



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

SANCO/3781/2008

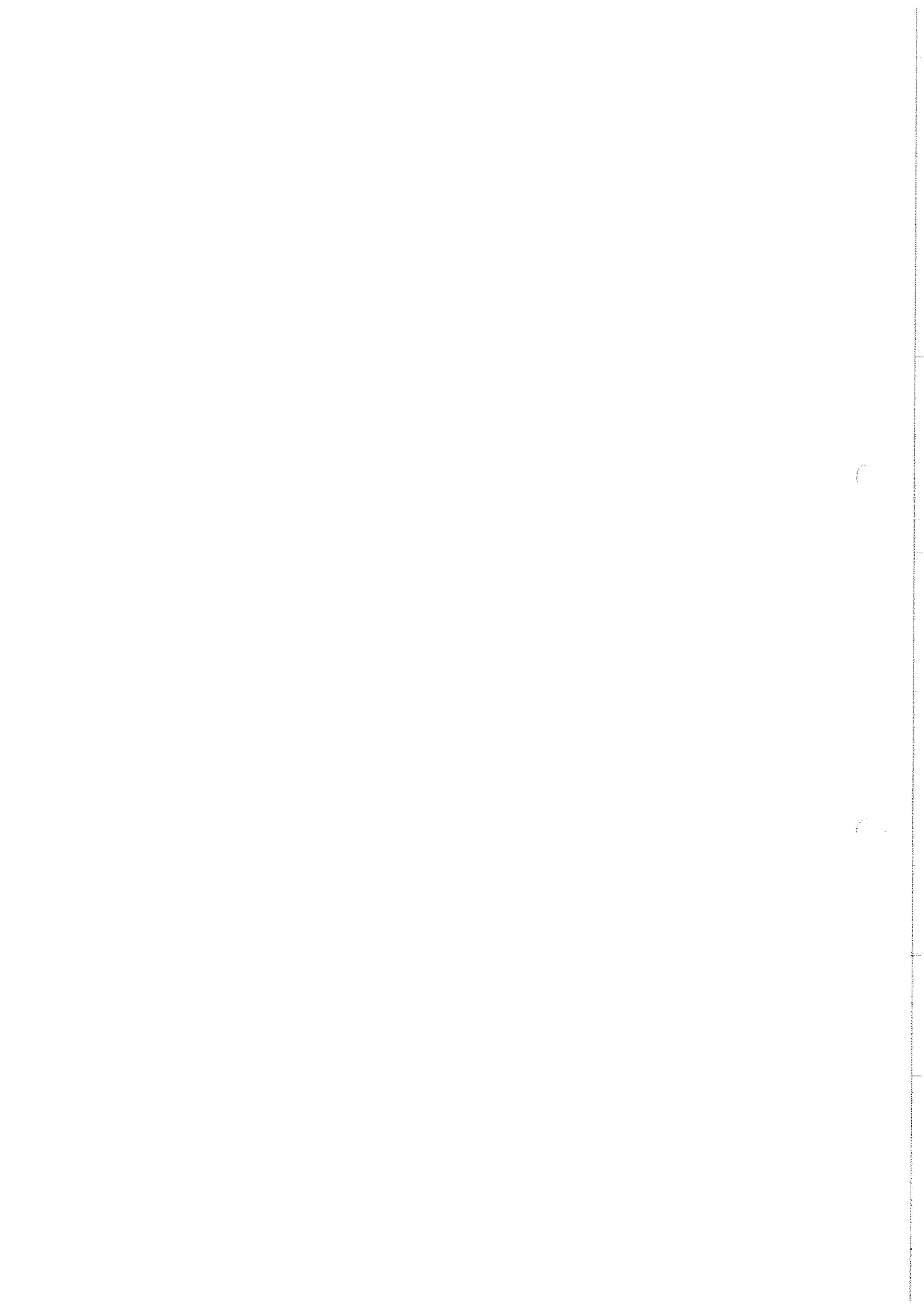
*Programmes for the eradication, control and monitoring of certain
animal diseases and zoonoses*

Surveillance and Eradication programme of Bluetongue

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

Malta

* in accordance with Commission Decision 90/424/EEC



**APPLICATION FOR COMMUNITY FINANCING FOR
PROGRAMMES FOR THE ERADICATION, MONITORING AND
CONTROL OF ANIMAL DISEASES**

Member state MALTA
Disease BLUE TONGUE
Year 2009

1. **Identification of the programme**

Member State: Malta

Disease: Blue Tongue

Year of implementation 2009

Reference of this MT-BT-09

document

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Date sent to Commission: 30th April 2008

2. Historical data on the epidemiological evolution of the disease

Malta as an island in the centre of the Mediterranean sea, is surrounded by various countries that have had outbreaks of Bluetongue in recent years. Due to the geographical location and the presence of potential vectors of the disease, Malta is in a high risk area for Bluetongue and the ongoing monitoring for the disease is necessary. Malta is listed in the Zone A restricted zone in Annex 1 to Commission Decision 2005/393/EC. Serotypes 2 and 9 are the most recurrent serotypes in this region (BTV4 and BTV16 to a lesser extent).

During the year 2002 an EU funded epidemiological survey for Bluetongue was carried out on the bovine, ovine and caprine population of Malta and Gozo. A total of 6894 animals were sampled.

In the first batch of results received, two bovine animals were positive to the ELISA test. These two samples were confirmed by means of sero-neutralisation tests for serotype 2.

These positive results must be interpreted in the light of climatic conditions as during the sampling period strong sandstorms could have carried infected vectors passively to the Maltese islands. There were no clinical signs of Bluetongue in the ruminant population observed to date. Even though infected vectors could be carried passively to the Maltese islands, there may not be the ideal climatic and environmental conditions for the vector to survive.

Total No. of samples tested	7868
Total No. of samples tested (excluding duplicates)	6894
Total no. of Bovine farms tested (dairy) (excluding duplicates)	128
Total no. of ovine, caprine farms tested (non-dairy)	158
Total no. of bovine animals tested (excluding duplicates)	4893
Total no. of positive bovine animals	2
Total no. of ovine/caprine animals tested	2001
Total no. of positive ovine/caprine animals	0

The Istituto Zooprofilattico Sperimentale dell' Abruzzo e del Molise (OIE Reference Laboratory) was able to offer its expertise to the NRL in Malta (VAFD laboratory). An entomological surveillance programme was initiated in May 2002, and six insect-traps were set up in four different areas of Malta and two areas on the island Gozo. These traps were activated once a week during the night. The insects caught in the trap were then observed and identified. The IZS carried out the identification until personnel from the Department was adequately trained.

During the late months of summer and early autumn 2002, *Culicoides imicola* and *C. pulicaris* were recorded in very small percentages (approx. 1% of the insects within the catches).

During the year 2004, a surveillance programme was set up. This time the programme made use of sentinel bovine animals on dairy farms distributed over the whole territory of the country. A total of 147 bovines distributed on 68 dairy holdings were sampled. The sera was tested using ELISA kits and was carried out at the National Veterinary Laboratory of the Veterinary Regulation Fisheries Conservation and Controls Division. The number of animals to be sampled was calculated in order to detect 1% herd prevalence with a 5% seroprevalence. This approach was suggested by the IZS Teramo. All sentinel bovines were young adult milking cows. There was seroconversion in a very small number of samples.

In 2006, 56 sera samples were tested.

In 2007, 101 sera samples were tested.

In the last two years no tests resulted.

The National Veterinary laboratory also took part in two ring tests; in 2006 and 2007 organised by Pirbright-UK. All samples analysed in these trials were correctly identified.

3. Description of the submitted programme

Serological surveillance

The whole Maltese territory is to be considered one serological unit. 15 dairy sentinel farms shall be chosen so as to be equally spread over the whole territory. Within each sentinel farm, 10 sentinel bovine animals shall be selected. This would detect a prevalence of 2% with a 95% confidence level. A bovine animal shall classify as a sentinel if it is female, docile, young and if the farmer intends keeping the animal on the holding for a reasonable span of time so that the same animal may be resampled. Each sentinel bovine shall be sampled on a monthly basis.

Each serological sample shall be tested by means of ELISA in the National Veterinary Laboratory of the Veterinary Regulation Fisheries Conservation and Controls Division..

10% of the samples shall also be sent to Pirbright - UK to be tested by means of PCR targeted at the BLUETONGUEV serotypes circulating in the central Mediterranean region. Malta is listed in the Zone A restricted zone in Annex 1 to Commission Decision 2005/393/EC. Serotypes 2 and 9 are the most recurrent serotypes in this region (BLUETONGUEV4 and BLUETONGUEV16 to a lesser extent).

Any positive samples shall be sent to the CRL for confirmation and serotyping.

Entomological surveillance

The scope of the survey is to determine the *Culicoides* population distribution in the Maltese territory, and to identify potential vectors of the disease.

The surface area of the Maltese islands is 316 square kilometres. The grid system of 45km by 45 km units (2000 km²) does not apply, and the whole Maltese territory is to be considered as one serological unit. In the Maltese islands six insect traps are in use, two in Gozo and four in Malta.

The midges shall be collected on one night per week all over the year. Information on climatic conditions and temperature shall be collected together with the insects trapped. This would result in 312 catches each year.

The collected midges shall be counted and analysed in the National Veterinary Laboratory of the Veterinary Regulation Fisheries Conservation and Controls Division.

A small sample of midges caught shall be sent to IZS – Teramo for virus identification by PCR. The midges sampled must be blood engorged females belonging to a species of *Culicoides* that is a probable vector of Bluetongue.

4.. Measures of the submitted programme

4.1 Summary of measures under the programme

The programme shall last one year.

The programme is a surveillance programme that shall confirm the disease-free status of the Maltese islands. Considering the geographical location of the islands in a high risk zone being surrounded by other countries that in recent years have had outbreaks of BLUETONGUE, and considering the recent evolution of the disease in certain member states in central Europe, an ongoing monitoring programme is necessary in order to detect the presence of the disease should it enter the Maltese territory.

4.2 Designation of the central authority charged with supervising and coordinating the departments responsible for implementing the programme

4.3 Description and delimitation of the geographical and administrative areas in which the programme is to be implemented

- The surveillance programmes will apply to the Islands of Malta and Gozo (one region). The total surface area of the Maltese territory is 316 km²;
- There is a lack of extensive grazing land available;
- Average farm size is 0.5 hectares;

- Livestock is reared on farms having a higher stocking density than would apply to an extensive system.

4.4 *Measures implemented under the programme*

4.4.1 Measures and terms of legislation as regards the registration of holdings

Council regulation (EC) No 21/2004 establishing a system for the identification and registration of ovine and caprine animals and amending Reg. (EC) No 1782/2003 and Directives 92/102/EEC and 64/432/EEC. Council regulation (EC) No 1760/2000 establishing a system for the identification and registration of bovine animals and regarding the labelling of beef and beef products and repealing Council Reg. (EC) No 820/97. The Regulations are currently being transposed into national legislation.

4.4.2 Measures and terms of legislation as regards the identification of animals

Council regulation (EC) No 21/2004 establishing a system for the identification and registration of ovine and caprine animals and amending Reg. (EC) No 1782/2003 and Directives 92/102/EEC and 64/432/EEC. Council regulation (EC) No 1760/2000 establishing a system for the identification and registration of bovine animals and regarding the labelling of beef and beef products and repealing Council Reg. (EC) No 820/97. The Regulations are currently being transposed into national legislation.

4.4.3 Measures and terms of legislation as regards the notification of the disease

Veterinary Services Act (Chapter 437) and Prevention of Disease Ordinance (Chapter 36).

Council directive 64/432/EEC on the animal health problems affecting intra-Community trade in bovine animals and in swine and successive amendments, transposed as national legislation under Legal Notice 505 of 2004.

Council Directive 2000/75/EC laying down specific provisions for the control and eradication of Bluetongue. Commission Decision 2005/393/EC on protection and surveillance zones in relation to Bluetongue and conditions applying the movements from or through these zones.

4.4.4 Measures and terms of legislation as regards the measures in case of a positive result

Veterinary Services Act (Chapter 437) and Prevention of Disease Ordinance (Chapter 36).

Council directive 64/432/EEC on the animal health problems affecting intra-Community trade in bovine animals and in swine and successive amendments, transposed as national legislation under Legal Notice 505 of 2004.

Council Directive 2000/75/EC laying down specific provisions for the control and eradication of Bluetongue. Commission Decision 2005/393/EC on protection and surveillance zones in relation to Bluetongue and conditions applying the movements from or through these zones.

4.4.5 Measures and terms of legislation as regards the different qualifications of animals and herds

Veterinary Services Act (Chapter 437) and Prevention of Disease Ordinance (Chapter 36).

Council directive 64/432/EEC on the animal health problems affecting intra-Community trade in bovine animals and in swine and successive amendments, transposed as national legislation under Legal Notice 505 of 2004.

Council Directive 2000/75/EC laying down specific provisions for the control and eradication of Bluetongue. Commission Decision 2005/393/EC on protection and surveillance zones in relation to Bluetongue and conditions applying the movements from or through these zones.

4.4.6 Control procedures and in particular rules on the movement of animals liable to be affected or contaminated by a given disease and the regular inspection of the holdings or areas concerned

Veterinary Services Act (Chapter 437) and Prevention of Disease Ordinance (Chapter 36).

Council directive 64/432/EEC on the animal health problems affecting intra-Community trade in bovine animals and in swine and successive amendments, transposed as national legislation under Legal Notice 505 of 2004.

Council Directive 2000/75/EC laying down specific provisions for the control and eradication of Bluetongue. Commission Decision 2005/393/EC on protection and surveillance zones in relation to Bluetongue and conditions applying the movements from or through these zones.

4.4.7 Measures and terms of legislation as regards the control (testing, vaccination...) of the disease

Veterinary Services Act (Chapter 437) and Prevention of Disease Ordinance (Chapter 36).

Council directive 64/432/EEC on the animal health problems affecting intra-Community trade in bovine animals and in swine and successive amendments, transposed as national legislation under Legal Notice 505 of 2004.

Council Directive 2000/75/EC laying down specific provisions for the control and eradication of Bluetongue. Commission Decision 2005/393/EC on protection and surveillance zones in relation to Bluetongue and conditions applying the movements from or through these zones.

4.4.8 Measures and terms of legislation as regards the compensation for owners of slaughtered and killed animals

Veterinary Services Act (Chapter 437) and Prevention of Disease Ordinance (Chapter 36).

Council directive 64/432/EEC on the animal health problems affecting intra-Community trade in bovine animals and in swine and successive amendments, transposed as national legislation under Legal Notice 505 of 2004.

Council Directive 2000/75/EC laying down specific provisions for the control and eradication of Bluetongue. Commission Decision 2005/393/EC on protection and surveillance zones in relation to Bluetongue and conditions applying the movements from or through these zones.

5. General description of the costs and benefits

Benefits to society: nil

Benefits to farmer: no trade barrier

6.1 Data on animals

Year: 2002 Disease: Blue Tongue

Animal species: Bovine

Situation on date 31/12/02

Region	Total number of animals**	Number of animals to be tested under the programme*	Number of animals tested	Number of animals tested individually	Number of positive animals	Slaughtering		Indicators	
						Number of animals with positive result slaughtered or culled	Total number of animals slaughtered	% coverage at animal level	% positive animals (Animal prevalence)
1	2	3	4	5	6	7	8	$9=(4/3) \times 100$	$10=(6/4) \times 100$
Malta/Gozo	8,500	4,000	5,867	4,893	2	0	0	100%	0.04%

* calculated to detect 1% herd prevalence with 5% seroprevalence. ** animals over one year of age.

Year: 2002 Disease: Blue Tongue

Animal species: Ovine and Caprine

Situation on date 31/12/02

Region	Total number of animals**	Number of animals to be tested under the programme*	Number of animals tested	Number of animals tested individually	Number of positive animals	Slaughtering		Indicators	
						Number of animals with positive result slaughtered or culled	Total number of animals slaughtered	% coverage at animal level	% positive animals (Animal prevalence)
1	2	3	4	5	6	7	8	$9=(4/3) \times 100$	$10=(6/4) \times 100$
Malta/Gozo	19,900	6,000	2,001	2,001	0	0	0	33.35%	0%

* calculated to detect 1% herd prevalence with 5% seroprevalence. ** animals over 6 months of age.

Year: 2004

Disease: Blue Tongue

Animal species: Bovine

Situation on date: 31/12/04

Region	Total number of animals [^]	Number of animals to be tested under the programme	Number of animals tested	Number of animals tested individually	Number of positive animals	Slaughtering		Indicators	
						Number of animals with positive result slaughtered or culled	Total number of animals slaughtered	% coverage at animal level	% positive animals (Animal prevalence)
1	2	3	4	5	6	7	8	$9 = (4/3) \times 100$	$10 = (6/4) \times 100$
Malta/Gozo	13169	300	294	147	16*	0	0	98%	5.4%

*Most positives were in samples collected in June 2004, however retested after 3 months resulted negative.

[^] Total bovine population over one year of age

Year: 2005

Disease: Blue Tongue

Animal species: Bovine

Situation on date: 31/12/05

Region	Total number of animals [^]	Number of animals to be tested under the programme	Number of animals tested	Number of animals tested individually	Number of positive animals	Slaughtering		Indicators	
						Number of animals with positive result slaughtered or culled	Total number of animals slaughtered	% coverage at animal level	% positive animals (Animal prevalence)
1	2	3	4	5	6	7	8	$9 = (4/3) \times 100$	$10 = (6/4) \times 100$
Malta/Gozo	13190	150	147	147	1	0	0	98%	0.7%

[^] Total bovine population over one year of age

Year: 2006

Disease: Blue Tongue

Animal species: Bovine

Situation on date:

October
2006

Region	Total number of animals [^]	Number of animals to be tested under the programme	Number of animals tested	Number of animals tested individually	Number of positive animals	Slaughtering		Indicators	
						Number of animals with positive result slaughtered or culled	Total number of animals slaughtered	% coverage at animal level	% positive animals (Animal prevalence)
1	2	3	4	5	6	7	8	$9 = (4/3) \times 100$	$10 = (6/4) \times 100$
Malta/Gozo	13351 [^]	168*	168*	168	0	0	0	100%	0%

* 3 sentinel animals were ovines in order to monitor an area of the island where no dairy farms are present.

[^] Total bovine population over one year of age

6.2 Stratified data on surveillance and laboratory tests

6.2.1. Stratified data on surveillance and laboratory tests

Description of the used serological tests: ELISA / seroneutralisation

Year: 2002 **Disease: Blue Tongue** **Animal species: Bovine**

Region	Serological tests		Microbiological 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
Malta and Gozo	5867	2	0	0	0	0

Year: 2002 **Disease: Blue Tongue** **Animal species: Ovines and Caprines**

Region	Serological tests		Microbiological 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
Malta and Gozo	2001	0	0	0	0	0

Year: 2004 **Disease: Blue Tongue** **Animal species: Bovine**

Region	Serological tests		Microbiological 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
Malta and Gozo	200	16	0	0	0	0

Year: 2005

Disease: Blue Tongue

Animal species: Bovine

Region	Serological tests		Microbiological 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
Malta and Gozo	26	1	0	0	0	0

Year: 2006

Disease: Blue Tongue

Animal species: Bovine

Region	Serological tests		Microbiological 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
Malta and Gozo	168	0	0	0	0	0

6.3 Data on infection

Year: 2002 Disease: Blue Tongue

Animal species: Bovine/Ovine/Caprine

Region	Number of herds infected	Number of animals infected
Malta and Gozo	0	0
Total	0	0

Year: 2004 Disease: Blue Tongue

Animal species: Bovine/Ovine/Caprine

Region	Number of herds infected	Number of animals infected
Malta and Gozo	0	0
Total	0	0

Year: 2005 Disease: Blue Tongue

Animal species: Bovine/Ovine/Caprine

Region	Number of herds infected	Number of animals infected
Malta and Gozo	0	0
Total	0	0

Year: 2006 Disease: Blue Tongue Animal species: Bovine/Ovine/Caprine

Region	Number of herds infected	Number of animals infected
Malta and Gozo	0	0
Total	0	0

Year: 2007 Disease: Blue Tongue Animal species: Bovine/Ovine/Caprine

Region	Number of herds infected	Number of animals infected
Malta and Gozo	0	0
Total	0	0

Year: 2008 Disease: Blue Tongue Animal species: Bovine/Ovine/Caprine

Region	Number of herds infected	Number of animals infected
Malta and Gozo	0	0
Total	0	0

6.4 Data on the status of herds at the end of each year

Year: 2002 Disease: Blue Tongue Animal species: Bovine

Region	Status of herds and animals under the programme													
	Total number of herds and animals under the programme		Unknown				Not free or not officially free		Free or officially free suspended		Free		Officially free	
			Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals
Malta/ Gozo	163	8,500	0	0	0	0	0	0	0	0	163	8,500	0	0

Year: 2002 Disease: Blue Tongue Animal species: Ovine and Caprine

Region	Status of herds and animals under the programme													
	Total number of herds and animals under the programme		Unknown				Not free or not officially free		Free or officially free suspended		Free		Officially free	
			Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals
Malta / Gozo	2051	19,900	0	0	0	0	0	0	0	0	2051	19,900	0	0

Year: 2004

Disease: Blue Tongue

Animal species: Bovine

Region	Status of herds and animals under the programme													
	Total number of herds and animals under the programme		Unknown				Not free or not officially free		Free or officially free suspended		Free		Officially free	
			Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals
Malta / Gozo	68	150	0	0	0	0	0	0	0	0	68	150	0	0

Year: 2005

Disease: Blue Tongue

Animal species: Bovine

Region	Status of herds and animals under the programme													
	Total number of herds and animals under the programme		Unknown				Not free or not officially free		Free or officially free suspended		Free		Officially free	
			Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals	Herds	Animals
Malta / Gozo	56	168	0	0	0	0	0	0	0	56	168	0	0	

6.5 Data on vaccination or treatment programmes

No vaccination carried out

6.6 Data on wildlife

No wildlife affected by Aujeszky's Disease

6.6.2 *Monitoring of wildlife*

Not applicable

6.6.3 *Data on vaccination or treatment of wildlife*

Not applicable

7. Targets

7.1 Targets related to testing

7.1.1. Targets on diagnostic tests

7.1.1.1. Number and specification of tests

Disease: Blue Tongue Animal species: Bovine

Region	Type of test	Target population	Type of sample	Objective	Number of planned tests
Malta and Gozo	ELISA	Sentinel Bovines	Serum	Qualification	1800
	PCR	10% of the sentinel bovines	Serum	Qualification	60
Total					1860

7.1.2. Targets on testing herds and animals

7.1.2.1. Targets on the testing of herds

Region	Total number of herds*	Total number of herds under the programme	Number of herds expected to be checked	Number of expected positive herds	Number of expected new positive herds	Number of herds expected to be depopulated	% positive herds expected to be depopulated	Target indicators		
								Expected % herd coverage	% positive herds	% new positive herds
Malta and Gozo	141	15	15	0	0	0	0	100%	0%	0%
Total	141	15	15	0	0	0	0	100%	0%	0%

*Total number of dairy farms

7.1.2.2. Targets on the testing of animals

Region	Total number of animals*	Number of animals under the programme	Number of animals expected to be tested	Number of animals to be tested individually	Number of expected positive animals	Slaughtering			Indicators	
						Number of animals with positive result expected to be slaughtered or culled	Total number of animals expected to be slaughtered	Expected % coverage at animal level	% positive animals (Expected Animal prevalence)	
1	2	3	4	5	6	7	8	9	10	
Malta and Gozo	19466	150	600	150	0	0	0	100%	0%	
Total	19466	150	600	150	0	0	0	100%	0%	

* Total number of bovine animals in Malta and Gozo

7.1.3. Targets on testing of flocks

Not applicable

8. Detailed analysis of the cost of the programme

<i>Costs related to</i>	<i>Specification</i>	<i>Number of units</i>	<i>Unitary cost in Euro</i>	<i>Total amounts in Euro</i>	<i>Community funding requested</i>
1. Testing					
1.1 Cost of the analysis	ELISA	1800	5.00	9000	yes
	PCR	60	25	1500	yes
1.2 Cost of sampling	Venoject tubes and needles	1800	0,11.5	198	yes
1.3 Other costs					
2. Vaccination or treatment	N/A				
3. Slaughtering and destruction	N/A				
3.1 Compensation of animals	N/A				
3.2 Transport costs	N/A				
3.3 Destruction costs	N/A				
3.4 Loss in case of slaughtering	N/A				
3.5 Costs from treatment of products	N/A				
4. Cleaning and disinfection	N/A				
5. Salaries	N/A				
6. Consumables and specific equipment	tips	9000	10/1000	9000	yes
7. Other costs	N/A				
Total				19,698	