



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

SANCO/3789/2008

*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

Sweden

* in accordance with Commission Decision 90/424/EEC

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)¹

1. Identification of the programme

Member State: **SWEDEN**

Disease(s)²: **BLUETONGUE**

Request of Community co-financing for³: **2009**

Reference of this document: **33-4891/08**

Contact (name, phone, fax, e-mail): **Kristina Mieziewska, Phone +46 703 203614, fax: +46 36 156100, email: kristina.mieziewska@sjv.se**

Date sent to the Commission:

2. Historical data on the epidemiological evolution of the disease(s)⁴

3. Description of the submitted programme⁵

This application is based on a 3 year vaccination program to be implemented if the criteria for vaccination are fulfilled. The vaccination programme that has been submitted to the Commission for approval is included in this application (see annex) and funding is requested for this plan as well as for surveillance for bluetongue. Please note that there are two vaccine scenarios for which funding is applied for. The specifics of the vaccination plan can be read in the actual vaccination plan (annex) Also funding is applied for the surveillance that has to be performed regardless of the vaccination program. This application covers the most likely scenarios for 2009.

¹ 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.

² 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.

³ Indicate the year(s) for which co-financing is requested.

⁴ 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.

⁵ 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.

The second part is the surveillance program according to the bluetongue regulation (1266/2007/EC). Surveillance will be adjusted to the presence or absence of restriction zones in Sweden and will follow at least minimum requirements in regulation 1266/2007/EC. Since Sweden is in a high risk area, but the measures implemented in 2009 and forward cannot be decided at present, the contingency planning has to cover all possibilities. The main objective of the plan is to monitor high risk areas and to detect early cases of bluetongue. If true outbreaks are confirmed the vaccination programme will be implemented with the goal to eradicate the disease. Vaccination will be carried out in all cattle, sheep and goat herds in the protection zone. In the buffer zone serological monitoring of domestic ruminants will be applied according to the criteria for the surveillance zone. In the vaccination zone, sentinels in the form of older ewes and lambs destined for slaughter will be used instead of tank milk testing. Such animals will be left unvaccinated and monitored for clinical symptoms during the remainder of their life and sampled for serology at slaughter. The cost of this will be approximately similar to that of the milkELISA tests..

4. Measures of the submitted programme

4.1. *Summary of measures under the programme*

Duration of the programme: 3 years

First year:

Control

Testing **Yes**

Slaughter of animals tested positive

Killing of animals tested positive

Vaccination **Yes, if performed**

Treatment

Disposal of products

Eradication, control or monitoring. **Yes**

Last year:

Eradication

Testing **Yes**

Slaughter of animals tested positive

Killing of animals tested positive

Extended slaughter or killing

Disposal of products

Other measures (*specify*):
killing of viraemic animals

4.2. *Organisation, supervision and role of all stakeholders⁶*

The Swedish Board of Agriculture (SBA) has, according to the Swedish regulation on epizootic diseases (1999:65 2§), the supervising and coordinating 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 vaccines used will be selected by the SVA. They are responsible for handling, storing and distribution of the vaccine as well as for administration and analysis of the antibody testing.

The County Administrative Board (CAB) is the authority responsible for controlling that decided measures are carried out in their county. SBA can according to the legislation also delegate certain tasks to CAB.

Government employed veterinarians

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.

The District Veterinary Organisation (DVO) within the SBA have national coverage and have about 300 veterinarians in 80 stations. These veterinarians will be the ones that carry out the vaccination or supervise technicians and other personnel.

National and local disease (vaccination) centres

If a vaccination campaign will be carried out, there will be a National disease control centre at SBA and Local disease control (vaccination) centres. The local centres will coordinate the vaccination within their defined areas. Staff for the local centres will be recruited from the DVO.

If necessary, SBA has also the authority to recruit any veterinarian to act as a district veterinarian.

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

To simplify, two areas involving a smaller and a larger area of vaccination is included in the vaccination plan. These areas consists of whole counties. The smallest administrative areas in the counties are the municipalities. Veterinary services that are used for vaccination and monitoring cover all areas in the programs. The counties of Skåne, Halland Kronoberg and Blekinge, and also the counties of Jönköping and Västra Götaland may be involved in vaccination, see maps and explanations in the vaccination plan in annex.

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:

4.4.1. Notification of the disease: According to regulation 1266/2007/EC

4.4.2. Target animals and animal population: Cattle, sheep and goats, for surveillance, cattle, sheep and wild ruminants.

4.4.3. Identification of animals and registration of holdings:

All holdings are registered at SBA. CDB (bovine data base) has information and localization of every bovine in Sweden. CDB is currently used to register bovines that have been tested for bluetongue. The tested bovines are denoted in this database, and the CDB can be used to supervise the movement of animals out of the restriction zone. The CDB register will be upgraded for the possibility to include vaccination information. Individual registers on sheep and goats are being developed for the purpose of vaccination.

4.4.4. Qualifications of animals and herds⁹: N/A

4.4.5. Rules on the movement of animals:

According to Directive 2000/75/EC and Regulation 1266/2007/EC

4.4.6. Tests used and sampling schemes:

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 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 schemes for surveillance in restriction zones or high risk areas: Example: the counties of Skåne, Blekinge and Halland. During vector season monthly milk ELISA tests will be performed on sentinels to achieve at least prevalence on 0,5% with 95% confidence. (in reality a total of around 6500 bulkmilk tests/year in this area.) Outside risk areas beef cattle for slaughter will be tested with serology for antibodies in accordance with the regulation 1266/2007/EC. If an area is vaccinated the sentinels in that area will consist of older ewes and lambs for slaughter and wild ruminants (game).

4.4.6. Vaccines used and vaccination schemes:

Inactivated vaccine for BTV-8, Vaccination schemes according to the manufacturers recommendations.

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.

4.4.8. Information and assessment on bio-security measures management and infrastructure) in place in the holdings involved: According to Directive 2000/75/EC

4.4.9. Measures in case of a positive result¹⁰: According to Directive 2000/75/EC. A 20 km zone will be established around the outbreak.

4.4.10. Compensation scheme for owners of slaughtered and killed animals: Swedish regulation on epizootic diseases (1999:657). Owners are compensated for animals killed (value of animals 100%), cleaning and disinfection (100%) and production losses (50%) or due to vaccination (100%).

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

see 4.2.

5. **Benefits of the programme**¹¹:

The effects of the new vector born virus is unknown in Sweden. Bluetongue has in a very short time period caused affected neighbouring member states considerable animal health and economic problems. In view of their experience the effort will be concentrated on early detection and eradication.

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.).

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

6.1. **Evolution of the disease**¹³ Bluetongue has never been detected in Sweden. On October 2007 a part of southern Sweden was included in a surveillance zone due to an outbreak in Denmark. Testing according to regulation 1266/2007/EC was made in 2007 in both the surveillance zone and in free areas. In March 2008 this surveillance zone was lifted. Surveillance will be done to at least the minimum requirement according to the regulation. Data is submitted for 2007 when surveillance was performed for November.

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

Year: 2007

Situation on date: 20071231

Disease^(b): Animal species: bovines, targeted for surveillance for B1 according to regulation 1266/2007/EC

Region ^(c)	Total number of herds ^(d)	Total number of herds under the programme	Number of herds checked ^(e)	Number of positive herds ^(c)	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
J	2	3	4	5	6	7	8	$9 = (4/3) \times 100$	$10 = (5/4) \times 100$	$11 = (6/4) \times 100$	
Surveillance zone from 20071013 (part of Skåne county)	3099	N/A	662	0	0	0	N/A	N/A	0	0	

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.

Total	3099	N/A	662	0	0	0	N/A	N/A	N/A
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- (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.

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

Year: 2007

Situation on date:

Disease^(a):

Animal species: bovine 662 dairy herds tested with bulk milk ELISA number of animals unknown (in compliance with 1266/2007/EC)

Region ^(b)	Total number of animals ^(c)	Number of animals ^(d) to be tested under the programme	Number of animals ^(d) tested	Number of animals tested individually ^(e)	Number of positive animals	Slaughtering		INDICATORS	
						Number of animals with positive result slaughtered or culled	Total number of animals slaughtered ^(f)	% coverage at animal level	% positive animals Animal prevalence
1	2	3	4	5	6	7	8	$9 = (4/3) \times 100$	$10 = (6/4) \times 100$
Skåne county surveillance zone	218818	662 herds (bulk milk)	Unknown, test on herd level	0	0	0	0	N/A	0
Total	218818	662		0	0	0	0	N/A	0

(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^(a): 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 ^(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)
Surveillance zone, Skane county	662	0	0	0	0	0
Total	662	0	0	0	0	0

(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) N/A

Year:

Disease^(a):

Animal species:

Region ^(b)	Number of herds infected ^(c)	Number of animals infected
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.

6.4. Data on the status of herds at the end of each year¹⁴

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

Region ^(b)	Status of herds and animals under the programme ^(c)													
	Total number of herds and animals under the programme		Unknown ^(d)		Not free or not officially free from disease Last check positive ^(e)		Last check negative ^(e)		Free or officially free from disease status suspended ^(g)		Free from disease ^(h)		Officially free from disease ⁽ⁱ⁾	
	Herds	Animals ^(f)	Herds	Animals ^(f)	Herds	Animals ^(f)	Herds	Animals ^(f)	Herds	Animals ^(f)	Herds	Animals ^(f)	Herds	Animals ^(f)
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 in Community or national legislation for the respective disease at the end of the reporting period.

(h) Free herd as defined in Community or national legislation for the respective disease.

(i) Officially free herd as defined in Community or national legislation for the respective disease.

(j) Include animals under the programme in the herds with the referred status (left column).

¹⁴ Only data to provide for bovine tuberculosis, bovine brucellosis, ovine and caprine brucellosis (*B. melitensis*), enzootic bovine leucosis (EBL) and Aujeszky's disease.

6.5. Data on vaccination or treatment programmes¹⁵

Year:

Disease^(a):

Animal species:

Description of the used vaccination, therapeutic or other scheme:

Region ^(b)	Total number of herds ^(c)	Total number of animals	Information on vaccination or treatment programme					Number of young ^(d) animals vaccinated
			Number of herds ^(c) in vaccination or treatment programme	Number of animals vaccinated or treated	Number of losses of vaccine or treatment administered	Number of adults ^(d) 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: _____
live animals
 Method of estimation^(a): number of hunted animals in the county in the table. Not possible to make a good estimate on actual number of

Regions ^(b)	Estimation of the population of the concerned wild species			
	Species: moose	Species: deer	Species:roe deer	Species: Crown game
Shane county	341	9904	3074	449
Total	341	9904	3074	449

(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.

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

Year: 2007

Disease^(a):

Animal species:

Description of the used serological tests: No tests performed in 2007 on wild ruminants

Description of the used microbiological or virological tests:

Description of the other used tests:

Region ^(b)	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
Total						

(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^(a):

Animal species:

Description of the used vaccination, therapeutic or other scheme: N/A

Region ^(b)	Square km	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^(a):

Animal species:

Region ^(b)	Type of the test ^(c)	Target population ^(d)	Type of sample ^(e)	Objective ^(f)	Number of planned tests
Scenario 2	Milk ELISA	Dairy herds	Bulk milk	surveillance	6500/year
Outside risk area	AB ELISA	Beef cattle for slaughter	serum	surveillance	13000/year
Outside risk area	AB ELISA	Vaccinated animals	serum	Control of vaccination	Not estimated
Outside risk area	AB ELISA	Dairy herd	Bulk milk	surveillance	480/year
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, RBJ, ...)

(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. Targets on testing herds and animals¹⁷

7.1.2.1 Targets on the testing of herds^(a) Testing of herds and animals are according to 1266/2007/EC

Disease ^(b)	Animal species:										TARGET INDICATORS		
	Region ^(c)	Total number of herds ^(d)	Total number of herds under the programme	Number of herds expected to be checked ^(e)	Number of expected positive herds ^(f)	Number of expected new positive herds ^(g)	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		
Scenario 2	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		
		7993 (bovine+sheep+goat)	See table 7.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
	Scenario 3	16518 (bovine+sheep+goat)	See table 7.1	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
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.

¹⁷ Data not to provide in case of rabies.

(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.

7.1.2.2. Targets on the testing of animals

Disease^(a):

Animal species:

Region ^(b)	Total number of animals ^(c)	Number of animals ^(a) under the programme	Number of animals ^(a) expected to be tested	Number of animals to be tested individually ^(c)	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 ^(c)	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
Scenario2	492313	492313	1300 indiv. + 6500 bulkmilk ^(c)	1300/year	N/A	N/A	N/A	1,3% if control bulkmilk as one animal	N/A
Scenario3	966985	966985	Not estimated	Not estimated	N/A	N/A	N/A	Not estimated	N/A
			At least according to decision 1266/2007						
Total									

(a) Disease and animal species if necessary.

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

- (e) 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)

Disease ^(a) Region ^(b)	Animal species:													
	Total number of herds and animals under the programme		Expected not free or not officially free from disease						Targets on the status of herds and animals under the programme ^(c)					
			Expected unknown ^(d)		Last check positive ^(e)		Last check negative ^(f)		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)	Herds	Animals ^(j)	Herds	Animals ^(j)	Herds	Animals ^(j)	Herds	Animals ^(j)	Herds	Animals ^(j)	
I	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 but not being *Free or Officially Free*

(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)

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

7.3.1. Targets on vaccination or treatment¹⁹

Disease ^(a) : bluetongue	Animal species:		Targets on vaccination or treatment programme						
	Region ^(b)	Total number of herds ^(c) in 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 ^(d) animals expected to be vaccinated
Scenario 2		7993	492313	7993	492313	895782			
Scenario3		16518	966985	16518	966985	1 763 239			
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.

7.3.2. *Targets on vaccination or treatment²⁰ of wildlife*

Disease^(a):

Animal species:

Region ^(b)	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
Total				

(a) Disease and species if necessary

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

²⁰

Data to provide only if appropriate.

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

<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>
1. Testing					
1.1. Cost of the analysis					
	Test:mikELISA (tank milk test)	6500+480	11,41	79 642	yes
	Test:AB ELISA	1300	11,41	14 833	yes
	Test:				
1.2. Cost of sampling					
	mikELISA	6980	1,08	7 538	yes
	AB ELISA	1300	0,87	1131	yes
1.3. Other costs					
	Admin. Of sampling regions	6980	3,8	26 414	yes
	investigation due to false positives	1600	11,41	18 256	yes
2. Vaccination or treatment					
2.1. Purchase of vaccine/treatment					
	Scenario 2	895 728	0,5	474 278	yes
	Scenario 3	1 763 239	0,5	908 034	yes
2.2. Distribution costs					

2.3. Administering costs							
2.4. Control costs							
3. Slaughter and destruction							
3.1. Compensation of animals					<i>Not possible to estimate</i>		
3.2. Transport costs					<i>Not possible to estimate</i>		
3.3. Destruction costs					<i>Not possible to estimate</i>		
3.4. Loss in case of slaughtering					<i>Not possible to estimate</i>		
3.5. Costs from treatment of products (milk, eggs, hatching eggs, etc)							
4. Cleaning and disinfection							

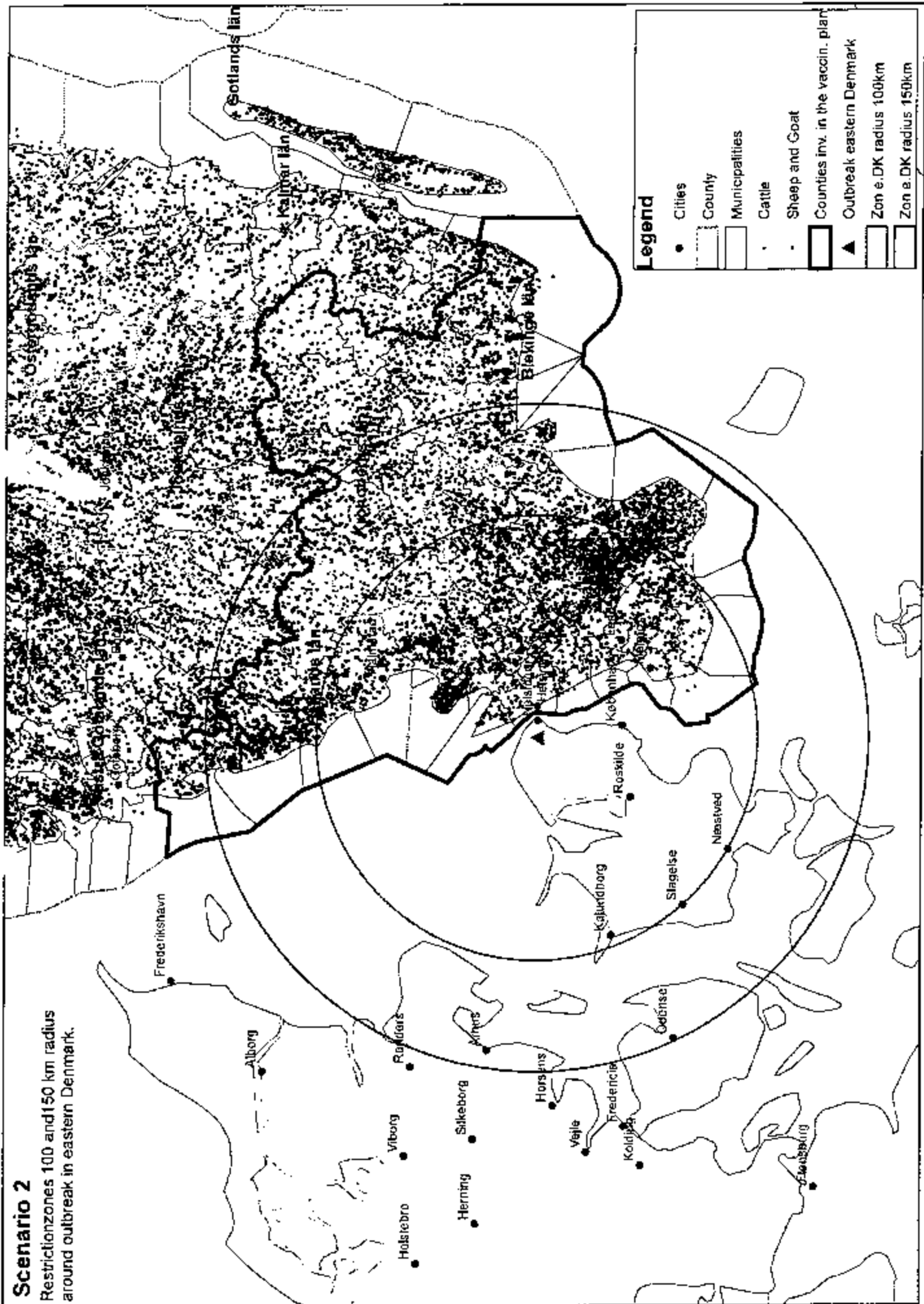
5. Salaries (staff contracted for the programme only)	Scenario 2				2 704 696	yes
	Scenario 3				4 046 956	yes
6. Consumables and specific equipment	Scenario 2				15 000	No (included in salaries)
	Scenario 3				25 000	No (included in salaries)
7. Other costs						
TOTAL					(Scenario 2): 2 745 788 (Scenario 3): 5 167 804	

Overview



Scenario 2

Restriction zones 100 and 150 km radius around outbreak in eastern Denmark.

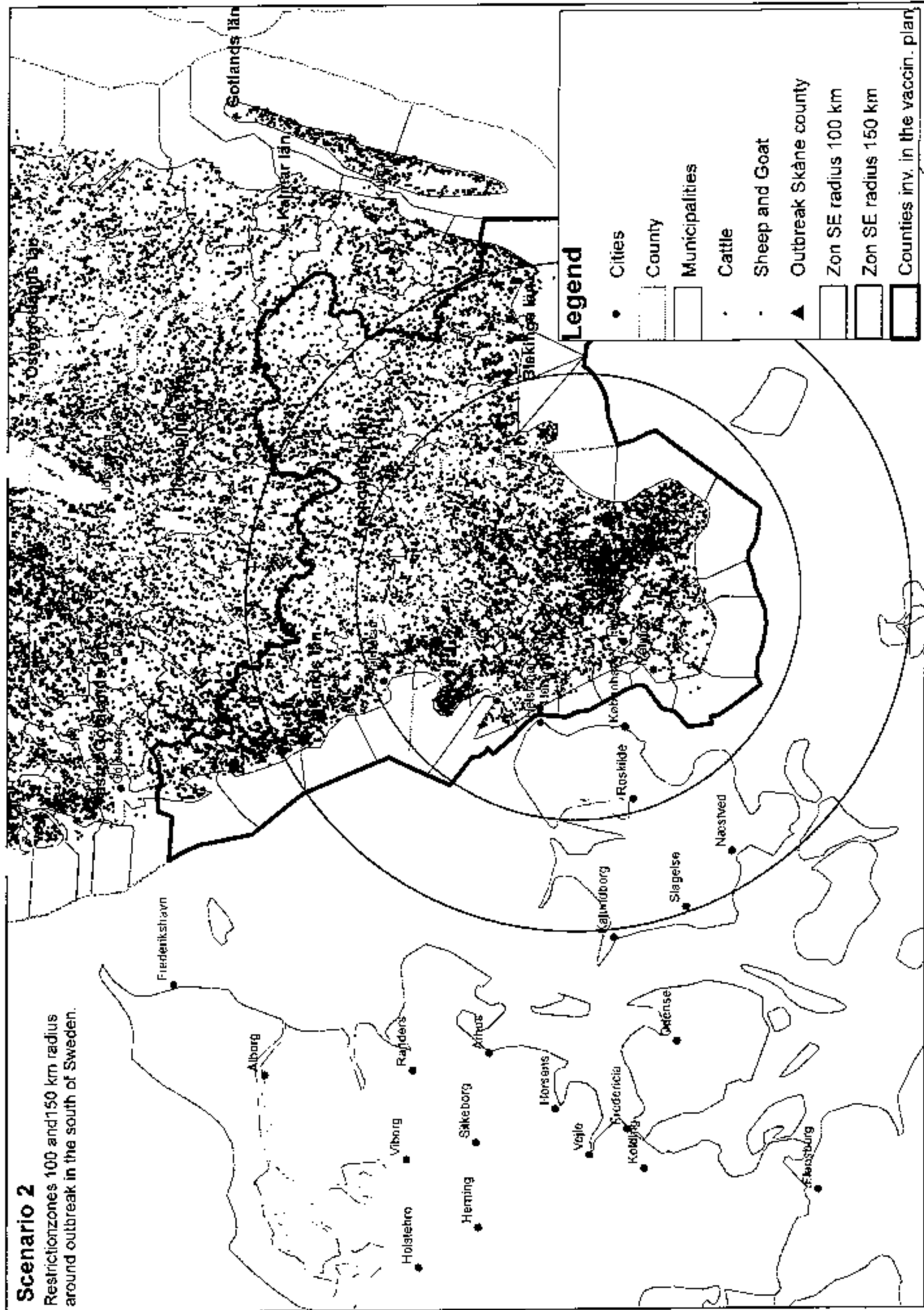


Legend

- Cities
- County
- Municipalities
- Cattle
- Sheep and Goat
- Counties inv. in the vaccin. plan
- ▲ Outbreak eastern Denmark
- Zon e.DK radius 100km
- Zon a.DK radius 150km

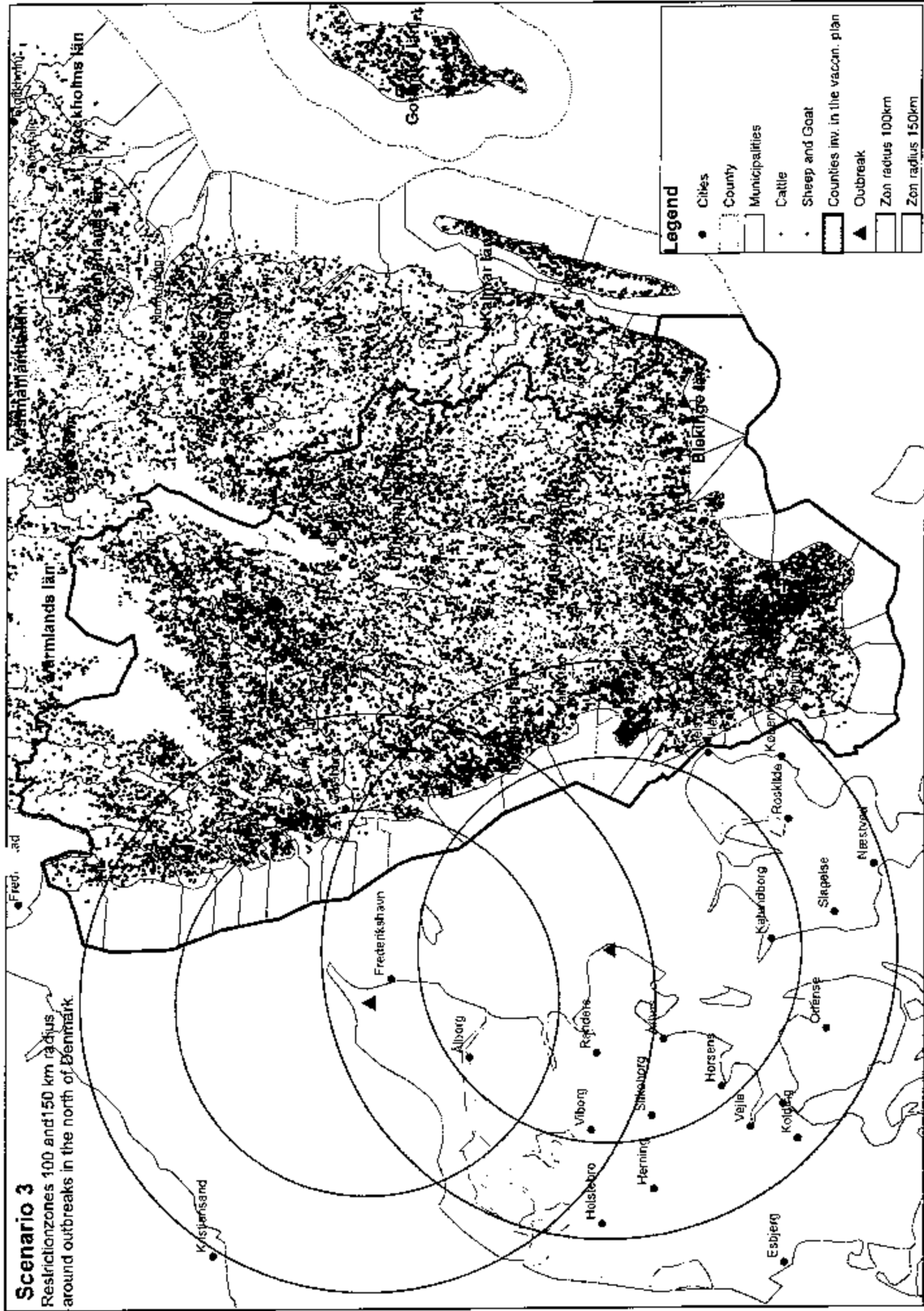
Scenario 2

Restriction zones 100 and 150 km radius around outbreak in the south of Sweden.



Scenario 3

Restriction zones 100 and 150 km radius around outbreaks in the north of Denmark



SANCO/10225/2008

BLUETONGUE EMERGENCY MASS VACCINATION PLAN 2008

SWEDEN

Requirements for the submission of bluetongue emergency mass vaccination plans for 2008

1. Identification

Member State: **Sweden**

Serotype(s): **BTV-8**

Request of co-finance for¹BTV-8 vaccine and vaccination: **both**

Reference of this document: **Vaccination plan Sweden 20080215**

Contact (name, phone, fax, e-mail):

Bengt Larsson, phone +46-702 903 754, bengt.larsson@sjv.se

or kristina.mieczewska@sjv.se

2. Brief description of the epidemiological evolution of the disease(s):

Risk assessment

Bluetongue has never been encountered in Sweden. Several factors have been considered in choosing a suitable vaccination strategy.

The progressive evolution of the disease, in particular the BTV-8 type, during 2006 and 2007 outside its previously assumed geographical boundaries has rendered current knowledge of the disease incomplete and less useful for predicting further spread in northern Europe. It is unknown how far north the disease can spread and also what the consequences would be for livestock or wildlife.

So far the measures taken to limit spread in BTV-8 affected countries have not been able to stop the disease from spreading. It is unlikely that current measures in the BT legislation will have any effect in 2008 beyond what has possibly been achieved so far. The current threat to Sweden will persist even after a vaccination campaign is launched in affected countries in the summer of 2008, until the outcome of the vaccination campaign is known.

Climatic factors

In 2007, bluetongue reached southern Denmark. At least all of Denmark and the southern part of Sweden have to be considered to be in the high risk area. Further north, factors such as shorter summers and a generally colder climate may alter the risk.

Midge population

The behaviour and lifecycle of potential vectors in the north of Sweden have not yet been studied. It has been established that the same *Culicoides* spp. which are believed to spread the BTV-8 serotype in the EU, are present in the southern half of Sweden. Although the summer in the north of Sweden is relatively short, there is an abundance of biting insects during those

¹ Indicate the measures for which co-finance is requested

months. It is unknown whether the conditions would be favourable for the spread of bluetongue.

Susceptible ruminants

The concentration of farmed animals in Sweden is not as high as in some of the affected member states. The majority of herds are located in the southern parts of the country and in these areas the population is sufficient to maintain virus circulation during the period of vector activity. In addition there are over 200 000 moose and over 400 000 deer in the country. This may slow down detection or mask the spread of the disease and make it more difficult to trace, once established in the vector population. Rough estimations of the maximal forage areas used by individual moose and deer are available and have been taken into consideration for assessing the spread of viremic wild ruminants. The large herds of reindeer in the very north of Sweden are not considered in this plan due to their stationary residence in the north where the climate is less favourable for disease spread.

3. Brief description of the submitted plan:

The plan is based on an estimate of the likely "bluetongue events" of 2008 taking into consideration several factors described below.

The objective is to have no infected animals or vectors in Sweden. The time frame will be subject to changes depending on the status of the surrounding countries.

Description of vaccination strategy.

Sweden will not vaccinate if the infection is contained within the present area within the Community. If there is a spread of the disease and thereby a threat to Sweden, or if a case is detected in Sweden, vaccination will be carried out. However, the situation in the neighbouring countries is critical. If there has been no significant spread of bluetongue during the summer months and it is approximately 1-2 months before the seasonally free period, no vaccination will be done.

Criteria for the implementation of the plan.

1. Implementation and strategy in other member states.

A factor affecting the predicted future spread of the disease is the extent of vaccination in the currently affected member states. If their vaccination campaigns are believed insufficient for halting the spread, a more pro-active approach would be needed in Sweden.

2. Availability of the vaccine.

One crucial factor is the date of availability of effective vaccines in other member states, as this will affect not only the actual spread of the disease but also the predicted future spread and thus the magnitude of the threat to the Swedish animal population. Availability of inactivated vaccine in Sweden will also affect the choice of strategy, as a shortage would mean that only the limited strategies are practically feasible.

3. Time considerations.

If the high risk of the disease spreading into Sweden occurs very late in the season, only a limited vaccination campaign (or no vaccination) may be needed to prevent further spread.

The time of decreased *Culicoides* activity occurs relatively early in Sweden, especially in the north, and thus the risk would be regarded as smaller late in the season. Meteorological data will be used as a basis for the estimation of when vector activity and effective virus spread can be assumed to decrease to threshold level (i.e. below what would be needed for an outbreak).

4. Coverage in Sweden.

The geographical extent of the vaccination plan will be modified according to the above factors.

Maps

Three maps with examples of 100 and 150km zones and geographically related administrative areas are provided. Estimated number of animals in each county are provided in point 6 in the plan. An estimate of the number of wild ruminants can be made in each county (not shown in the map).

The maps contain the following information:

1. The extent of the restriction zone in Swedish territory depending on the localization of a bluetongue outbreak. Examples of such zones are shown on the maps as 100 km and 150km circles.
2. The counties in which vaccination would be considered are outlined with a thick red line. The number of animals in these counties is approximated in tables in point 6. The extent of the vaccination in each county will be modified to fit the actual situation. The municipalities in each county will be used as smallest administrative area. They are outlined in the maps.
3. All bovine, ovine and caprine farms are shown in the map as dots. On a small size map (A4) it is only possible to have an overview of the concentration of farms.

5. Measures of the submitted plan

4.1 *Summary of measures under the plan*

4.1.1. Duration of the plan:

Three years

- First year: concise summary of activity foreseen

Communication plan.

An information campaign is launched by the Board of Agriculture (SBA) in collaboration with the National Veterinary Institute (SVA), County Administrative Board (CAB) and the stakeholders, primarily to reach all farms in the areas "at risk". Information of the situation abroad and in Sweden will be posted through local media, on SBA, SVA CAB and

stakeholder websites as well as through other sources. The information division at the SBA is responsible for the communication plan.

Risk assessment Continuous evaluations of the risk areas neighbouring Sweden will be made throughout the year. Monthly serological surveillance in the surveillance zone as well as increased clinical and serological surveillance in epidemiological relevant areas outside the Swedish part of the surveillance zone will be made. Entomological surveillance will continue throughout the year.

Launching of the vaccination. As stated previously, a vaccination plan will be initiated if one of two conditions are fulfilled. 1: Based on continuous evaluation of the bluetongue situation of nearby member states it is decided that outbreaks of bluetongue in Sweden is likely to occur in the near future. 2: A case or outbreak is found in Sweden. The earliest and most likely initiation time of the plan so far is late summer-early autumn 2008, taking into consideration the characteristics of the disease, the present state of spread and the status of the vaccine manufacturing plans. Once initiated, the plan will most likely be implemented for 3 years.

Vaccine delivery. A delay of vaccine delivery from the time of initiation of the vaccine plan is foreseen to around 2-4 weeks. After receiving the vaccine susceptible animals will be vaccinated beginning with the area closest to the outbreaks. Estimated time of completion of vaccination plan is 4 weeks for the majority of the herds closest to the outbreak.

If the vaccination campaign is launched in the middle of summer delays are foreseen due to the fact that some herds will have to be collected from grazing.

Monitoring viral circulation. In the buffer zone serological monitoring of domestic ruminants will be applied according to the criteria for the surveillance zone. In the vaccination zone, sentinels in the form of older ewes and lambs destined for slaughter will be used. Such animals will be left unvaccinated and monitored for clinical symptoms during the remainder of their life and sampled for serology at slaughter.

-- Second year: concise summary of activity foreseen

If vaccination has begun in 2008 and if the vaccine is proven effective (based on both Swedish and foreign evaluations) there will be continuous vaccination of ruminants over 2 months of age as well as a revaccination of animals vaccinated 2008. To cut costs, cattle and sheep will as far as possible be vaccinated within the frame of regular veterinary visits.

If vaccination was not initiated in 2008, it may be initiated in 2009 if the conditions stated for 2008 has been fulfilled.

-- Last year: concise summary of activity foreseen

Vaccination of animals according to year 2.

Evaluation of success of vaccination in areas in- and outside Sweden.

4.1.2. Calendar of implementation through the year (indicate priorities by region or status of herd or other relevant criteria)

It is not possible to give a detailed calendar of events. However, the most likely time for a vaccination campaign is in June-August. According to the entomological survey made 2007 the activity of the Swedish midges starts to decline in October. This time is temperature dependent and cannot be accurately foreseen. Several years of milder autumns have been seen in southern parts.

The area closest to the outbreaks will be prioritized. All susceptible cattle, sheep and goats will be vaccinated in these areas. The objective is not to leave islands unvaccinated. Surveillance will be adjusted to the actual situation.

Wild ruminants, deer and moose will be tested serologically during hunting season (early fall). Lambs are slaughtered throughout autumn and can be serologically tested continuously both if a vaccination is initiated or if it is not.

The vector free period will most likely begin in November.

4.1.3. Monitoring immunization: strategy to be used to check proper implementation

Monitoring the efficacy of the vaccination campaign

All bovine, ovine and caprine herds or farms have an identification number (PPN – production place number). In addition, all cattle, sheep and goats have individual ID numbers. The registration of vaccinated animals will be monitored by the registration unit in the SBA.

Apart from ensuring a total coverage of the campaign, via official vets and official animal records, surveillance to monitor the seroconversion of vaccinated animals will be made.

A random sample of vaccinated animals will be tested for seroconversion. The sample size calculations use the same method as for estimating seroprevalence (but here applied for absence of seroconversion), using a design prevalence of 20% (since the aim is 80% seroconversion) and replacing test sensitivity with test specificity (since the aim is to detect true negative animals). Herd-level clustering will also be accounted for.

4.1.4. Other measures (*specify*):

4.2. Organisation, supervision and role of all stakeholders involved in the plan (full description)

4.2.1. Legal provisions for the plan (compulsory/not compulsory)

Compulsory

legal basis: Swedish regulation on epizootic diseases (1999:657)

- 4.2.2. Identification and designation of the central authority charged with supervising and coordinating the departments responsible for implementing the plan;

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

- 4.2.3. Full description of the departments, services or other means to be used for implementing the measures of the plan

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 vaccines used will be selected by the SVA. They are responsible for handling, storing and distribution of the vaccine as well as for administration and analysis of the antibody testing.

The County Administrative Board (CAB) is the authority responsible for controlling that decided measures are carried out in their county. SBA can according to the legislation also delegate certain tasks to CAB.

Government employed veterinarians

The District Veterinary Organisation (DVO) within the SBA have national coverage and have about 300 veterinarians in 80 stations. These veterinarians will be the ones that carry out the vaccination or supervise technicians and other personnel.

National and local disease (vaccination) centres

If a vaccination campaign will be carried out, there will be a National disease control centre at SBA and Local disease control (vaccination) centres. The local centres will coordinate the vaccination within their defined areas. Staff for the local centres will be recruited from the DVO.

If necessary, SBA has also the authority to recruit any veterinarian to act as a district veterinarian.

4.3 Description and delimitation of the geographical and administrative areas in which the plan is to be implemented²:

Two alternatives

Alternative 1 is based on the following situation:

The spread of bluetongue is estimated to reach Sweden within the following months and there is at least 1-2 months before the vector free period can be expected to begin in the southern parts of the country.

Preventive vaccination will be initiated in the coastal areas along the southern borders. As an example this might involve the vaccination of all susceptible domestic species in the entire counties of Skåne, Halland and Blekinge, as well as the southern coastal parts of the counties of Kalmar and Västra Götaland. This would involve approximately 650 000 animals (cattle, sheep and goats). The aim of this strategy is to achieve a protective immunity in these areas, so as to create a "firewall" and avoid outbreaks as well as spread of infection in the Swedish animal population. (Map scenario 3)

Alternative 2 is based on the following situation:

The spread of bluetongue has already reached the Swedish borders and restriction zones (in addition to the one remaining from the Danish case in 2007) already cover parts of southern Sweden.

Vaccination will be applied in restricted areas, in an area covering a 200 - 250 km radius from all outbreaks. Depending on the geographical location of the outbreak(s), a larger zone may be more suitable. A buffer zone of 50 - 100 km outside the vaccination zone with intensified surveillance will also be applied. (Map scenario 2)

4.4. Description of the measures of the plan³:

4.4.1. Target animals and animal population indicating which herds and animals, if any, are excluded from the programme and why

- Indicate: species, aptitude (milk/beef), age of animals to be vaccinated

Animals included in the vaccination plan

Vaccination of all herds of bovine (milk/beef), ovine and caprine animals over 2 months of age will be mandatory. Other susceptible species or wild species will not be included. Zoo animals will be allowed to be vaccinated on a voluntary basis.

As soon as the chosen vaccine is available, Sweden will allow vaccination of certain animals in the existing restriction zone that will be transported out of the restriction area to free areas. However, this vaccination will be allowed only after permission from SBA on a case by case basis. This will remove the risk involved with applying unsafe vector protective measures

² Describe the name and denomination, the administrative boundaries, and the surface of the administrative and geographical areas in which the plan is to be applied. Illustrate with maps.

³ A comprehensive description needs to be provided of all measures. The national legislation in which the measures are laid down is mentioned.

when moving the animals out of a zone as well as minimising stakeholder losses due to the restriction zone.

Animals excluded from vaccination.

In areas within close distance (20-40km) to an outbreak only ewes intended for slaughter will be exempted. In areas vaccinated due to outbreaks outside Sweden, ewes and lambs for slaughter will be exempted. Lambs are normally slaughtered from august to december.

- If certain categories of already naturally immunized animals (adults of certain species) are to be exempted from vaccination, sufficient data substantiating the immunological status of the population (mainly a reliable estimation of the intra herd prevalence) should be provided for each geographical area.

N/A

4.4.2. Means to ensure mass coverage

Compulsory vaccination

Compulsory vaccination will be carried out . Expected coverage at least 80% of susceptible animals.

Voluntary vaccination: describe mechanisms to be used to ensure proper implementation

Voluntary vaccination of zoo animals and certain valuable animals will be permitted.

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

Bovine data base

CDB (bovine data base) has information and localization of every bovine in Sweden. CDB is currently used to register bovines that have been tested for bluetongue. The tested bovines are denoted in this database, and the CDB can be used to supervise the movement of animals out of the restriction zone. The CDB register will be upgraded for the possibility to include vaccine information.

The vaccine brand, date of vaccination and expiration will be entered into the CDB bovine register. The veterinarians vaccinating the animals will send confirmation to the CDB unit that the animals are vaccinated, including the vaccine data. The animals that are due for revaccination will be flagged in the CDB register. Only cattle destined for export will be ear-tagged.

Identification and registration of sheep and goats

There is currently no individual sheep and goat data base. The veterinarian vaccinating the animals report the ID on the ear tags to SBA. The information about herd, individual number and date of expiration of vaccine will be entered into a register. All tested animals as well as all vaccinated animals can be registered in a database. Vaccinated ovine and caprine animals for export only will be marked with specific ear tags.

4.4.4. Vaccines to be used (types) and vaccination schemes (dosage)

Tenders have been launched for inactivated vaccine

Estimated dosage. 2 doses/cattle and 1 dose/sheep and goat. Yearly booster.

4.4.5. Compensation scheme for owners for animals death due to vaccination

Owners are compensated for losses of animals due to measures taken for outbreaks of epizootic diseases according to the Swedish regulation on epizootic diseases (1999:657).

4.4.6. Control on the implementation of the plan and reporting:

The National disease control center at SBA, and lokal disease control centers.

4.5 Surveillance

-Describe surveillance in place, specially changed in existing surveillance schemes due to the implementation of vaccination

The aim is to assure full coverage. As described earlier, older ewes and lambs for slaughter will form a good basis for surveillance due to the continuous autumn slaughter. Also during fall game will be hunted and can be tested. Most of the susceptible animals in Sweden are cattle, approximately 5:1, so testing lambs will not interfere with the vaccination.

Laboratory tests

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 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).

4.6. Financial information

4.6.1. Description of the national finances involved (i.e. funds, regional/national budget)

2008

The government will bear the cost for vaccination and the government will apply for co-financing from the community.

According to the Swedish epizootic legislation (1999:657) government funding may be applied for 100% of the cost of vaccination.

Estimated costs will include cost of vaccine, distribution of vaccine to local/regional vaccination centres, cost for vaccination (veterinary costs) and some disposables.

5. Data on infection

Region/zone ^(b)	Number of outbreaks in 2007	Serotype
N/A		
Total		

6. Targets on vaccination

6.1 Targets on vaccination for 2008

Cattle:

Region	Serotype	Vaccine type	Targets on vaccination plan									
			Total number of herds existing in the region	Total number of animals existing in the region	Number of herds expected to be vaccinated	Number of adult animals expected to be vaccinated	Number of young animals expected to be vaccinated	% of animals expected to be vaccinated (vaccinated/expected)	Number of doses of vaccine expected to be administered			
Scenario 2 + scenario 3 in the maps												
Slane county	BTV 8	Inactivated	3099	218818	3099	145878	7239	100	437636			
Blking county	BTV 8	Inactivated	670	28078	670	19118	9559	100	57356			
Hallands county	BTV 8	Inactivated	1370	93688	1370	62445	31222	100	167336			
Kronoberg county	BTV 8	Inactivated	1336	62262	1336	41508	20754	100	124524			
Total			6675	403446	6475	268949	134474	100	806852			
+ scenario 3												
Jonkings county	BTV 8	Inactivated	2204	125309	2204	83519	41769	100	250618			
Vastra gotalands county	BTV 8	Inactivated	4570	267527	4570	178351	89175	100	535054			
Total			13249	796282	13249	530839	265418	100	1592524			

The table shows data in each county. Whole, or parts of a county may be involved in a vaccination.

6.1 and 6.2 sheep

Sheep and goats: this table is the same for subsequent years as for 2008

Region	Serotype	Vaccine type	Targets on vaccination plan						
			Total number of herds existing in the region	Total number of animals existing in the region	Number of herds to be vaccinated	Number of adult animals expected to be vaccinated	Number of young animals expected to be vaccinated ¹	% of animals expected to be vaccinated (vaccinated/stung)	Number of doses of vaccine expected to be administered
Scenario 2 + scenario 3 in the maps	BTV 8	Inactivated	710	47478	710	47474	0	100	47478
	BTV 8	Inactivated	183	12534	183	12534	0	100	12534
	BTV 8	Inactivated	358	16592	358	16592	0	100	16592
	BTV 8	Inactivated	267	12263	267	12263	0	100	12263
Total			1518	88867	1518	88867	0	100	88867
+ scenario 3									
Jonkoping's county	BTV 8	Inactivated	413	20790	413	20790	0	100	20790
	BTV 8	Inactivated	1337	61046	1337	61046	0	100	61046
Total			3268	170703	3268	170703	0	100	170703

The table shows number of animals in each county. Whole, or parts of a county may be involved in a vaccination.

¹ Lambs are usually slaughtered in autumn. They will be tested as part of the serological surveillance. Lambs destined to become breeding animals will be vaccinated. The total number of animals is assumed to be approximately the same each year.

Other species: (please indicate if any) Alpackas around 700 totally in Sweden, not known how many in the potential vaccination areas.

6.2 Targets on vaccination (one table for each of the subsequent years of implementation)

Cattle:

Region	Serotype	Vaccine type	Targets on vaccination plan										
			Total number of herds existing in the region	Total number of animals existing in the region	Number of herds expected to be vaccinated	Number of adult animals expected to be vaccinated	Number of young animals expected to be vaccinated ¹	% of animals expected to be vaccinated (vaccinated/expected)	Number of doses of vaccine expected to be administered				
Scenario 2 + scenario 3 in the maps													
Skåne county	BTV 8	Inactivated	3099	218818	3099	145878	72939	100	324228				
Blekinge county	BTV 8	Inactivated	670	28678	670	19118	9559	100	38236				
Hallands county	BTV 8	Inactivated	1370	93688	1370	62445	31222	100	124889				
Kronobergs county	BTV 8	Inactivated	1336	62262	1336	41308	20754	100	83016				
Total			6475	403446	6475	268949	134474		570369				
+ scenario 3													
Jönköpings county	BTV 8	Inactivated	2204	125309	2204	83319	41769	100	167077				
Västtra götlands county	BTV 8	Inactivated	4570	267527	4570	178351	80175	100	356701				
Total			13249	796282	13249	530839	373326	100	1094147				

The table shows number of animals in each county. Whole, or parts of a county may be involved in a vaccination.

Year 2 and subsequent years, approximately 1/3 of the cattle are new and will need two doses of vaccine.

7. Detailed analysis of the cost of the plan for 2008 for which Community funding is requested

Costs related to	Specification	Number of units	Unitary cost in €	Total amount in €
1. Vaccination				
1.1. Purchase of vaccine doses		895.726	0,5	447.864
1.2. Administering costs				
1.2.1 Salaries (staff contracted for the plan only)	Vaccination performed by the district veterinary service			2.108.696*
1.2.2. Consumables and specific equipment	Disposables (15 000 €) included in above			
1.2.3. Other costs				
	TOTAL			2.556.560

Scenario 2

Estimated cost for the exact area of vaccination cannot be entered in point 7. The localization and extent of a possible threat or outbreak cannot be exactly predicted at this time. Therefore 2 different calculations are made based on number of animals in 2 possible areas, or scenarios, of vaccination.. Scenario 2 in point 7 correspond to the scenario 2 maps and scenario 3 in point 7 correspond to scenario 3 map.

* The total cost for the vaccination is estimated assuming the veterinary service is performing most of the vaccination. This cost can probably be reduced if other personnel vaccinate the animals under veterinary guidance.

7. Detailed analysis of the cost of the plan for 2008 for which Community funding is requested

Costs related to	Specification	Number of units	Unitary cost in €	Total amount in €
1. Vaccination				
1.1. Purchase of vaccine doses ¹		1.763.239	0,5	881.618
1.2. Administering costs				
1.2.1 Salaries (staff contracted for the plan only)	Vaccination performed by the district veterinary service			4.066.956 ¹
1.2.2. Consumables and specific equipment	Disposables (25 000 €) included in above			
1.2.3. Other costs				
	TOTAL			4.968.574

Scenario 3

Estimated cost for the exact area of vaccination cannot be entered in point 7. The localization and extent of a possible threat or outbreak cannot be exactly predicted at this time. Therefore 3 different calculations are made based on number of animals in 3 possible areas, or scenarios, of vaccination.. Scenario 2 in point 7 correspond to the scenario 2 maps and scenario 3 in point 7 correspond to scenario 3 map.

¹ The total cost for the vaccination is estimated assuming the veterinary service is performing most of the vaccination. This cost can probably be reduced if other personnel vaccinate the animals under veterinary guidance.

Table 6 with additional information on animals in all southern counties (not by scenarios)

6.1 Targets on vaccination for 2008

Cattle:

Region	Serotype	Vaccine type	Targets on vaccination plan							
			Total number of herds existing in the region	Total number of animals existing in the region	Number of herds expected to be vaccinated	Number of adult animals expected to be vaccinated	Number of young animals expected to be vaccinated	% of animals expected to be vaccinated (vaccinated/total stung)	Number of doses of vaccine expected to be administered	
Östergötlands county	BTV 8	Inactivated	1386	114970	1386	76646	38323	100	229940	
Jönköpings county	BTV 8	Inactivated	2204	125309	2204	83539	41769	100	250618	
Krönbergs county	BTV 8	Inactivated	1316	62262	1316	41508	20754	100	124524	
Kalmar county	BTV 8	Inactivated	1750	145993	1750	97328	48664	100	291986	
Gotlands county	BTV 8	Inactivated	725	62570	725	41680	20840	100	125040	
Skåne county	BTV 8	Inactivated	670	28678	670	19118	9559	100	57356	
Jönköpings county	BTV 8	Inactivated	1370	93683	1370	62445	31222	100	187336	
Västra götlands county	BTV 8	Inactivated	4570	267527	4570	178351	89175	100	535054	
Skåne county	BTV 8	Inactivated	3099	218818	3099	145878	72939	100	437636	
Total			17130	119765	17130	746439	373326	100	2139530	

The table shows number of animals in each county. Whole, or parts of a county may be involved in a vaccination.

Year 2 and subsequent years, approximately 1/3 of the cattle are new and will need two doses of vaccine.

Sheep and goats: first and subsequent years

Region	Serotype	Vaccine type	Targets on vaccination plan						
			Total number of herds existing in the region	Total number of animals existing in the region	Number of herds expected to be vaccinated	Number of adult animals expected to be vaccinated	Number of young animals expected to be vaccinated	% of animals expected to be vaccinated (vaccinated/total)	Number of doses of vaccine expected to be administered
Ostergötlands county	BTV 8	Inactivated	462	33056	462	33056	0*	100	33056
Jönköpings county	BTV 8	Inactivated	413	20790	413	20790	0	100	20790
Kronobergs county	BTV 8	Inactivated	267	12263	267	12263	0	100	12263
Kalmar county	BTV 8	Inactivated	431	25165	431	25165	0	100	25165
Gotlands county	BTV 8	Inactivated	417	43798	417	43798	0	100	43798
Bläkinge county	BTV 8	Inactivated	183	12534	183	12534	0	100	12534
Hallands county	BTV 8	Inactivated	358	16592	358	16592	0	100	16592
Västra Götlands county	BTV 8	Inactivated	1337	61046	1337	61046	0	100	61046
Skåne county	BTV 8	Inactivated	710	47478	710	47478	0	100	47478
Total			4578	272722	4578	272722	0	100	272722

The table shows number of animals in each county. Whole, or parts of a county may be involved in a vaccination.

Lambs are usually slaughtered in autumn. They will be tested as part of the serological surveillance. Lambs destined to become breeding animals will be vaccinated. The number of those animals will be assumed to be approximately the same each year.

Other species: (please indicate if any) Alpaca around 700 totally in Sweden, not known how many in the potential vaccination areas.

6.2 Targets on vaccination (one table for each of the subsequent years of implementation)

Cattle:

Region	Serotype	Vaccine type	Targets on vaccination plan						
			Total number of herds existing in the region	Total number of animals existing in the region	Number of herds expected to be vaccinated	Number of adult animals expected to be vaccinated	Number of young animals expected to be vaccinated	% of animals expected to be vaccinated (vaccinated/total)	Number of doses of vaccine expected to be administered
Östergötlands county	BTV 8	Inactivated	1386	111970	1386	76646	38323	100	153292
Jönköpings county	BTV 8	Inactivated	2204	125309	2204	83539	41769	100	167077
Kronobergs county	BTV 8	Inactivated	1336	62262	1336	41508	20754	100	83016
Kalmar county	BTV 8	Inactivated	1750	145993	1750	97328	48664	100	104656
Gotlands county	BTV 8	Inactivated	725	62520	725	41480	20840	100	83360
Blekinge county	BTV 8	Inactivated	670	28678	670	19118	9559	100	38236
Hallands county	BTV 8	Inactivated	1370	93688	1370	62445	31222	100	124889
Västergötlands county	BTV 8	Inactivated	4570	267527	4570	178251	89175	100	356701
Sköne county	BTV 8	Inactivated	3099	218818	3099	145878	72939	100	324228
Total			17110	1119765	17110	716439	375326	100	1493092

The table shows number of animals in each county. Whole, or parts of a county may be involved in a vaccination.

: Year 2 and subsequent years, approximately 1/3 of the cattle are new and will need two doses of vaccine.