



EUROPEAN COMMISSION  
HEALTH & CONSUMERS DIRECTORATE-GENERAL

Unit 04 - Veterinary Control Programmes

SANCO/12891/2010

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

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

**Approved\* for 2011 by Commission Decision 2010/712/EU**

**The Netherlands**

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

Program for Eradication : ANNEX 1

Submission Date 29/04/2010 Submission Number 1272551008479-306

1. Identification of the programme

| Member State | Disease                                  | Species                     | Request of Community co-financing from beginning of | To end of |
|--------------|--|-----------------------------|---|-----------|
| Netherlands  | Bluetongue in endemic or high risk areas | Bovines and sheep and goats | 2011  | 2011      |

1.1 Contact

| Contact Name             | Contact Phone   | Contact Fax     | Contact Email                   |
|--------------------------|-----------------|-----------------|---------------------------------|
| Carien Posthumus Meijjes | 0031 70 3785122 | 0031 70 3786100 | c.c.posthumusmeijjes@minilnv.nl |

2. Historical data on the epidemiological evolution of the disease

## 2. Historical data on the epidemiological evolution of the disease

In August 2006, the first cases of bluetongue virus serotype 8 (BTV 8) were found in the Netherlands. Until the end of 2007, a substantial number of cattle on Dutch farms had become infected. Since May 2008 farmers were given the possibility to vaccinate against BTV 8. Natural immunity in combination with vaccination on a large scale led to an effective reduction of new outbreaks in 2008 (24 infected cattle holdings/27 infected sheep holdings). No cases of BTV 8 were confirmed in the Netherlands in 2009 (see Figure 1).

The target population for the passive monitoring is the entire cattle and sheep population in the Netherlands. The passive monitoring focuses on the milk cattle population (see Table 1).

### Main measures

In spring 2007, a cross-sectional study indicated the evolution of the disease in the susceptible animal population. Later that same year, a sentinel monitoring programme was conducted. In the fall of 2008 and subsequently in the fall of 2009 (November/December), a virological survey was conducted to determine at least 20% prevalence.

In view of the promising monitoring results 2009 (no positives), the Netherlands have decided to confirm these results in a study conducted in spring 2010 on at least 3400 non-vaccinated calves born in the vector-free period 2008/2009, older than 9 months of age.

At the end of 2006 vector monitoring started with specialized traps in every compartment. In the subsequent year, vector monitoring continued with the weekly analysis of an average 21 traps. Since 2008, vector monitoring has been reduced to activities in fall and spring in order to determine the vector-free period.

### Attachments:

Figure 1: Description of the disease situation 2007, 2008, 2009

Table 1: Target population

## 3. Description of the submitted programme

The Dutch bluetongue BTV surveillance and control programme is conform the requirements laid down in Council Directive 2000/75/EC, Commission regulations 1286/2007 and 789/2009.

### Objectives

- Monitoring the absence of BTV8 in Dutch livestock.
- Ensuring early detection of reoccurrence or new introduction of bluetongue virus.
- Determination of the seasonally vector free period.

### Measures

#### Passive clinical monitoring:

Bluetongue is a notifiable disease in the Netherlands. Passive clinical monitoring is based on the reporting of clinical signs suggesting BTV by farmers and veterinary practitioners to the veterinary authorities. After reporting of suspected cases of BTV, a veterinarian of the Food and Consumer Authority (VWA) and a veterinarian of the Animal Health Service visit the suspected animal for investigation and blood sampling. The blood is sent to the Central Veterinary Institute for serological (ELISA) and PCR-testing. All positive samples are tested for as well BTV 8 as BTV 1. Special attention is given to whether animals are vaccinated against BTV 8.

### 3. Description of the submitted programme

Active monitoring with laboratory research:

In the fall of 2011 (November/December), a virological survey according to a risk-based approach will be held to determine 2% prevalence with 95% certainty:  
- In all 21 compartments, on 10 cattle holdings 15 non vaccinated or previously infected animals will be sampled (at least 150 animals per compartment).  
• This leads to a total of at least 3150 animals tested from at least 210 holdings.

Cattle that is most likely to be infected will be chosen for sampling (risk-based approach), in order to prevent false positive results due to interference with antibodies from natural infection in previous years, or from vaccination or maternal immunity.

All blood samples will be serologically tested by the Dutch Animal Health Service. Positive tested animals will be sampled again and re-tested at the Central Veterinary Institute of the Netherlands with additional bluetongue ELISA and in the following with Virus Neutralization Tests (VNT).

The target population for the passive monitoring is the entire cattle and sheep population in the Netherlands. The passive monitoring focuses on the milk cattle population (please consult Table I).

Entomological surveillance

The entomological surveillance is intended to determine the seasonally vector free period.

The entomological surveillance is based on "vector catching". For this purpose aspiration traps equipped with ultraviolet light will be used (South African "Onderstepoort-model"). In 2011, 13 traps will be set out spread out over the Netherlands, to catch midges (Figure II). Starting one month before the expected start of the vector free period (15 November) to the start of the vector free period the traps will operate once per week and the midges are retrieved from each trap on the day following its operation. From the start of the vector free period to one month before the expected end of the vector free period (1 March) the traps will operate one night per month and the midges are retrieved from each trap on the day following its operation.

Midges collected in the insect traps will be sent to the Centre for Vector Monitoring of the Dutch Ministry of Agriculture, Nature and Food Quality. Here, trained personnel will count and identify the collected species of Culicoides and if necessary, select pools of Culicoides to send it to the Dutch reference lab (CVI) for virus detection.

### 4. Measures of the submitted programme

#### 4.1 Summary of measures under the programme

Duration of the programme

: beginning of 2011 to end of 2011

**Program for Eradication : PDF detail**

**Duration of the programme**

|                                       |   |
|---------------------------------------|---|
| <b>First Year :</b>                   |   |
| Control                               |   |
| Testing                               | X |
| Slaughter and animals tested positive |   |
| Killing of animals tested positive    | X |
| Vaccination                           | X |
| Treatment                             |   |
| Disposal of products                  |   |
| Eradication, control or monitoring    |   |

|                                    |   |
|------------------------------------|---|
| <b>Last Year :</b>                 |   |
| Eradication                        |   |
| Testing                            | X |
| Slaughter of positive animals      |   |
| Killing of animals tested positive |   |
| Extended slaughter of killing      |   |
| Disposal of products               |   |
| Other                              |   |

**4.2 Organisation, supervision and role of all stakeholders involved in the programme**

#### 4.2 Organisation, supervision and role of all stakeholders involved in the programme

The central authority in charge of supervising and coordinating and the department responsible for implementing the programme: Ministry of Agriculture, Nature and Food Quality, Department of Food, Animal Health and Welfare and Consumer Policy.

Operators involved:

The Dutch Animal Health Service: Execution of the programme

The Central Veterinary Institute: Re-Testing of positive results and suspected cases.

Food and Consumer Authority (VWA): Investigation of suspected cases and placing of vector traps.

The Dutch Centre for Vector Monitoring: Analysis of vectors.

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

Geographical unit

The epidemiological unit of concern for BT is neither the single animal nor the herd, but a geographical unit that has to be defined taking into account mainly environmental characteristics. The Netherlands can be regarded as one geographical unit with identical climatic and environmental conditions over the whole territory.

For the purpose of the active bluetongue monitoring programme, compartments of approximately 45 by 45 km (apprx. 2,000 km<sup>2</sup>) are defined (see Figure III)

#### 4.4 Description of the measures of the programme

##### 4.4.1 Notification of the disease

Bluetongue is a notifiable disease in the Netherlands. Passive clinical monitoring is based on notification of clinical signs suggesting BT by farmers and veterinary practitioners to the veterinary authorities. The Food and Consumer Authority (VWA) and a veterinarian of the Animal Health Service visit the suspected animal for investigation and blood sampling. The blood is sent to the Central Veterinary Institute for serological (ELISA) and subsequent PCR-testing. All positive samples are tested for as well BTV 8 as BTV1. Special attention is given to whether the animals are vaccinated against BTV 8.

##### 4.4.2 Target animals and animal population

## Program for Eradication : PDF detail

### 4.4.2 Target animals and animal population

The target population for the passive monitoring is the entire cattle and sheep population in the Netherlands. The passive monitoring focuses on the milk cattle population (please consult Table I).

Cattle is considered the preferred host of the virus.

### 4.4.3 Identification of animals and registration of holdings

Holdings are registered with an unique UBN number. Individual animals are identified in the I&R system.

### 4.4.4 Qualifications of animals and herds

n.a.

### 4.4.5 Rules of the movement of animals

Rules of movement are implemented according to Council Directive 2000/75/EC and Commission Regulation 1268/2007 amended by Commission Regulation 789/2009.

### 4.4.6 Tests used and sampling schemes

#### 4.4.6 Tests used and sampling schemes

- In all 21 compartments, on 10 cattle holdings 15 animals will be sampled (at least 150 animals per compartment).
- This leads to a total of at least 3150 animals tested from at least 210 holdings.

Sampling will be conducted according to a risk-based approach, in order to prevent false positive results due to interference with antibodies from natural infection in previous years, or from vaccination or maternal immunity. Animal will be chosen under the following preconditions:

- Calves must be born in the vector free period.
- Calves must be older than 9 months to rule out maternal immunity.
- Selected farms have not vaccinated in the previous years.

All blood samples will be serologically (ELISA) tested by the Dutch Animal Health Service. Positive tested animals will be sampled again and re-tested at the Central Veterinary Institute of the Netherlands with additional buretongue ELISA and in the following with Virus Neutralization (VNT).

#### 4.4.7 Vaccines used and vaccination schemes

Vaccination will be voluntarily.

#### 4.4.8 Information and assessment on bio-security measures management and infrastructure

n.a.

#### 4.4.9 Measures in case of a positive result

no extra measures will be installed.

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



## Program for Eradication : PDF detail

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

n.a.

### 4.4.11 Control on the implementation of the programme and reporting

The execution of the programme will be under the responsibility of the Ministry of Agriculture, Nature and Food Quality. Activities are audited on a regular basis by the Food and Consumer Authority.

### 5. Benefits of the programme

The absence of BTV 8 and other bluetongue types in the Netherlands is carefully monitored. Moreover, the seasonally vector free period is determined.

## 6. Data on the epidemiological evolution during the last five years

### 6.1 Evolution of the disease

#### 6.1.1 Data on herds for year:

| Year           | Region | Total Nber of herds | Total number of herds under the programme | Number of herds checked | Number of positive herds | Number of new positive herds | Number of depopulated herds | % positive herds depopulated | % herds coverage | Indicators                  |                                |   |
|----------------|--------|---------------------|---|-------------------------|--------------------------|------------------------------|-----------------------------|------------------------------|------------------|-----------------------------|--------------------------------|---|
|                |        |                     |   |                         |                          |                              |                             |                              |                  | % positive herds prevalence | % new positive herds incidence | % |
| <b>Sum:</b>    |        |                     |   |                         |                          |                              |                             |                              |                  |                             |                                |   |
| <b>Total :</b> |        |                     |   |                         |                          |                              |                             |                              |                  |                             |                                |   |



6.2 Stratified data on surveillance and laboratory tests

6.2.1 Stratified data on surveillance and laboratory tests for year :

| Year          | Region          | Test Type        | Test Description | Number of samples tested | Number of positive samples |
|---------------|-----------------|------------------|------------------|--------------------------|----------------------------|
| 2008          | The Netherlands | serological test | ELISA            | 450                      | 66                         |
|               |                 | <b>Sum:</b>      |                  |                          | <b>6,242</b>               |
| 2007          | The Netherlands | other test       | ELISA milk       | 26,333                   | 3,301                      |
|               |                 | serological test | ELISA blood      | 37,073                   | 6,472                      |
|               |                 | <b>Sum:</b>      |                  |                          | <b>9,773</b>               |
| 2006          | n.a.            | other test       | 0                | 0                        | 0                          |
|               |                 | <b>Sum:</b>      |                  |                          | <b>0</b>                   |
| 2005          | n.a.            | other test       | 0                | 0                        | 0                          |
|               |                 | <b>Sum:</b>      |                  |                          | <b>0</b>                   |
| <b>Total:</b> |                 |                  |                  | <b>70,482</b>            | <b>9,944</b>               |

6.3 Data on infection for year :

| Year          | Region | Number of herds infected | Number of animal Infected |
|---------------|--------|--------------------------|---------------------------|
| <b>Total:</b> |        |                          |                           |
| <b>Sum:</b>   |        |                          |                           |

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

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

|   |             | Not Free or not officially free from disease |         |                                      |         |                              |         |
|---|-------------|--|---------|--------------------------------------|---------|------------------------------|---------|
| Total number of herds and animals under the programme |             | Unknown                                      |         | Free or officially free from disease |         | Officially free from disease |         |
| Year  | NUTS Region | Herds  | Animals | Herds                                | Animals | Herds                        | Animals |
|   |             |  |         |                                      |         |                              |         |
| Total:  |             |  |         |                                      |         |                              |         |

6.5 Data on vaccination or treatment programmes for year

|        |        | Information on vaccination or treatment programme |                         |   |   |  |                                    |
|--------|--------|---|-------------------------|---|---|--|------------------------------------|
| Year   | Region | Total number of herds                             | Total number of animals | Number of herds in vaccination or treatment programme | Number of animals vaccinated or treated | Number of doses of vaccine or treatment administered | Number of young animals vaccinated |
|        |        |   |                         |   |   |  |                                    |
| Total: |        |   |                         |   |   |  |                                    |

6.5 Data on wildlife

6.6.1 Estimation of wildlife population for year :

| Year | Region | Species | Method of estimation | Estimation of the population |
|------|--------|---------|----------------------|------------------------------|
|      |        |         |                      |                              |
| Sum: |        |         |                      |                              |

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6.6 Data on wildlife

6.6.1 Estimation of wildlife population for year :

| Year   | Region | Species | Method of estimation | Estimation of the population |
|--------|--------|---------|----------------------|------------------------------|
| Total: |        |         |                      |                              |

6.6.2 Monitor of wildlife for year:

| Year | Region | Species | Test Type | Test Description | Number of samples tested | Number of positive samples |
|------|--------|---------|-----------|------------------|--------------------------|----------------------------|
|      |        |         |           |                  |                          |                            |

6.6.3 Data on vaccination or treatment of wildlife for year:

| Year | Region | Square km | Number of vaccine or treatment to be administered | Number of campaigns | Total number of doses of vaccine or treatment to be administered |
|------|--------|-----------|---|---------------------|--|
|      |        |           |   |                     |  |

7. Targets

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

7.1.1 Targets on diagnostic tests for year:

| Year | Region | Type of the test | Target population | Type of sample | Objective | Number of planned tests |
|------|--------|------------------|-------------------|----------------|-----------|-------------------------|
|      |        |                  |                   |                |           |                         |

Program for Eradication : PDF detail

7. Targets

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

7.1.1 Targets on diagnostic tests for year:

| Year          | Region          | Type of the test           | Target population | Type of sample | Objective                       | Number of planned tests |
|---------------|-----------------|----------------------------|-------------------|----------------|---------------------------------|-------------------------|
| 2011          | The Netherlands | ELISA                      | Bovines           | blood          | confirmation of suspected cases | 300                     |
|               | The Netherlands | ELISA                      | Bovines           | blood          | surveillance                    | 3,500                   |
|               | The Netherlands | ELISA confirmation         | Bovines           | blood          | surveillance                    | 25                      |
|               | The Netherlands | PCR                        | Bovines           | blood          | confirmation of suspected cases | 300                     |
|               | The Netherlands | Virus neutralisation tests | Bovines           | serum          | surveillance                    | 25                      |
| <b>Total:</b> |                 |                            |                   |                |                                 | <b>4,150</b>            |

7.1.2 Targets on testing herds and animals

7.1.2.1 Targets on the testing of herds for year :

| Year          | Region | 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 | Target indicators                           |                        |  |  |  |  |  |
|---------------|--------|---|--|-----------------------------------|---------------------------------------|--|---|------------------------|--|--|--|--|--|
|               |        |   |  |                                   |                                       |  | % positive herds expected to be depopulated | Expected herd coverage | % positive herds Expected period herd prevalence | % new positive herds Expected herd incidence |  |  |  |
| <b>Sum:</b>   |        |   |  |                                   |                                       |  |   |                        |  |  |  |  |  |
| <b>Total:</b> |        |   |  |                                   |                                       |  |   |                        |  |  |  |  |  |

7.1.2.2 Targets on the testing of animals for year:

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7.1.2.2 Targets on the testing of animals for year:

| Year   | Region | Slaughtering                                 |   |                                     |   | Target indicators                                  |                                     |   |
|--------|--------|--|---|-------------------------------------|---|--|-------------------------------------|---|
|        |        | Number of animals under the programme tested | Number of animals to be tested individually | Number of expected positive animals | 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) |
| Sum:   |        |  |   |                                     |   |  |                                     |   |
| Total: |        |  |   |                                     |   |  |                                     |   |

7.2 Targets on qualification of herds and animals for year:

| Year   | Region | Targets on the status of herds and animals under the programme |         |                  |         |                     |         |                     |         |  |         |                            |         |
|--------|--------|--|---------|------------------|---------|---------------------|---------|---------------------|---------|--|---------|----------------------------|---------|
|        |        | Total number of herds and animals under the programme          |         | Expected unknown |         | Last check positive |         | Last check negative |         | Expected free or officially free from disease status |         | Expected free from disease |         |
|        |        | Herds  | Animals | Herds            | Animals | Herds               | Animals | Herds               | Animals | Herds  | Animals | Herds                      | Animals |
| Sum:   |        |  |         |                  |         |                     |         |                     |         |  |         |                            |         |
| Total: |        |  |         |                  |         |                     |         |                     |         |  |         |                            |         |

7.3 Targets on vaccination or treatment

7.3.1 Targets on vaccination or treatment for year:

|        |  | Targets on vaccination or treatment programme |  |  |  |
|--------|--|---|--|--|--|
| Sum:   |  |   |  |  |  |
| Total: |  |   |  |  |  |

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7.3 Targets on vaccination or treatment

7.3.1 Targets on vaccination or treatment for year :

| Targets on vaccination or treatment programme |             |   |   |  |  |   |  |   |  |
|---|-------------|---|---|--|--|---|--|---|--|
| Year  | NUTS Region | Total number of herds in vaccination or treatment programme | Number of herds in vaccination or treatment programme | Number of herds 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 expected to be vaccinated | Number of young animals expected to be vaccinated |  |
|   |             |   |   |  |  |   |  |   |  |
|   |             | <b>Sum:</b>   |   |  |  |   |  |   |  |
|   |             | <b>Total:</b>   |   |  |  |   |  |   |  |

7.3.2 Targets on vaccination or treatment of wildlife for year

| Targets on vaccination or treatment programme |             |               |  |                              |
|---|-------------|---------------|--|------------------------------|
| Year  | NUTS Region | Square km     | Number of doses of vaccine or treatments expected to be administered in the campaign | Expected number of campaigns |
|   |             |               |  |                              |
|   |             | <b>Sum:</b>   |  |                              |
|   |             | <b>Total:</b> |  |                              |

Total number of doses of vaccine or treatment expected to be administered

8. Detailed analysis of the cost of the programme for year

| Year | Cost Category | Specification          | Cost related to  | Number of units | Unitary cost in EUR | Total amount in EUR | Community funding request |
|------|---------------|------------------------|------------------|-----------------|---------------------|---------------------|---------------------------|
| 2011 | 1. Testing    | confirmation ELISA CVI | Cost of analysis | 25              | 6.2                 | 155.00              | yes                       |
|      |               | ELISA GD               | Cost of analysis | 3,500           | 6.2                 | 21,700.00           | yes                       |



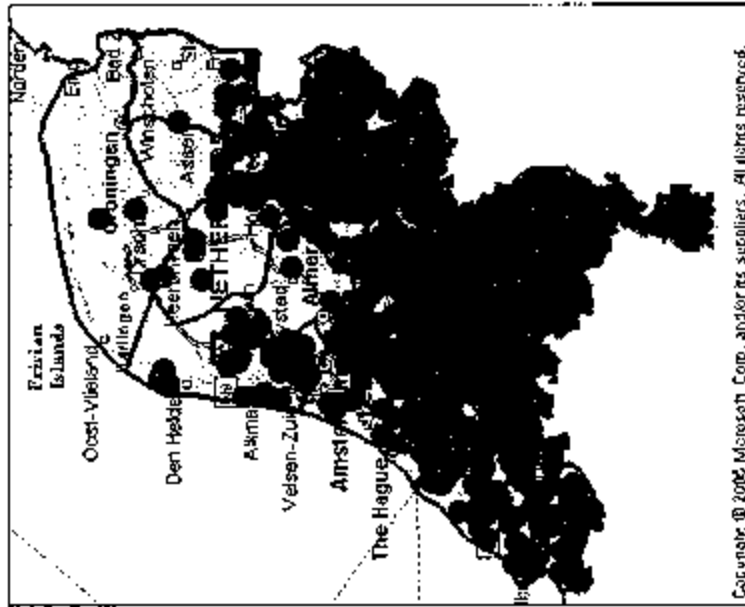
Program for Eradication : PDF detail

8. Detailed analysis of the cost of the programme for year

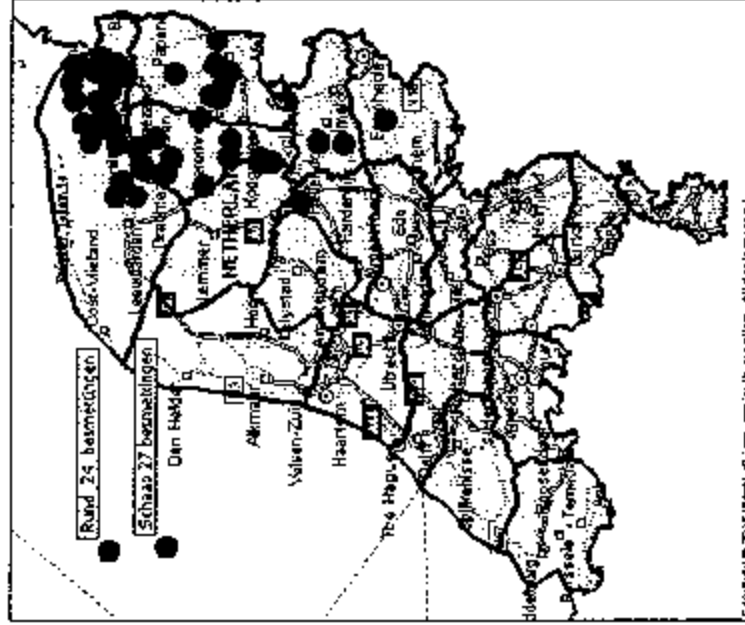
| Year  | Cost Category  | Specification                   | Cost related to  | Number of units | Unitary cost in EUR | Total amount in EUR | Community funding request |
|---|----------------|---------------------------------|------------------|-----------------|---------------------|---------------------|---------------------------|
| 2011  | 1. Testing     | entomological tests             | Cost of analysis | 150             | 200                 | 30,000.00           | yes                       |
|   |                | entomological tests             | Cost of sampling | 150             | 200                 | 30,000.00           | yes                       |
|   |                | passive monitoring BTV1 ELISA   | Cost of analysis | 300             | 5.9                 | 1,770.00            | yes                       |
|   |                | passive monitoring BTV1 PCR     | Cost of analysis | 300             | 31                  | 9,300.00            | yes                       |
|   |                | passive monitoring BTV8 ELISA   | Cost of analysis | 300             | 5.9                 | 1,770.00            | yes                       |
|   |                | passive monitoring BTV8 PCR     | Cost of analysis | 300             | 31                  | 9,300.00            | yes                       |
|   |                | sampling GD                     | Cost of sampling | 3,975           | 7.6                 | 30,210.00           | yes                       |
|   |                | Viruses neutralisation test CVI | Cost of analysis | 25              | 68                  | 1,700.00            | yes                       |
|   |                | <b>Sum:</b>                     |                  | <b>9,025</b>    | <b>0</b>            | <b>135,905.00</b>   |                           |
|   |                | 2. Vaccination or treatment     | n.a.             | n.a.            | 0                   | 0                   |                           |
| <b>Sum:</b>   |                | <b>0</b>                        | <b>0</b>         | <b>0.00</b>     |                     |                     |                           |
| 3. Slaughter and destruction                          | not applicable | n.a.                            | 0                | 0               |                     | no                  |                           |
| <b>Sum:</b>   |                | <b>0</b>                        | <b>0</b>         | <b>0.00</b>     |                     |                     |                           |
| 4. Cleaning and disinfection                          | not applicable | n.a.                            | 0                | 0               |                     | no                  |                           |
| <b>Sum:</b>   |                | <b>0</b>                        | <b>0</b>         | <b>0.00</b>     |                     |                     |                           |
| 5. Salaries (staff contracted for the programme only) | not applicable | n.a.                            | 0                | 0               |                     | no                  |                           |
| <b>Sum:</b>   |                | <b>0</b>                        | <b>0</b>         | <b>0.00</b>     |                     |                     |                           |
| 6. Consumables and specific equipment                 | not applicable | n.a.                            | 0                | 0               |                     | no                  |                           |
| <b>Sum:</b>   |                | <b>0</b>                        | <b>0</b>         | <b>0.00</b>     |                     |                     |                           |
| <b>Sum:</b>   |                | <b>9,025</b>                    |                  | <b>Sum:</b>     | <b>135,905.00</b>   |                     |                           |
| <b>Total:</b>   |                | <b>9,025</b>                    |                  | <b>Sum:</b>     | <b>135,905.00</b>   |                     |                           |

**Figure 1**

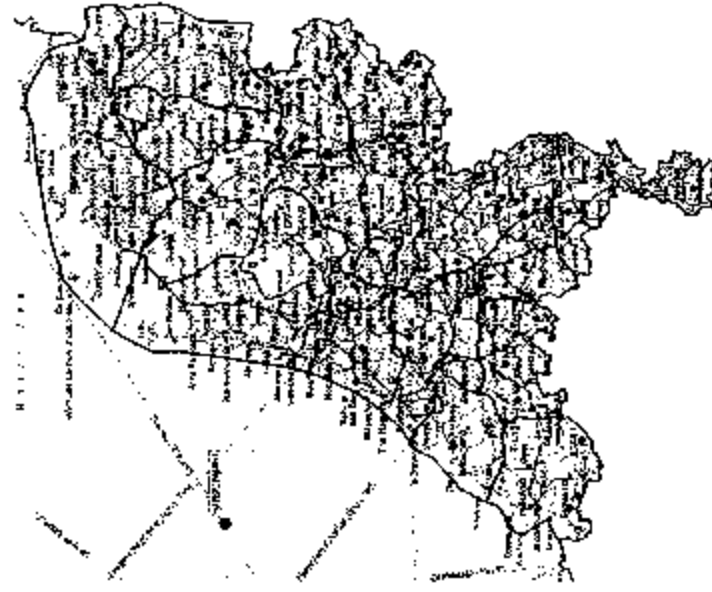
Description of the disease situation



Outbreaks 2007

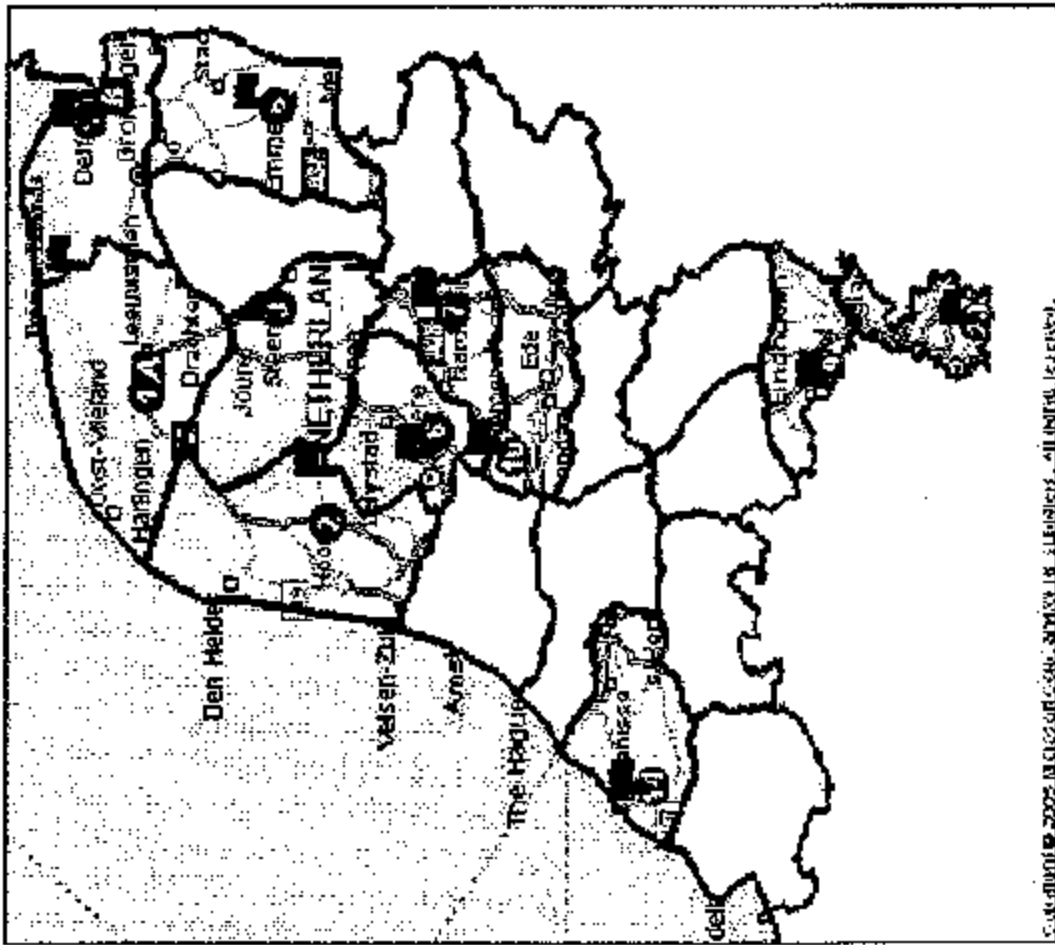


Outbreaks 2008



Suspicions 2009  
(No positives)

Figure II location of vector catching traps



Scanned with CamScanner

Figure 3: Compartments used in the active monitoring programme

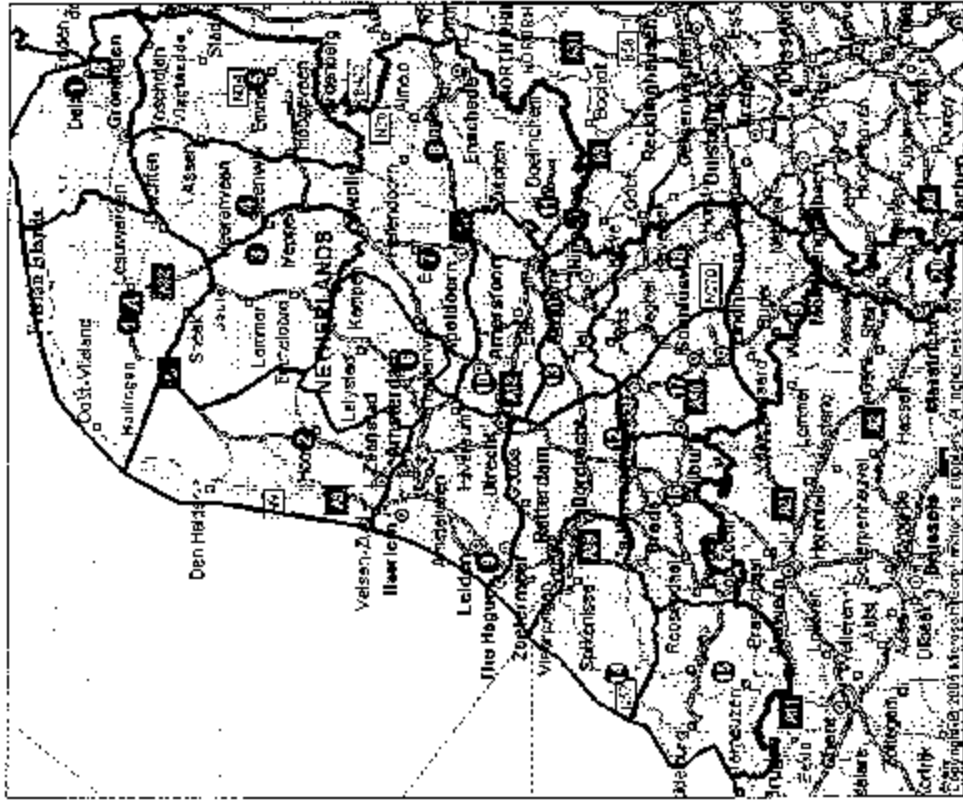


Table I: number of cattle in the Netherlands 2008/2009

| Onderwerpen                            | Perioden | 2008:1 december | 2009:4 december |
|--|----------|-----------------|-----------------|
| Rundvee, totaal                        |          | 3996            | 3998            |
| Melk- en fokvee                        |          | 2770            | 2610            |
| Melk- en fokvee, totaal                |          | 541             | 572             |
| Jongvee, < 1 jr, vrouwelijk            |          | 34              | 33              |
| Jongvee, < 1 jr, mannelijk             |          | 500             | 532             |
| Jongvee, 1-2 jr, vrouwelijk            |          | 15              | 14              |
| Jongvee, 1-2 jr, mannelijk             |          | 84              | 87              |
| Melk- en kalfkoeien (>= 2 jr)          |          | 1542            | 1521            |
| Vlees- en weidekoeien (>= 2 jr)        |          | 45              | 41              |
| Stieren voor de fokkerij (>= 2 jr)     |          | 9               | 10              |
| Vlees- en weidevee                     |          | 1227            | 1188            |
| Vlees- en weidevee, totaal             |          | 912             | 886             |
| Vleeskalveren                          |          | 636             | 619             |
| Vleeskalveren voor witvlees (< 1 jr)   |          | 276             | 267             |
| Vleeskalveren voor roodvlees (< 1 jr)  |          | 43              | 41              |
| Jongvee vleesprod., < 1 jr, vrouwelijk |          | 55              | 52              |
| Jongvee vleesprod., < 1 jr, mannelijk  |          | 43              | 46              |
| Jongvee vleesprod., 1-2 jr, vrouwelijk |          | 54              | 48              |
| Jongvee vleesprod., 1-2 jr, mannelijk  |          | 20              | 20              |
| Zoogkoeien (>= 2 jr, vrouwelijk)       |          | 88              | 85              |
| Stieren voor vleesproductie (>= 2 jr)  |          | 11              | 10              |

CBS Den Haag/Heeren en Dienst Regelingen van het Ministerie van LNV 28-4-2010