Number of animals infected
Restricted zone	33	71
Total		

(a) Disease and animal species if necessary.

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

(c) Herds or flocks or holdings as appropriate.

### 6.5. Data on vaccination or treatment programmes<sup>17</sup>

Year: 2008

Disease<sup>(a)</sup>:

Animal species: Bovines

Description of the used vaccination, therapeutic or other schemes: mass vaccination

Region <sup>(b)</sup>	Total number of herds <sup>(c)</sup>	Total number of animals	Information on vaccination or treatment programme					
			Number of herds <sup>(c)</sup> in vaccination or treatment programme	Number of herds <sup>(c)</sup> vaccinated or treated	Number of animals vaccinated or treated	Number of doses of vaccine or treatment administered	Number of adults <sup>(d)</sup> vaccinated	Number of young <sup>(e)</sup> animals vaccinated
Vaccination area	10 936	659 872	8 501	No info	430 896	731 215	N/A	N/A
Total	10 936	659 872	8 501	No info	430 896	731 215		

<sup>17</sup> Data to provide only if vaccination has been carried out.

Year: 2008

Disease<sup>(a)</sup>:

Animal species: Ovinés

Description of the used vaccination, therapeutic or other scheme:

Region <sup>(c)</sup>	Total number of herds <sup>(c)</sup>	Total number of animals	Information on vaccination or treatment programme					
			Number of herds <sup>(c)</sup> in vaccination or treatment programme	Number of herds <sup>(c)</sup> vaccinated or treated	Number of animals vaccinated or treated	Number of doses of vaccine or treatment administered	Number of adults <sup>(d)</sup> vaccinated	Number of young <sup>(d)</sup> animals vaccinated
Vaccination area	5394	139 221	2957	No info	71 960	71 960	N/A	N/A
Total	5394	139 221	2957	No info	71 960	71 960		

(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

## 6.6. Data on wildlife<sup>18</sup>

### 6.6.1. Estimation of wildlife population

Year:

Method of estimation<sup>(a)</sup>:

Regions <sup>(b)</sup>	Estimation of the population of the concerned wild species			
	Species: moose	Species: red deer	Species: roe deer	Species: fallow deer
In restriction zone (hunting bag)	14451	1700	71400	155000
Free area (hunting bag)	80974	3400	119300	186600
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

<sup>18</sup> Data only to provide in case the programme comprises measures as regards wildlife or if the data are epidemiologically relevant for the disease.

6.6.2. *Monitoring of wildlife (one table per year and per disease/species)*

Year: 2008

Disease<sup>(a)</sup>:

Animal species: moose, deer

Description of the used serological tests: used to assess if BT-8 is spread in wild life, 625 moose, 32 deer, 98 roe deer and 30 of unknown species

Description of the used microbiological or virological tests: used to assess if BT-8 is spread in wild life

Description of the other used tests: no other tests used

Region <sup>(b)</sup>	Microbiological or virological tests		Serological tests		Other tests	
	Number of samples tested	Number of positive samples	Number of samples tested	Number of positive samples	Number of samples tested	Number of positive samples
In restricted zone	785		785	1		
Total	785		785	1		

(a) Disease and species, if necessary

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

6.6.3. Data on vaccination or treatment of wildlife

Year: \_\_\_\_\_ Disease<sup>(a)</sup>: BT Animal species: \_\_\_\_\_

Description of the used vaccination, therapeutic or other scheme: No vaccination of wild ruminants.

Region <sup>(b)</sup>	Square kms	Vaccination or treatment programme		
		Number of doses of vaccine or treatment to be administered	Number of campaigns	Total number of doses of vaccine or treatment administered
Total				

(a) Disease and species if necessary

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

## 7. Targets

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

#### 7.1.1. Targets on diagnostic tests

Disease<sup>(a)</sup>:

Animal species: Bovines and ovines year 2010

Region <sup>(b)</sup>	Type of the test <sup>(c)</sup>	Target population <sup>(d)</sup>	Type of sample <sup>(e)</sup>	Objective <sup>(f)</sup>	Number of planned tests
Restriction zone (outside vaccinated area)	Bulk milk ELISA	Dairy herds	Bulk milk	surveillance	5000
Vaccinated area	AB-ELISA	Vaccinated animals bovine and ovine	serum	Control of seroconversion	700
Vaccinated area	PCR	Calves born in vector free period	blood	Transcriptionally infected calves	200
Vaccinated area	AB-ELISA	Non vaccinated calves	serum	surveillance	204
Free area	AB-ELISA	Beef cattle	serum	surveillance	1600
Free area	Bulk milk ELISA	Dairy herds	serum	surveillance	400
Whole Sweden	PCR	Clinical suspicions Other serotypes than BT.V.-8	EDFA blood	surveillance	300
Restriction zone including vaccinated area	AB-ELISA - PCR	Wild ruminants	serum	surveillance	8000-8000
Total					10 000

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

#### 7.1.1. Targets on diagnostic tests

Disease<sup>(a)</sup>:

Animal species: Bovines and ovines year 2010

Region <sup>(b)</sup>	Type of the test <sup>(c)</sup>	Target population <sup>(d)</sup>	Type of sample <sup>(e)</sup>	Objective <sup>(f)</sup>	Number of planned tests

Restriction zone (outside vaccinated area)	Bulk milk ELISA	Dairy herds	Bulk milk	surveillance	5000
Vaccinated area	AB-ELISA	Non vaccinated calves	serum	surveillance	200
Free area	AB-ELISA	Beef herds	serum	surveillance	1600
Free area	Bulk milk ELISA	Dairy herds	serum	surveillance	400
Restriction zone including vaccinated area	AB-ELISA, PCR	Wild ruminants	serum	surveillance	8000-8800
Whole Sweden	PCR	Clinical suspicions	EDFA blood	surveillance	300
		Other serotypes than GTV-8			9100
					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 detected vaccines, testing of vaccine, control of vaccination, ...)



7.1.2. Targets on testing herds and animals<sup>19</sup>

7.1.2.1 Targets on the testing of herds<sup>(a)</sup>

Disease <sup>(b)</sup> : Region <sup>(c)</sup>	Animal species: No testing on herd level							TARGET INDICATORS		
	Total number of herds <sup>(e)</sup>	Total number of herds under the programme	Number of herds expected to be checked <sup>(e)</sup>	Number of expected positive herds <sup>(d)</sup>	Number of expected new positive herds <sup>(d)</sup>	Number of herds expected to be depopulated	% positive herds expected to be depopulated	Expected % herd coverage	% positive herds Expected period herd prevalence	% new positive herds Expected herd incidence
1	2	3	4	5	6	7	$8 = (7/5) \times 100$	$9 = (4/3) \times 100$	$10 = (5/4) \times 100$	$11 = (6/4) \times 100$
Total										

(a) Herds or flocks, or holdings as appropriate.

(b) Disease and animal species if necessary.

(c) Region as defined in the approved 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, upgrading, etc., the health status of the herd. In this column a herd must not be counted twice even if it 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 positive animal in this period.

<sup>19</sup> Data not to provide in case of rabies.

7.1.2.2. Targets on the testing of animals (100%)

Disease<sup>(b)</sup>:

Animal species: bovines

Region <sup>(b)</sup>	Total number of animals <sup>(c)</sup>	Number of animals <sup>(c)</sup> under the programme	Number of animals <sup>(c)</sup> expected to be tested	Number of animals to be tested individually <sup>(e)</sup>	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 <sup>(d)</sup>	Expected % coverage at animal level	% positive animals (Expected animal prevalence)
1	2	3	4	5	6	7	8	$9 = \frac{7}{8} \times 100$	$10 = \frac{6}{8} \times 100$
Restriction zone (outside vaccinated area) as of 2009-04-28	253 964	N/A	250 000 (50 indiv per bulk milk test)	0	0				
Vaccinated area	335 790	N/A	200	200					
Free area	594 719	N/A	21 600 (50 indiv per bulk milk test)	1 600					
Total	1 584 473		271 800	1 800					

Disease<sup>(b)</sup>:

Animal species: wild ruminants

Region <sup>(b)</sup>	Total number of animals <sup>(c)</sup>	Number of animals <sup>(a)</sup> under the programme	Number of animals <sup>(b)</sup> expected to be tested	Number of animals to be tested individually <sup>(c)</sup>	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 <sup>(d)</sup>	Expected % coverage at animal level	% positive animals (Expected animal prevalence)
1	2	3	4	5	6	7	8	9-4(3)X100	10-(6/4)X100
Restriction zone			800	800					
Total			800	800					

(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.

7.1.2.2. Targets on the testing of animals 2010

Disease <sup>(a)</sup>	Region <sup>(b)</sup>	Total number of animals <sup>(c)</sup>	Number of animals <sup>(c)</sup> under the programme	Number of animals <sup>(c)</sup> expected to be tested	Number of animals to be tested individually <sup>(d)</sup>	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 <sup>(e)</sup>	Expected % coverage at animal level	% positive animals (Expected animal prevalence)
	I	2	3	4	5	6	7	8	9.4/23x100	10=(6/4)x100
	Restriction zone (outside vaccinated area)	253 964	N/A	250 000 (50 indiv per bulk milk test)	0					
	Vaccinated area	735 790	N/A		300					
	Free area	594 719	N/A	21 600 (50 indiv per bulk milk test)	1 600					
	Total	1 584 473		271 600	1 800					

Disease<sup>(a)</sup>: Animal species: wild ruminants

Region <sup>(a)</sup>	Total number of animals <sup>(c)</sup>	Number of animals <sup>(a)</sup> under the programme	Number of animals <sup>(a)</sup> expected to be tested	Number of animals to be tested individually <sup>(e)</sup>	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 <sup>(b)</sup>	Expected % coverage at animal level	% positive animals (Expected animal prevalence)
1	2	3	4	5	6	7	8	$9 = \frac{7}{8} \times 100$	$10 = \frac{6}{4} \times 100$
Restriction zone			800	800					
Total			800	800					

(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.

### 7.3. Targets on vaccination or treatment (one table for each year of implementation)

#### 7.3.1. Targets on vaccination or treatment<sup>20</sup>

Disease <sup>(a)</sup>	Animal species: bovines 2009									
	Region <sup>(b)</sup>	Total number of herds <sup>(c)</sup> in vaccination or treatment programme	Total number of animals in vaccination or treatment programme	Number of herds <sup>(c)</sup> in vaccination or treatment programme	Number of expected herds <sup>(c)</sup> 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 <sup>(d)</sup> expected to be vaccinated	Number of young <sup>(e)</sup> animals expected to be vaccinated	
Vaccinated area 20090331		8 990	735 790	6 590	6 590	700 000	793 000			
Total		8 990	735 790	6 590	6 590	700 000	793 000			

#### 7.3.1. Targets on vaccination or treatment<sup>21</sup>

Disease <sup>(a)</sup>	Animal species: ovines 2009	
	Region <sup>(b)</sup>	Total
		Targets on vaccination or treatment programme

<sup>20</sup> Data to provide only if appropriate.

<sup>21</sup> Data to provide only if appropriate.

	number of herds <sup>(a)</sup> in vaccination or treatment programme	number of animals in vaccination or treatment programme	ADULTS	Number of herds <sup>(c)</sup> in vaccination or treatment programme	Number of herds <sup>(c)</sup> 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 <sup>(b)</sup> expected to be vaccinated	Number of young <sup>(b)</sup> animals expected to be vaccinated
Vaccinated men 2009/03/1	5677	139 221		2162	2162	378 000	378 000		
Total	5677	139 221		2162	2162	378 000	378 000		

(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

### 7.3.1. Targets on vaccination or treatment<sup>22</sup>

Disease <sup>(a)</sup> :	Animal species: <u>bovines 2010</u>								
	Total number of herds <sup>(a)</sup> in vaccination or treatment programme	Total number of animals in vaccination or treatment programme	Number of herds <sup>(c)</sup> in vaccination or treatment programme	Number of herds <sup>(c)</sup> 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 <sup>(b)</sup> expected to be vaccinated	Number of young <sup>(b)</sup> animals expected to be vaccinated	
Region <sup>(b)</sup>			Targets on vaccination or treatment programme						

<sup>22</sup> Data to provide only if appropriate.

Vaccinated area 2009/0331	8 990	735 790	6 590	6 590	740 000	793 000		
Total	8 990	735 790	6 590	6 590	700 000	793 000		

7.3.1. Targets on vaccination or treatment<sup>23</sup>

Disease<sup>(a)</sup>:

Animal species: ovines 2010

Region <sup>(a)</sup>	Total number of herds <sup>(b)</sup> in vaccination or treatment programme	Total number of animals in vaccination or treatment programme	Targets on vaccination or treatment programme					Number of young <sup>(b)</sup> animals expected to be vaccinated
			Number of herds <sup>(c)</sup> in vaccination or treatment programme	Number of herds <sup>(c)</sup> 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 <sup>(b)</sup> expected to be vaccinated	
Vaccinated area 2009/0331	5677	139 221	2162	2162	350 000	350 000		
Total	5677	139 221	2162	2162	350 000	350 000		

<sup>23</sup> Data to provide only if appropriate.



- (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
- (e)

7.3.2. Targets on vaccination or treatment<sup>34</sup> of wildlife

Disease<sup>(a)</sup>:

Animal species: No vaccination of wildlife

Region <sup>(b)</sup>	Square km	Targets on the vaccination or treatment programme		
		Number of doses of vaccine or treatments expected to be administered in the campaign	Expected number of campaigns	Total number of doses of vaccine or treatment expected to be administered
<b>Total</b>				

(a) Disease and species, if necessary

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

<sup>34</sup> Data to provide only if appropriate.

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

<i>Costs related to</i>	<i>Specification</i>	<i>Number of units</i>	<i>Unitary cost in €</i>	<i>Total amount in €</i>	<i>Community funding requested (yes/no)</i>
<b>1. Testing</b>				<b>1 EURO = 11,317500 SEK</b>	
<i>1.1. Cost of the analysis</i>	<i>Test: bulk milk ELISA, serum ELISA</i>	<i>5400+2600</i>	<i>120SEK 10,60 EUR</i>	<i>142 000 EUR</i>	<b>YES</b>
	<i>Test:PCR</i>	<i>1100</i>	<i>310 SEK 27,40 EUR</i>	<i>30 108 EUR</i>	<b>YES</b>
<b>1.2. Cost of sampling</b>					
<b>1.3. Other costs</b>	<i>Admin. Of sampling regions milk ELISA</i>	<i>5400</i>	<i>3,8</i>	<i>1 811EUR</i>	<b>NO</b>
<b>2. Vaccination or treatment</b>	<i>Vaccine doses</i>	<i>1 171 000</i>	<i>6,74 SEK 0,6 EUR</i>	<i>697 374 EUR</i>	<b>YES</b>
<i>2.1. Purchase of vaccine/treatment</i>					

2.2. Distribution costs		

<i>2.3. Administering costs</i>									
<i>2.4. Control costs</i>									
<b>3. Slaughter and destruction</b>	N/A								
<i>3.1. Compensation of animals</i>									
<i>3.2. Transport costs</i>									
<i>3.3. Destruction costs</i>									
<i>3.4. Loss in case of slaughtering</i>									
<i>3.5 Costs from treatment of products (milk, eggs, hatching eggs, etc)</i>									
<b>4. Cleaning and disinfection</b>	N/A								

<b>5. Salaries (staff contracted for the programme only)</b>	<i>The cost of the vaccination is presented as per vaccine dose. Summary for 5, 6 and 7</i>	1 171 000	50 SEK/vaccinating exclusive vaccin 4,41 EUR	5 169 597 EUR	NO
<b>6. Consumables and specific equipment</b>					
<b>7. Other costs</b>					
<b>TOTAL</b>				6 040 879 EUR	

