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

SANCO/12916/2010

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

Control programme of Salmonella

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

The Netherlands

* in accordance with Council Decision 2009/470/EC

PROPOSED
VETERINARY CONTROL PROGRAMME
FOR

SALMONELLA IN TURKEYS
PRESENTED FOR 2011*

BY
THE NETHERLANDS

*In accordance with Regulation 2160/2003 and (EG) Nr. 584/2008

INDEX

ANNEX II – PART A

1. GENERAL REQUIREMENTS FOR THE PROGRAMME

A.a: Aim of the program

The aim of the programme is to monitor and reduce the prevalence of Salmonella Enteritidis (Se) and Salmonella Typhimurium (St) in flocks of breeding turkeys and fattening turkeys.

The target for the reduction of Salmonella Enteritidis (SE) and Salmonella Typhimurium (ST) in adult breeding turkey flocks shall be that no more than one flock may remain positive by 31 December 2012

The target for the reduction of Salmonella Enteritidis (SE) and Salmonella Typhimurium (ST) in fattening turkeys is a reduction of the maximum percentage fattening turkeys remaining positive to 1%, or less by 31 December 2012.

A.b: Animal population and phases of production

Animal population:

- Turkeys

Phase of production:

- Rearing flocks (day-old chicks, four-week-old birds. two weeks before moving to breeding unit)
- Adult breeding flocks
- Birds leaving for slaughter

A.c: Evidence that programme complies requirements laid down in Parts C, D and E of Annex II regulation No 2160 / 2003

Annex II, part C and D are not applicable for turkeys. Annex II, part E is applicable to turkeys but is specifically directed to the trade of meat for human consumption. In the Netherlands there are no slaughterhouses for turkeys, all turkeys from the Netherlands are slaughtered in Germany. Therefore, the Dutch program focuses on live production only. Hence, Annex II, part E is not applicable for the Dutch program.

A.d.1: General

A.d.1.1: Short summary referring to the occurrence of Salmonellosis

In 2009 the results with regard to the occurrence of Salmonella were:

Fattening turkeys:

- 25 flocks infected with Salmonella spp out of 191 flocks (13,1%)
- 0 flocks infected with Salmonella Enteriditis out of 191 flocks (0,0%)
- 0 flocks infected with Salmonella Typhimurium out of 191 flocks (0,0%)

Breeding turkeys:

- 0 flocks infected with Salmonella spp out of 2 flocks (0,0%)
- 0 flocks infected with Salmonella Enteriditis out of 2 flocks (0,0%)
- 0 flocks infected with Salmonella Typhimurium out of 2 flocks (0,0%)

A.d.1.2: Structure and organization of the relevant competent authorities

In the Netherlands the Product Board for Livestock, Meat and Eggs is responsible for the implementation of the programme. The Ministry of Agriculture, Nature and Food Quality is the

central authority and supervises this implementation. In Figure 1, all organizations involved are mentioned, including their relation to the programme.

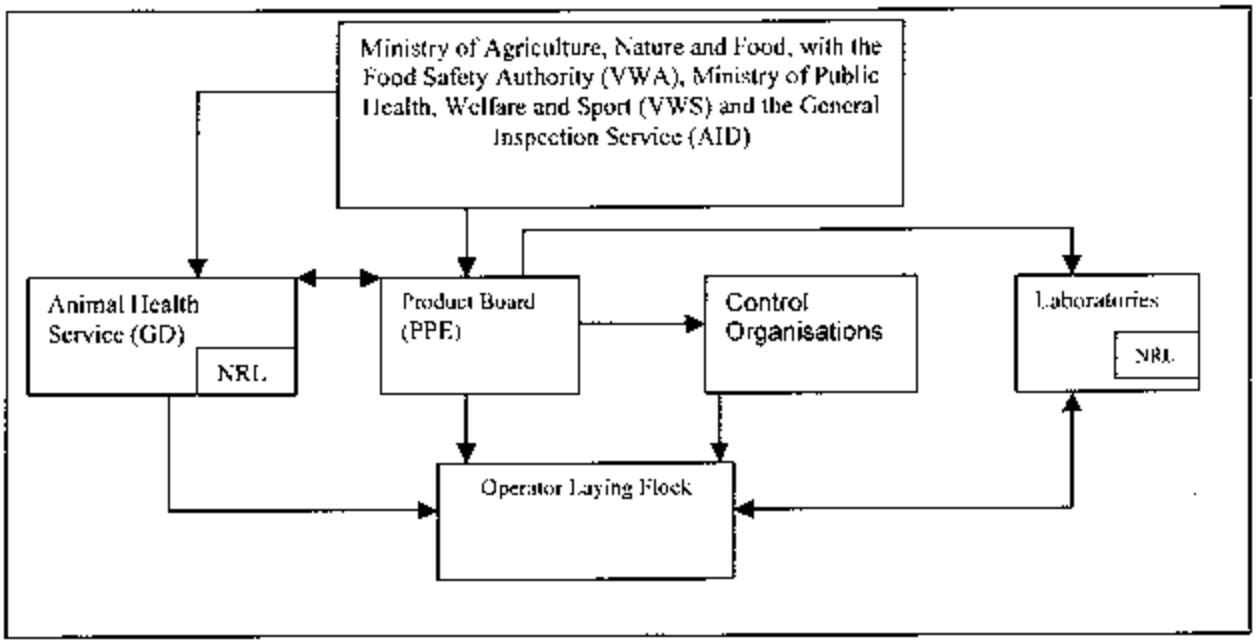


Figure 1: Organizational scheme of the institutes involved in the programme concerning the control of Salmonella in poultry

1. PPE

The Product Board for Poultry and Eggs (PPE) is a delegated authority. This is legally laid down in the following regulation by the Ministry of Agriculture, Nature and Food Quality: "Besluit bescherming tegen bepaalde zoönosen en bestrijding van besmettelijke dierziekten" and "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's". The regulations concerning the Action Plans are formulated by the PPE and acknowledged by the ministry of Agriculture. The implementation of the programme is carried out by the PPE. The evaluation of the results is also the responsibility of the Product Board.

2. Animal Health Service (GD)

Concerning poultry, the main objective is to promote optimal health of poultry, particularly by preventing infectious diseases and the presence of microorganisms and residues that may be harmful to consumers. As a competent independent organization, GD occupies a central position in organized poultry health care. On the basis of (government) regulations or by government order, disease control programmes are realized. GD is acknowledged by the ministry of Agriculture, Nature and Food Quality to perform these tasks. GD will do official sampling.

3. VWA and AID

The Food and Consumers Product Safety Authority (VWA) checks if GD and other laboratories perform according to the agreed work process. Both the VWA and the General Inspection Service (AID) are able to prosecute in specific cases when measures were not followed correctly (e.g. by laboratory or farmer).

4. Control organizations

The control organizations audit the procedures in the Action Plan and the sampling done by the operators. These control organizations must be independent and are acknowledged by the PPE.

5. Laboratories

In total 21 (private) laboratories are acknowledged by the PPE to perform analysis to determine the Salmonella status of samples taken concerning the Action plans. This is legally laid down in the PPE directive "Besluit erkenningsvoorwaarden en werkwijzen laboratoria (PPE) 2007". Every

acknowledged laboratory has to participate in the ring-survey for the determination and serotyping of Salmonella that is performed by the RIVM (NRL) every twelve months. Positive test results for the relevant Salmonella serotypes are reported to the PPE.
The authorization of the laboratories is delegated by the Ministry of Agriculture, Nature and Food Quality to the PPE. This is legally laid down in the following regulation by the Ministry of Agriculture, Nature and Food Quality: "Besluit bescherming tegen bepaalde zoönosen en bestrijding van besmettelijke dierziekten" and "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's" in Article 96, section 2, subsection b, point 8.

6. NRL (RIVM, National Institute of Public Health and Environment)
The RIVM is the national reference laboratory for Salmonella. RIVM falls under the Ministry of Public Health, Welfare and Sport, and also undertakes commissions from other ministries such as the Ministry for Agriculture, Nature and Food Quality.
The RIVM organizes regular bacteriological ring surveys among laboratories, including GD, participating in the Dutch national programme for control of Salmonella in the poultry sector. Results of these ring surveys are reported to the PPE.

A.d.1.3: Approved laboratories

The following laboratories are acknowledged by the PPE to perform analysis to determine the Salmonella status of samples taken concerning the Action plans:
1. A.R.S.I.A.
2. Alex Stewart Bioconsult
3. Bacteriologisch Adviesbureau
4. C.C.L. – Nutricontrol
5. Demetris DierGezondheid BV
6. DGZ Vlaanderen – locatie Torhout
7. GD
8. Heijs Groep Pluimveeverwerkende Industrie (Lab Heijs/ de Vries)
9. K.B.B.L. Wijhe
10. Laboratorium Pro Health BV
11. Lavetan NV
12. Lebensmittel- und veterinärlabor GmbH
13. Lohmann Tierzucht
14. Masterlab BV
15. Opinion Test & Taste
16. Plukon Poultry BV
17. ROBA Laboratorium
18. SGS Laboratory Services
19. Silliker Netherlands BV
20. Storteboom Fresh BV Laboratorium
21. Veterinair Centrum Someren

A.d.1.4: Methods in examination

The tests that are performed in the National Plan: PVE branch method for Salmonella analysis: this method includes the use of Modified Semi solid Rapport Vassiliadis agar (MSRV) as a selective enrichment medium. The semi solid medium should be incubated at 41.5 °C +/- 1 °C for 48 h. Alternative methods for detection will be permitted (for example Salmonella analysis by PCR), when the methods are approved as valid by the CRL.
In case of a positive finding, serotyping is performed according to the Kaufmann-White scheme.

A.d.1.5: Official controls at feed and flock level

Official controls (fattening turkeys
GD carries out official sampling at 10% of the farms once a year. At these 10% of the farms all flocks will be sampled. This 10% will include all flocks that were tested positive for SE or ST by sampling of the food business operator. When this group does not reach 10% of the total amount

of fattening turkey farms in the Netherlands a random selection will take place to fill up the group until 10%. Official sampling replaces monitoring by the operator.

Official controls (breeding turkeys)
GD carries out official sampling at all breeding holdings once a year. This will occur when the breeding turkeys are between 30 and 45 weeks of age. Official sampling replaces monitoring by the operator.

A.d.1.6: Measures taken by the competent authorities

Measures to be taken in case of positive findings in fattening turkeys are:
a) removal of litter when infected turkeys have left the house;
b) cleaning and disinfection of turkey house when empty;
c) swab test, executed by a PPE acknowledged company, of the house after cleaning and disinfection;
d) when swab test is negative, new flock can be placed. When the swab test is positive, new flock can be placed but after this flock has left the turkey house, the cleaning and disinfection of the turkey house has to be executed by a professional cleaning and disinfection company.

Measures to be taken in case of positive findings in breeding turkeys are:
a) determination of the Salmonella serotype
b) verification
c) when verification results in SE/ST:
    a. culling of the flock
    b. non-incubated eggs from the flock have to be treated in such a manner that guarantees the elimination of Salmonella or have to be destroyed
    c. eggs from flocks that are still present in a hatchery, must be destroyed or treated in accordance with Regulation (EC) No 1774/2002

After culling of the flock and after infection with any other Salmonella serotype:
d) Thorough cleaning and disinfection of the housing when empty;
e) swab test, executed by a PPE acknowledged company, of the turkey house after cleaning and disinfection;
f) when swab test is positive, thorough cleaning and disinfection is repeated, followed by a second swab test, executed by a PPE acknowledged company. This cycle is repeated until the swab test is negative.
g) new flock can be placed when the swab test was negative.

A.d.1.7: National legislation relevant to the implementation of the programme

The implementation of the programme is laid down in the PPE Directive 'Verordening Hygiënevoorchriften Kalkoenhouderij (PPE) 2009'.

A.d.1.8: Financial assistance provided to food and feed business

At the moment there is no financial assistance for broiler flocks. Starting in 2011 the programme will offer financial assistance for the purchase of vaccine doses.

A.d.2: Food and feed businesses covered by the programme

A.d.2.1: Structure of the production of broilers

The Dutch turkey business is very small. There are no Dutch (rearing) grandparent flocks or slaughterhouses. All turkeys are slaughtered in Germany. Consequently the programme is applied from rearing parent flocks to fattening turkey flocks. The program coveres all turkey farm businesses in the Netherlands.

The number of turkey operators in the Netherlands:

- 2 rearing breeding flock holdings;
- 2 breeding flock holdings;
- 1 hatchery;
- 55 fattening turkey holdings.

The number of flocks in the Netherlands in 2009

1. Rearing parent stock: 3 flocks
2. Parent stock: 2 flocks
3. Fattering stock: 191 flocks

A.d.2.2: Structure of the production of feed

Directives for the production of feed are laid down in the "Kaderwet Diervoeders" by the Ministry of Agriculture, Nature and Food Quality. The Product board for Feed (PDV) is a delegated authority and publishes specific regulations on the production of feed. The most important regulations for the poultry sector are the "Verordening Monitoring Zoönosen en Zoönoseverwekkers Diervoedersector 2005" and the "Besluit PDV Salmonella in de diervoedersector 2005". In the latter one the monitoring are presented in the Dutch annual zoönoses report.

A.d.2.3: Relevant guidelines

Besides Salmonella monitoring and measurements in case of a positive findings other measurements are part of the "Plan of Approach Salmonella in the turkey sector 1999". These contain hygiene management at farms, measures to prevent incoming infections carried by animals, feed, drinking water, people working at farms and hygiene transporting animals to and from farms.

The measurements (in short) are:

1. Hygiene management at farms:
   a. No pets, stock or (other) poultry is allowed in the turkey house;
   b. If pets, stock or (other) poultry is on the location of the turkey farm special hygiene measurements are required (like separate care);
   c. No wild birds can enter the turkey house;
   d. Visitors are only allowed to enter the turkey house when this is necessary and under strict hygiene measurements (including special clothing);
   e. On the breeding farm there is a shower;
   f. Every farm has a rodent control program or charter an acknowledged rodent control company (at least every 2 months);
   g. Once a year a bacteriological research, and in case of a natural source of water also chemical research, of drinking water for turkeys is accomplished;
   h. Every farm has a clear boundary and it is visible for visitors where they must announce themselves. The turkey houses are locked;
   i. The turkey house, the turkey farm and its close environment is clean;
   j. Before entering the turkey house there is a hygiene barrier with clothing and shoes:
   k. The drive- and walking routes to the farm are paved and cleanable;
   l. The silo is placed on a paved underground, is easy to clean and refillable from outside the turkey house. When there are more silo's, every silo has a unique number;
   m. Feed and litter is in such a way stored that it stays clean, dry and mouldfree;
   n. Every turkey house must have a hand-washing facility.
2. Cleaning and disinfection:
   o. After removing the turkeys the litter is removed and the turkey house is cleaned and disinfected;
   p. Once a year a hygiene check in the cleaned and disinfected empty turkey house is done by an by the PPE acknowledged company:

A.d.2.4: Routine veterinary supervision of farms

Every farm is inspected at least once a year by a qualified veterinarian on behalf of the Competent Authority to enforce national legislation (e.g. legislation based on EU Directive 90/593/EC). This visit is not considered as official sampling. In the frame of the Salmonella control programme. The official sampling therefore is in addition to the routine veterinary visit.

A.d.2.5: Registration of farms

All poultry farms and flocks (with more than 250 birds) are being registered by the PPE. Every farm receives a unique number. When a flock is being transferred from one farm to another the PPE must be informed. This is laid down in the directive 'Verordening productie van en handel in broedeieren en levend pluimvee (PPE)". All the information is stored in the "Koppel Informatiesysteem Pluimvee (KIP-system)". This so called KIP-system is also the base for the registration in according to the EU Regulation 852/2004.

A.d.2.6: Record-keeping at farms

Turkey farmers have to keep record of the following parameters:

- Number of animals
- Fallout ration
- Number of produced eggs
- Date of Salmonella sampling and result and serotype
- Starting date new flock
- Date of transfer of information concerning Salmonella status to the Product Board and to the buyer and the supplier of eggs or turkeys.

A.d.2.7: Documents to accompany animals when dispatched

When animals are dispatched they are accompanied by a special document, called 'P-formulier'. For dispatch to slaughterhouse a document called 'VKI – Voedsel Keten Informatie' is demanded. On this document information like Salmonella status and use of medicine is registrated. The VKI form is according to directive EG 2074/2005.

Every holding is obligated to inform the slaughterhouse where the fattening turkeys are transferred to, about the Salmonella status. This is laid down in the directive "Verordening Hygiënevoorschriften Kalkoenhouderij (PPE)".

Because all turkeys are slaughtered in Germany all the transports have to have an exportcertificate which is issued by the Food and Consumers Product Safety Authority (VWA). The export certificate is based on the following EU documents:

- Directive 2009/158/EG; Directive 90/425/EEG; Directive 96/93
- Regulation 2160/2003; Regulation 1234/2007; Regulation 617/2008
- Decision 2006/147; Regulation 1/2005.

Operators wishing to export more than 20 birds or hatching eggs to another EU member state (or certain third countries) must comply with EU Directive 90/539/EC and ensure that the consignment is accompanied by a completed and signed Intra-trade Animal Health Certificate (ITAHC) for poultry breeding and production.
The ITAHC will also require the reference number of the operator's poultry health certificate. The ITAHC will be amended to include the results of the last test for *Salmonella* as required in Commission Regulation (EC) 2160/2003 Article 9.1 prior to any dispatching of the live animals, or hatching eggs, from the food business of origin. The date and the result of testing shall be included in the relevant health certificates provided for in Community legislation.This certificate must be completed and signed by the Official Veterinarian as well as the operator to confirm compliance with the relevant articles of Directive.

A.d.2.8: Other relevant measures to ensure traceability of animals

The TRACES system is managed by the Dutch Food Safety Authority (VWA). An export can only be approved in TRACES if the official veterinarian has given his approval.

ANNEX II – PART B

1. IDENTIFICATION OF THE PROGRAMME

Member state:	The Netherlands
Disease:	Infection of turkeys with zoonotic Salmonella spp
Species:	Turkeys

Request of Community co-financing from: 2011 to 2012

Geographical Area:	The Netherlands

Contact:
Ir. M.M. van Huik
Product Board for Poultry and Eggs, PPE
Phone: 0031(0)79 363 4340
Fax: 0031(0)79 363 4345
E-mail: mvanhuik@pve.nl

Date sent to the commission: April 29th 2010

2. HISTORICAL DATA ON THE EPIDEMIOLOGICAL EVOLUTION OF ZOONOTIC SALMONELLOSIS

The Netherlands has a programme to control the prevalence of Salmonella in turkeys since 1999. The programme is called "Plan of Approach Salmonella in the turkey sector 1999". The programme that was designed involved strict hygiene rules and the monitoring of Salmonella infections throughout the turkey production chain. The actions involved in the Plan are obligatory, pursuant to the legislation of the PPE. The programme is compulsory for all turkey operators in the Netherlands. The Dutch turkey business is very small. There are no Dutch (rearing) grandparent flocks or slaughterhouses. All turkeys are slaughtered in Germany. Consequently the programme is applied from rearing parent flocks to fattening turkey flocks.
The number of turkey operators in the Netherlands:

- 2 rearing breeding flock holdings;
- 2 breeding flock holdings;
- 1 hatchery;
- 55 fattening turkey holdings.

The programme has been effectively, which is shown in figure 1. The Salmonella spp. prevalence in fattening turkeys decreased from 2004 till 2007 to 2,9%, however the Salmonella spp. prevalence in fattening turkeys has increased in 2009 to 4,6%. In 2009 there have been no contaminations with Salmonella enteritidis of Salmonella typhimurium. Woodwool samples are taken when the fattening turkeys arrive at the holding and fluff samples are taken in the hatchery.

In the Baseline survey 2006-2007, which is performed by MSs and analysed by EFSA, the Netherlands had a SE / ST-infection percentage, based on bacteriological results, of 1,5% in fattening turkeys. This percentage is the starting-point for this programme. At this moment the Netherlands are very close to the target mentioned in EG 584/2008 article 1, a:

The Community target, as referred to in Article 1 (a and b) of Regulation (EC) No 584/2008, for the reduction of SE and ST in turkeys ('Community target') shall be:

a) a reduction of the maximum percentage of fattening turkey flocks remaining positive of SE and ST to 1% or less by 31 December 2012
b) a reduction of the maximum percentage of breeding turkeys flocks remaining positive of SE en ST to 1% or less by 31 December 2012.

For breeding turkeys no baseline study has been performed, but the last 6 years no Salmonella has been found in the two Dutch breeding turkey flocks. However since the Netherlands has less than 100 adult breeding flocks (namely 2), the community target shall be that no more than one flock of adult breeding may remain positive by 31 December 2012. This is conform article 1.b. EG 584/2008.

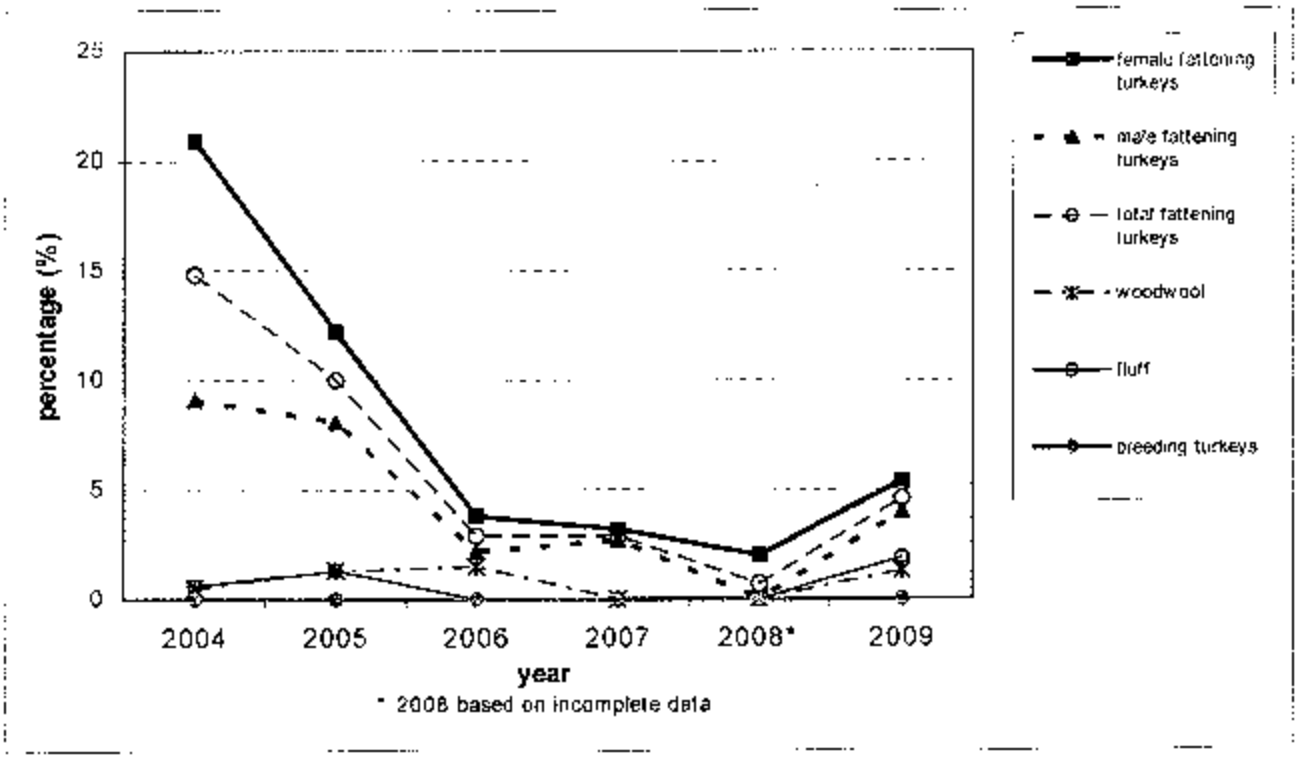


Figure 2: prevalence of Salmonella spp. in turkey production chain in the Netherlands from 2004-2009.

3. DESCRIPTION OF THE SUBMITTED PROGRAMME

3.1 Target Veterinary Control Programme

Fattening turkeys
The target for the reduction of Salmonella Enteritidis (SE) and Salmonella Typhimurium (ST) in fattening turkeys is a reduction of the maximum percentage fattening turkeys remaining positive to 1%, or less by 31 December 2012.

Breeding turkeys
The target for the reduction of Salmonella Enteritidis (SE) and Salmonella Typhimurium (ST) in adult breeding turkey flocks shall be that no more than one flock may remain positive by 31 December 2012.

3.2 Monitoring of the Veterinary Control Programme

A. Monitoring by the food business operator (fattening turkeys)
The test frequency is laid down in the directives of the PPE. At the maximum of 21 days before slaughter, samples are taken at the holding. The operator is responsible for the monitoring. During monitoring at least two pair of boot / sock swabs are taken per turkey house. All compartments of the turkey house are equally represented in the samples. It is ensured that all sections in a turkey house are represented in the sampling in a proportionate way. Each pair should cover about 50% of the area of the house.
On completion of sampling the boot / sock swabs are carefully removed so as not to dislodge adherent material. Boot swabs may be inverted to retain material. The boot swabs are transported in a bottle or plastic bag with a label.

Before putting on the boot / sock swabs, their surface is moistened with maximum recovery diluents (MRD: 0,8% sodium chloride, 0,1% peptone in sterile deionised water), or sterile water or any other diluent approved by the national reference laboratory. The use of farm water containing antimicrobials or additional disinfectants is prohibited.

Samples will send by (express) mail or courier to a PPE acknowledged laboratory, within 24 hours after collection. If not sent within 24 hours, they will be stored. At the laboratory samples will be kept refrigerated until examination, which is carried out within 48 hours following receipt and within 96 hours of sampling. Samples are analyzed according to the MSRV-branchemethod, which is according to point 3.4 of the Annex of 584/2008 and is based on the latest version of Annex D, ISO 6579(2002). Each Salmonella positive sample has to be analyzed to a serotype.

When a turkey farmer feeds the turkeys with cereal grown on his own farm of bought from another farmer, the turkey farmers has to take a double sample from every batch of cereal. The farmer has to take at least 5 separate samples from different parts of one batch of cereal. The total of these samples has to be at least 500 grams. Of each sample the following features have to be registered:

- Date of sample
- Name of product
- Size of batch
- Origing (home grown, bought from other farmer)
- Place of sampling

When there is positive Salmonella finding at the turkey house of which the origin is unknown, the cereal sample has to be examined for Salmonella spp. The samples have to be sent to a laboratory that is acknowledged by the Product Board Animal Feed.

B. Official sampling (fattening turkeys)

GD carries out official sampling at 10% of the farms once a year. At these 10% of the farms all flocks will be sampled. This 10% will include all flocks that were tested positive for SE or ST by sampling of the food business operator. When this group does not reach 10% of the total amount of fattening turkey farms in the Netherlands a random selection will take place to fill up the group until 10%. Official sampling replaces monitoring by the operator.

C. Monitoring by the food business operator (breeding turkeys)
The test frequency is laid down in the directives of the PPE. Rearing breeding turkeys are sampled at day-old (woodwool or litter), at four weeks of age (2 pairs of boot swabs) and two weeks before moving to the laying phase or laying unit (2 pairs of boot swabs).
Adult breeding turkeys are sampled from an age of 30 weeks every third week during the laying period at the holding or at the hatchery. Samples are taken in accordance with the provisions laid down in the Annex of Regulation EG 584/2008.

D. Official sampling (breeding turkeys)
GD carries out official sampling at all breeding holdings once a year. This will occur when the breeding turkeys are between between 30 and 45 weeks of age. Official sampling replaces monitoring by the operator.

3.3 Measures to be taken in case of Salmonella positive findings at the turkey house

Fattening turkeys
Measures to be taken in case of positive findings in fattening turkeys are:
a) removal of litter when infected turkeys have left the house;
b) cleaning and disinfection of turkey house when empty;
c) swab test, executed by a by the PPE acknowledged company, of the house after cleaning and disinfection;
d) when swab test is negative, new flock can be placed. When the swab test is positive, new flock can be placed but after this flock has left the turkey house, the cleaning and disinfection of the turkey house has to be executed by a professional cleaning and disinfection company.

Breeding turkeys
Measures to be taken in case of positive findings in breeding turkeys are:
a) determination of the Salmonella serotype
b) verification
c) when verification results in SE/ST:
    a. culling of the flock
    b. non-incubated eggs from the flock have to be treated in such a manner that guarantees the elimination of Salmonella or have to be destroyed
    c. eggs from flocks that are still present in a hatchery, must be destroyed or treated in accordance with Regulation (EC) No 1774/2002.

After culling of the flock and after infection with any other Salmonella serotype:
d) Thorough cleaning and disinfection of the housing when empty;
e) swab test, executed by a PPE acknowledged company, of the turkey house after cleaning and disinfection;
f) when swab test is positive, thorough cleaning and disinfection is repeated, followed by a second swab test, executed by a PPE acknowledged company. This cycle is repeated until the swab test is negative.
g) new flock can be placed when the swab test was negative.

3.4 Monitoring in slaughterhouse

Not applicable because there are no slaughterhouses for turkeys in the Netherlands, all Dutch turkeys are slaughtered in Germany.

3.5 Measures to be taken in case of Salmonella positive findings at the slaughterhouse

Not applicable.

3.6 Other bio-security regulations

Besides Salmonella monitoring and measurements in case of a positive findings other bio-security regulations are part of the "Plan of Approach Salmonella in the turkey sector 1999". The measurements (in short) are:

1. Hygiene management at farms:
    a. No pets, stock or (other) poultry is allowed in the turkey house;
    b. If pets, stock or (other) poultry is on the location of the turkey farm special hygiene measurements are required (like separate care);
    c. No wild birds can enter the turkey house;
    d. Visitors are only allowed to enter the turkey house when this is necessary and under strict hygiene measurements (including special clothing);
    e. On the breeding farm there is a shower;
    f. Every farm has a rodent control program or charter an acknowledged rodent control company (at least every 2 months);
    g. Once a year a bacteriological research, and in case of a natural source of water also chemical research, of drinking water for turkeys is accomplished;
    h. Every farm has a clear boundary and it is visible for visitors where they must announce themselves. The turkey houses are locked;
    i. The turkey house, the turkey farm and its close environment is clean;
    j. Before entering the turkey house there is a hygiene barrier with clothing and shoes;
    k. The drive- and walking routes to the farm are paved and cleanable;
    l. The silo is placed on a paved underground, is easy to clean and refillable from outside the turkey house. When there are more silo's, every silo has a unique number;
    m. Feed and litter is in such a way stored that it stays clean, dry and mouldfree;
    n. Every turkey house must have a hand-washing facility.
2. Cleaning and disinfection:
    o. After removing the turkeys the litter is removed and the turkey house is cleaned and disinfected;
    p. Once a year a hygiene check in the cleaned and disinfected empty turkey house is done by an by the PPE acknowledged company;

4 MEASURES OF THE SUBMITTED PROGRAMME

4.1 Summary of measures under the programme

Duration of the programme:
There is a program running since 1999, which is slightly changed from 1st January 2010. Especially the part of culling SE or ST positive breeding flocks and the official sampling is new and will start at 1st January 2010. The rest of the programme is ongoing, at least up to 31 December 2013.

First year:
- ☐ Control:
  - ☐ Testing
- ☐ Monitoring or surveillance
- ☐ Culling SE/ST breeding flocks
- ☐ Destruction of SE/ST hatching eggs

- ☐ Other measures:
  - ☐ Rodent control programme
  - ☐ Hygiene check
  - ☐ Bacteriological research water
  - ☐ Hygiene measurements

Last year:
- ☐ Control:
  - ☐ Testing
- ☐ Monitoring or surveillance
- ☐ Culling SE/ST breeding flocks
- ☐ Destruction of SE/ST hatching eggs
- ☐ Separate transport of positive fattening flocks to slaughterhouse
- ☐ Other measures:
  - ☐ Rodent control programme
  - ☐ Hygiene check
  - ☐ Bacteriological research water
  - ☐ Hygiene measurements

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

In the Netherlands the Product Board for Livestock, Meat and Eggs (PPE) is responsible for the implementation of the programme. The Ministry of Agriculture, Nature and Food Quality is the central authority and supervising this implementation. In Figure 3, all organizations involved are mentioned, including their relation to the programme.

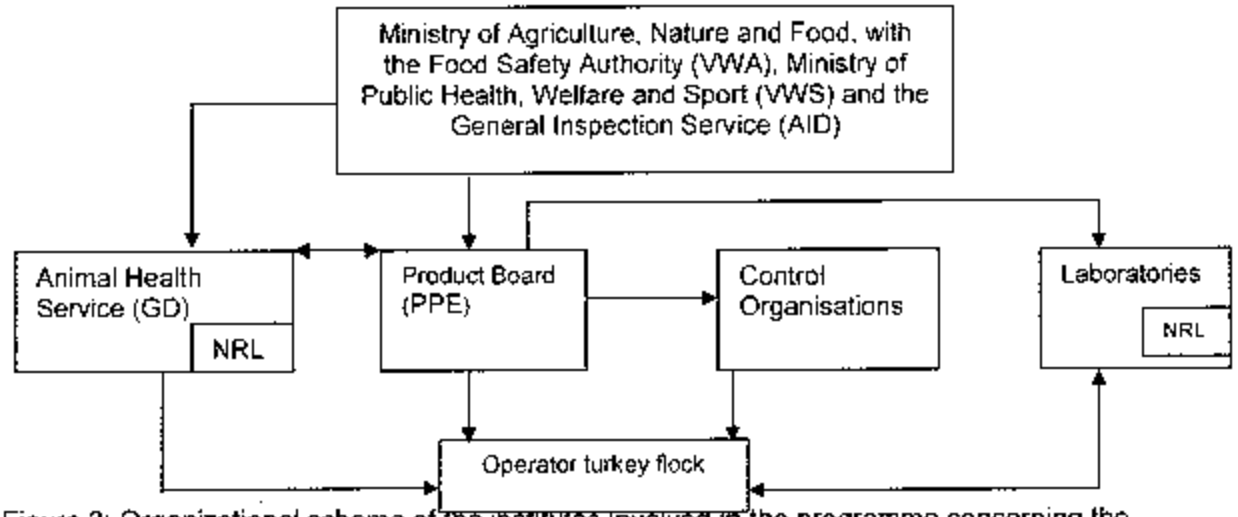


Figure 3: Organizational scheme of the institutes involved in the programme concerning the control of Salmonella in turkeys.

1. PPE
The Product Board for Poultry and Eggs (PPE) is a delegated authority. This is legally laid down in the following regulation by the Ministry of Agriculture, Nature and Food Quality: "Besluit bescherming tegen bepaalde zoönosen en bestrijding van besmettelijke dierziekten" and "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's". The regulations concerning the Action Plans are formulated by the PPE and acknowledged by the ministry of Agriculture. The implementation of the programme is carried out by the PPE. The evaluation of the results is also the responsibility of the Product Board.

2. Animal Health Service (GD)
Concerning poultry, the main objective is to promote optimal health of poultry, particularly by preventing infectious diseases and the presence of microorganisms and residues that may be harmful to consumers. As a competent independent organization, GD occupies a central position in organized poultry health care. On the basis of (government) regulations or by government order, disease control programmes are realized. GD is acknowledged by the ministry of Agriculture, Nature and Food Quality to perform these tasks. GD will do official sampling.

3. VWA and AID
The Food and Consumers Product Safety Authority (VWA) checks if GD and other laboratories perform according to the agreed work process. Both the VWA and the General Inspection Service (AID) are able to prosecute in specific cases when measures were not followed correctly (e.g. by laboratory or farmer).

4. Control organizations
The control organizations audit the procedures in the Action Plan and the sampling done by the operators. These control organizations must be independent and are acknowledged by the PPE.

5. Laboratories
In total 22 (private) laboratories are acknowledged by the PPE to perform analysis to determine the Salmonella status of samples taken concerning the Action plans. This is legally laid down in the PPE directive "Besluit erkenningsvoorwaarden en werkwijzen laboratoria (PPE) 2007". Every acknowledged laboratory has to participate in the ring-survey for the determination and serotyping of Salmonella that is performed by the RIVM (NRL) every twelve months. Positive test results for the relevant Salmonella serotypes are reported to the PPE.
The authorization of the laboratories is delegated by the Ministry of Agriculture, Nature and Food Quality to the PPE. This is legally laid down in the following regulation by the Ministry of Agriculture, Nature and Food Quality: "Besluit bescherming tegen bepaalde zoönosen en bestrijding van besmettelijke dierziekten" and "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's" in Article 96, section 2, subsection b, point 8.

6. NRL (RIVM, National Institute of Public Health and Environment)
The RIVM is the national reference laboratory for Salmonella. RIVM falls under the Ministry of Public Health, Welfare and Sport, and also undertakes commissions from other ministries such as the Ministry for Agriculture, Nature and Food Quality.
The RIVM organizes regular bacteriological ring surveys among laboratories, including GD, participating in the Dutch national programme for control of Salmonella in the poultry sector. Results of these ring surveys are reported to the PPE.

Structure of the production of feed
Directives for the production of feed are laid down in the "Kaderwet Diervoeders" by the Ministry of Agriculture, Nature and Food Quality. The Product board for Feed (PDV) is a delegated authority and publishes specific regulations on the production of feed. The most important regulations for the poultry sector are the "Verordening Monitoring Zoönosen en Zoönoseverwekkers Diervoedersector 2005" and the "Besluit PDV Salmonella in de diervoedersector 2005". In the latter one the monitoring are presented in the Dutch annual zoönoses report.

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

Geographical limitations: The Netherlands.

4.4 Measures implemented under the programme

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

All turkey farms and flocks are being registered by the PPE. Every farm receives a unique number. When a flock is being transferred from one farm to another the farm informs the PPE about this. The number of animals and date of birth are registered. This is laid down in the directive "Verordening productie van en handel in broedeieren en levend pluimvee (PPE)". All the information is stored in the "Koppel Informatiesysteem Pluimvee". This so called KIP-system is also the base for the registration in according to the EC directive 852/2004.

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

Not applicable for turkeys.

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

In case of a Salmonella infection the laboratory that signalises the first indication / suspicion has to inform GD (Animal Health Service) and the farmer. After this a verification study will take place. When the infection is confirmed the PPE and the farmer are informed. If necessary (see chapter 3.3) PPE organises the destruction of the infected animals and the breeding eggs.

Each veterinarian has the obligation to notify Salmonella to the GD. This is specified in legislation of the Ministry of Agriculture, Nature and Food Quality, "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's". According to the food chain information obligation (EG 853/2005) the farmer has to notify the slaughterhouse about the result of Salmonella sampling, this is laid down in directives of the PPE.

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

The measures that have to be taken in case of a positive result are laid down in directives of the PPE. The Ministry of Agriculture, Nature and Food Quality and Ministry of Public Health, Welfare and Sport have to approve these directives. All measures are stated in Chapter 3.
In the frame of the *Salmonella* control programme in **turkey flocks** of Meleagris gallopavo **the** provisions of paragraph 1 and 2 (frequency of sampling) 4 (results and reporting) of Annex of Commission Regulation (EC) No 584/2008 **(particularly provisions on exceptional cases)**are implemented

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

Not applicable for turkeys.

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

When birds from infected flocks are slaughtered or destroyed, steps are taken to reduce the risk of spreading zoonoses as far as possible. Slaughtering will be carried out in accordance with

Community legislation on food hygiene. Also hatching eggs are destructed. If not destined for human consumption, such products must be used or disposed of in accordance with Regulation (EC) No 1774/2002.

4.4.7 Measures and applicable legislation as regards the control (testing, vaccination) of Salmonella

Vaccination against salmonella is not used in turkeys in the Netherlands.

Laboratory tests and analyses
The tests that are performed in the Action Plan are:
PPE branch method for Salmonella analysis: this method includes the use of Modified Semi solid Rapport Vassiliadis agar (MSRV) as a selective enrichment medium. The semi solid medium should be incubated at 41.5 °C +/- 1 °C for 48 h. Alternative methods for detection will be permitted (for example Salmonella analysis by PCR), according to the provisions laid down in Commission Regulation 584/2008 (Annex point 3.4) In case of a positive finding, serotyping is performed according to the Kaufmann-White scheme.

At least one isolated strain per house and per year shall be collected by the competent authority and stored for future phagetyping or anti-microbial susceptibility testing, using normal methods for culture collection, which must ensure integrity of the strains for minimum of two years.

Antimicrobials
The use of antimicrobials is prohibited except for circumstances laid down in 1177/2006/EC, Article 2.

Salmonella vaccines
Vaccination is not yet used in turkey fattening or breeding flocks. Starting in 2011 the programme will also contain vaccination. When vaccination is used, the provisions of CR 1177/2006 on the use of vaccines will be followed.

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

The financial contribution for the owner of culled breeding turkeys will be specified in legislation of the PPE "Verordening Subsidieverlening terugdringing Salmonella in de pluimveesector". At the moment in this legislation there are no possibilities for financial contribution for turkey breeding flocks. In 2010 there will be.

4.4.9 Information and assessment on bio-security measures management and infrastructure in place in flocks / holdings involved

Besides the control programme for Salmonella, each flock will be checked once through a veterinarian, in accordance to the GVP-code (Good Veterinarian Practice). This is a Dutch quality code for veterinarian and ensures that the veterinarian has knowledge of poultry (turkeys).

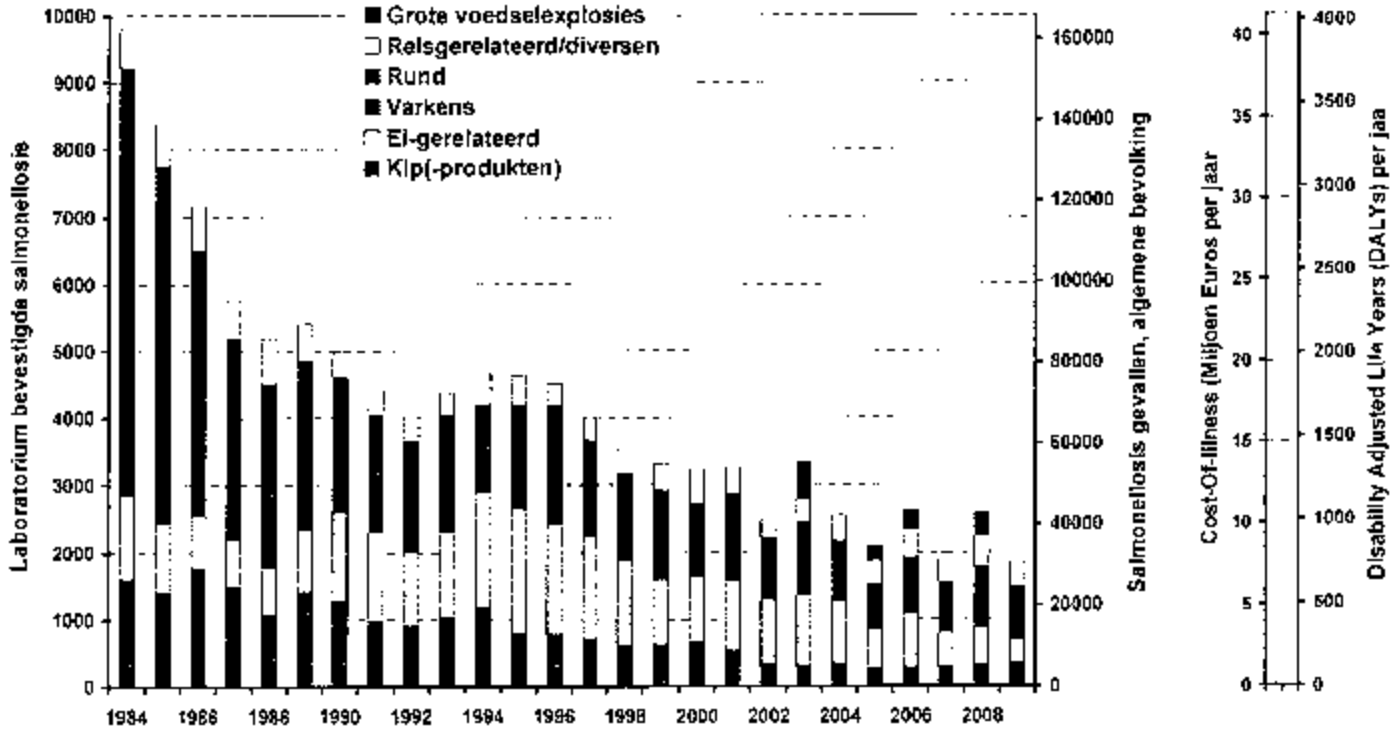
Every holding is obligated to inform the slaughterhouse where the fattening turkeys are transferred, about the Salmonella status. This is laid down in the directive "Verordening Hygiënevoorschriften Kalkoenhouderij (PPE)".

Because all turkeys are slaughtered in Germany all the Dutch turkey holdings take part in the German quality system Q&S. The Product Board (PPE) is Bündler for the Dutch turkey holdings and coordinates the control activities and supervises the compliance of the Dutch Q&S participants.

5 GENERAL DESCRIPTION OF THE COSTS AND BENEFITS

5.1. Human salmonellosis

The incidence of human salmonellosis health, is outlined in the graph below:



Detailed cost benefits data are not available.

6 DATA ON THE EPIDEMIOLOGICAL EVOLUTION DURING THE LAST FIVE YEARS

6.1 Evolution of the disease

6.1.2. Data on evolution of zoonotic salmonellosis

Year: 2005 **Situation on date:** December 2005
Animal species: turkey **Disease/infection**[a]: Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[d]	Number of positive[e] flocks[a]			Number of flocks depopulated[a]		Total number of animals slaughtered or destroyed[a]		Quantity of eggs destroyed (number or kg)[a]		Quantity of eggs channelled to egg products (number or kg)[a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Rearing breeding turkey	4	20.260	4	20.260	4	0	0	0	0	0	0	0	0	0	0	0
	Breeding turkey	3	14.948	3	14.948	3	0	0	0	0	0	0	0	0	0	0	0
	Fattening turkey	252	2,6 million	252	2,6 million	252	0	0	27	0	0	0	0	0	0	0	0
Total		259	2,6 million	259	2,6 million	259	0	0	27	0	0	0	0	0	0	0	0

Year: 2006 **Situation on date:** December 2006
Animal species: turkey **Disease/infection**[a]: Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[d]	Number of positive[e] flocks[a]			Number of flocks depopulated[a]		Total number of animals slaughtered or destroyed[a]		Quantity of eggs destroyed (number or kg)[a]		Quantity of eggs channelled to egg products (number or kg)[a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Rearing breeding turkey	4	17.791	4	17.791	4	0	0	0	0	0	0	0	0	0	0	0

	Breeding turkey	2	9.736	2	9.736	2	0	0	0	0	0	0	0	0	0	0	0
	Fattening turkey	227	2,9 million	227	2,9 million	227	0	0	12	0	0	0	0	0	0	0	0
Total		231	2,9 million	231	2,9 million	231	0	0	12	0	0	0	0	0	0	0	0

Year: 2007 **Situation on date:** December 2007
Animal species: turkey **Disease/infection**[a]: Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[i] [c]	Number of positive[d] flocks[e]			Number of flocks depopulated[a]		Total number of animals slaughtered or destroyed [a]		Quantity of eggs destroyed (number or kg) [a]		Quantity of eggs channelled to egg products (number or kg) [a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Rearing breeding turkey	3	15.466	3	15.466	3	0	0	0	0	0	0	0	0	0	0	0
	Breeding turkey	2	9.947	2	9.947	2	0	0	0	0	0	0	0	0	0	0	0
	Fattening turkey	210	2,8 million	210	2,8 million	210	0	0	8	0	0	0	0	0	0	0	0
Total		215	2,8 million	215	2,8 million	215	0	0	8	0	0	0	0	0	0	0	0

Year: 2008 **Situation on date:** December 2008
Animal species: turkey **Disease/infection**[a]: Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[i] [c]	Number of positive[d] flocks[e]			Number of flocks depopulated[a]		Total number of animals slaughtered or destroyed [a]		Quantity of eggs destroyed (number or kg) [a]		Quantity of eggs channelled to egg products (number or kg) [a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Rearing breeding turkey	4	20.352	4	20.352	4	0	0	0	0	0	0	0	0	0	0	0

	Breeding turkey	4	18.245	4	18.245	4	0	0	0	0	0	0	0	0	0	0	0	0
	Fattening turkey	197	2,8 million	197	2,8 million	197	0	0	1	0	0	0	0	0	0	0	0	0
Total		205	2,8 million	205	2,8 million	205	0	0	1	0	0	0	0	0	0	0	0	0

Year: 2009 **Situation on date:** December 2009
Animal species: turkey **Disease/infection**[a]: Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[d]	Number of positive[e] flocks[a]			Number of flocks depopulated[a]		Total number of animals slaughtered or destroyed [a]		Quantity of eggs destroyed (number or kg) [a]		Quantity of eggs channelled to egg products (number or kg)[a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Rearing breeding turkey	3	10.224	3	10.224	3	0	0	0	0	0	0	0	0	0	0	0
	Breeding turkey	2	9.520	2	9.520	2	0	0	0	0	0	0	0	0	0	0	0
	Fattening turkey	191	2,6 million	191	2,6 million	191	0	0	25	0	0	0	0	0	0	0	0
Total		196	2,6 million	196	2,6 million	196	0	0	1	0	0	0	0	0	0	0	0

(a) For zoonotic Salmonellosis indicate the serotypes covered by the control programmes: (a1) for *Salmonella* Enteritidis, (a2) for *Salmonella* Typhimurium, (a3) for other serotypes-specify as appropriate, (a4) for *Salmonella* Enteritidis or *Salmonella* Typhimurium.

(a1) Region as defined in the approved control and eradication programme of the Member State.

(b) For example, breeding flocks (rearing, adult flocks), production flocks, laying hen flocks, breeding turkeys, broiler turkeys, breeding pigs, slaughter pigs, etc. Flocks or herds or as appropriate.

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

(d) Check means to perform a flock level test under the programme for the presence of salmonella. In this column a flock must not be counted twice even if it has been checked more than once.

(e) If a flock has been checked, in accordance with footnote (d), more than once, a positive sample must be taken into account only once.

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: 2009 **Animal species [a]:** turkey **Category[b]:** breeding and fattening flocks
Description of the used serological tests: N/A

Description of the used microbiological or virological tests: MSRV method in faeces

Description of the other used tests: N/A

Region[c]	Serological tests		Microbiological or virological tests		Other tests	
	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]
Netherlands	N/A	N/A	449	25	N/A	N/A
Total	N/A	N/A	449	25	N/A	N/A

(a) Animal species if necessary.
(b) Category/further specifications such as breeders, laying hens, broilers ,breeding turkeys, broiler turkeys, breeding pigs, slaughter pigs, etc, when appropriate.
(c) Region as defined in the approved control and eradication programme of the Member State.
(d) Number of samples tested.
(e) Number of positive samples.

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

Year: 2005 **Animal species**[a]:: turkey (breeding and fattening flocks)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	19 (all serotypes)	NA
Total	19 (all serotypes)	NA

Year: 2006 **Animal species**[a]:: turkey (breeding and fattening flocks)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	12 (all serotypes)	NA
Total	12 (all serotypes)	NA

Year: 2007 **Animal species**[a]:: turkey (breeding and fattening flocks)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	8 (all serotypes)	NA
Total	8 (all serotypes)	NA

Year: 2008 **Animal species**[a]:: turkey (breeding and fattening flocks)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	1 (all serotypes)	NA
Total	1 (all serotypes)	NA

Year: 2009 **Animal species**[a]:: turkey (breeding and fattening flocks)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	25 (all serotypes)	NA
Total	25 (all serotypes)	NA

(a) Animal species if necessary.

(b) Region as defined in the control and eradication programme of the Member State.
(c) Herds or flocks or holdings as appropriate.

6.4 Data on vaccination programmes

Not applicable, until 2011 there is no vaccination programme for turkeys in the Netherlands. From 1-1-2011 a vaccination programme for turkeys will start.

7 TARGETS

7.1 Targets related to testing

7.1.1. Targets on diagnostic tests

Year: 2011 **Animal species:** [a]: turkey (breeding and fattening flocks)

Region[b]	Type of the test[c]	Target population[d]	Type of sample[e]	Objective[f]	Number of planned tests
Netherlands	MSRV	Breeding flocks	faeces	monitoring	80
Netherlands	MSRV	Fattening flocks	faeces	monitoring	400
Total					480

(a) Species if necessary.
(b) Region as defined in the approved control and eradication programme of the Member State.
(c) Description of the test.
(d) Specification of the targeted species and the categories of targeted animals if necessary.
(e) Description of the sample (for instance faeces).
(f) Description of the objective (for instance surveillance, monitoring, , control of vaccination).

7.1.2. Targets on testing of flocks[1]

Year: 2011 **Situation on date:** December 2009
Animal species: Turkey **infection**[a]: Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Expected number of flocks to be checked[d]	Number of flocks[e] expected to be positive			Number of flocks expected to be depopulated[a]		Total number of animals expected to be slaughtered or destroyed [a]		Expected quantity of eggs to be destroyed (number or kg) [a]		Expected quantity of eggs channelled to egg products (number or kg) [a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3
Netherlands	Breeding flocks	5	20.000	5	20.000	5	0	1	0	1	0	5.000	0	10.000	0	10.000	0
	Faltening Flocks	191	2,6 million	191	2,6 million	191	0	5	20	0	0	0	0	0	0	0	0
Total		196	2,6 million	196	2,6 million	196	0	6	20	1	0	5.000	0	10.000	0	10.000	0

(a) For zoonotic salmonellosis indicate the serotypes covered by the control programmes: (a1) for *Salmonella* Enteritidis, (a2) for *Salmonella* Typhimurium, (a3) for other serotypes-specify as appropriate, (a4) for *Salmonella* Enteritidis or *Salmonella* Typhimurium.

(a1) Region as defined in the approved control and eradication programme of the Member State.

(b) For example, breeding flocks (rearing, adult flocks), production flocks, laying hen flocks, breeding turkeys,broiler turkeys, breeding pigs, slaughter pigs, etc. Flocks or herds or as appropriate.

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

(d) Check means to perform a flock level test under the programme for the presence of salmonella. In this column a flock must not be counted twice even if it has been checked more than once.

(e) If a flock has been checked, in accordance with footnote (d), more than once, a positive sample must be taken into account only once.

[1] Specify types of flocks if appropriate (breeders, layers, broilers).

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

7.2.1. Targets on vaccination [2]

Year: 2011 **Animal species:** [a]: **turkey** (breeding and fattening flocks)

Region[b]	Total number of herds[c] in vaccination programme	Total number of animals in vaccination programme	Targets on vaccination programme			
			Number of herds[c] in vaccination programme	Number of herds[c] expected to be vaccinated	Number of animals expected to be vaccinated	Number of doses of vaccine expected to be administered
Netherlands	196	2,6 million	196	196	2,6 million	5,2 million
Total	196	2,6 million	196	196	2,6 million	5,2 million

(a) Species if necessary.
(b) Region as defined in the approved control and eradication programme of the Member State.
(c) Herds or flocks or holdings as appropriate.

[2] Data to provide only if appropriate.

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

Costs related to	*Specification*	*Number of units*	*Unitary cost in EUR*	*Total amount in EUR*	*Community funding requested (yes/no)*
1. Testing					
1.1. Cost of the analysis	*Test:* Number of bacteriological tests (cultivation) planned to be carried out in the framework of official sampling Breeding flocks	24	18,39	441	yes
	Fattening flocks (10%)	19	18,39	351	yes
1.2. Cost of sampling		NA	NA	NA	No
1.3. Other costs		NA	NA	NA	No

2. Vaccination or treatment of animal products					
2.1. Purchase of vaccine/treatment of animal products	Number of purchase of vaccine doses planned if a vaccination policy is part of the programme as set out explicitly under point 4 of Annex II	7,86 million	0,16	1.257.600	yes
2.2. Distribution costs		NA	NA	NA	No
2.3. Administering costs		NA	NA	NA	No
2.4. Control costs		NA	NA	NA	No
3. Slaughter and destruction					
3.1. Compensation of animals	1 breeding flock	5000	50	250.000	yes
3.2. Transport costs		NA	NA	NA	No

3.3. Destruction costs		NA	NA	NA	No
3.4. Loss in case of slaughtering		NA	NA	NA	No
3.5 Costs from treatment of animal products (milk, eggs, hatching eggs, etc)		75.000	1,03	77.250	yes
4. Cleaning and disinfection	Fattening flocks after infection	25	96,40	2.410	yes
5. Salaries (staff contracted for the programme only)		NA	NA	NA	No
6. Consumables and specific equipment		NA	NA	NA	No

7. Other costs		Na	NA	NA	No

Fattening Flocks	Hygiene check	191	115	21.965	yes

	Water analysis	191	40	7.640	yes

Cleaning and desinfection	2.6 million	0,033	85.800	yes

	Salmonella analysis after cleaning and desinfection	25	18,39	460	yes
	TOTAL			**1.712.395**	yes

9. TOTAL COSTS REQUESTED FOR REFUNDING IN 2011 FOR TURKEYS

Official analysis	subtotal A1	€	793
Vaccination of animal	subtotal A2	€	1.257.600
Compensation of animals	Subtotal A3	€	250.000
Costs of treatment of products	Subtotal A4	€	77.250
Cleaning and disinfection	Subtotal A5	€	2.410
Other costs	Subtotal A6	€	115.865
	TOTAL	**€**	**1.712.395**

The Netherlands confirm that all measures mentioned in Table 8 for which we ask for co-financing are fundable according to current national rules.

PROPOSED
VETERINARY CONTROL PROGRAMME
FOR
SALMONELLA IN BREEDING FLOCKS
PRESENTED FOR 2011*
BY
THE NETHERLANDS

* IN ACCORDANCE WITH REGULATION 2160/2003 AND 200/2010

INDEX

PART A

A.a: Aim of the programme

The aim of the programme is to monitor and reduce the prevalence of the following relevant Salmonella serovars: Enteritidis, Typhimurium, Hadar, Infantis and Virchow in breeding flocks of Gallus gallus. The target is to reduce the percentage of adult breeding flocks infected with the five relevant Salmonella serovars to 1% or less.

A.b: Animal population and phases of production which sampling covers

Breeding flocks of Gallus gallus:

- Rearing flocks (day-old chicks, four-weeks-old birds, four weeks before moving to laying phase of laying unit);
- Adult breeding flocks (every second week during the laying period).

A.c: Evidence that programme complies with the specific requirements laid down in Part C of Annex II regulation No 2160 / 2003

With regard to breeding flocks where the competent authority has confirmed an infection with SE or ST the following requirements are implemented in the programme:

- All birds, including day-old chicks, in the flock must be slaughtered or destroyed so as to reduce as much as possible the risk of spreading salmonella. Slaughtering must be carried out in accordance with Community legislation on food hygiene. Products derived from such birds may be placed on the market for human consumption in accordance with Community legislation on food hygiene and, once applicable, part E. If not destined for human consumption, such products must be used or disposed of in accordance with Regulation (EC) No 1774/2002 of the European Parliament and of the Council of 3 October 2002 laying down health rules concerning animal by-products not intended for human consumption.
- Non-incubated eggs from the flock must be destroyed. Such eggs may be used for human consumption if they are treated in a manner that guarantees the elimination of Salmonella enteritidis and Salmonella typhimurium in accordance with Community legislation on food hygiene. Where eggs for hatching from flocks in which Salmonella enteritidis or Salmonella typhimurium is present are still present in a hatchery, they must be destroyed or treated in accordance with Regulation (EC) No 1774/2002.

A.d.1: General

A.d.1.1: Short summary referring to the occurrence of Salmonellosis

Regulation (EC) nr 1003/2005 was implemented on 1st January 2007. The results with regard to the occurrence of Salmonella Enteritidis and Salmonella Typhimurium in adult breeding flocks were:

•	2007	Grandparent	130 flocks, 0 infections
		Parent broiler	601 flocks, 4 infected flocks (3 SE and 1 Infantis)
		Parent egg	69 flocks, 1 infected flock (Virchow)
•	2008	Grandparent	148 flocks, 0 infections
		Parent broiler	675 flocks, 4 infected flocks (3 SE and 1 ST)

		Parent egg	68 flocks, 0 infections
•	2009	Grandparent	129, 0 infections
		Parent broiler	662, 4 infected flocks (3 SE and 1 Infantis)
		Parent egg	59 flocks, 0 infections

A.d.1.2: Structure and organization of the relevant competent authorities

In the Netherlands the Product Board for Livestock, Meat and Eggs is responsible for the implementation of the programme. The Ministry of Agriculture, Nature and Food Quality is the central authority and supervises this implementation. In Figure 1, all organizations involved are mentioned, including their relation to the programme.

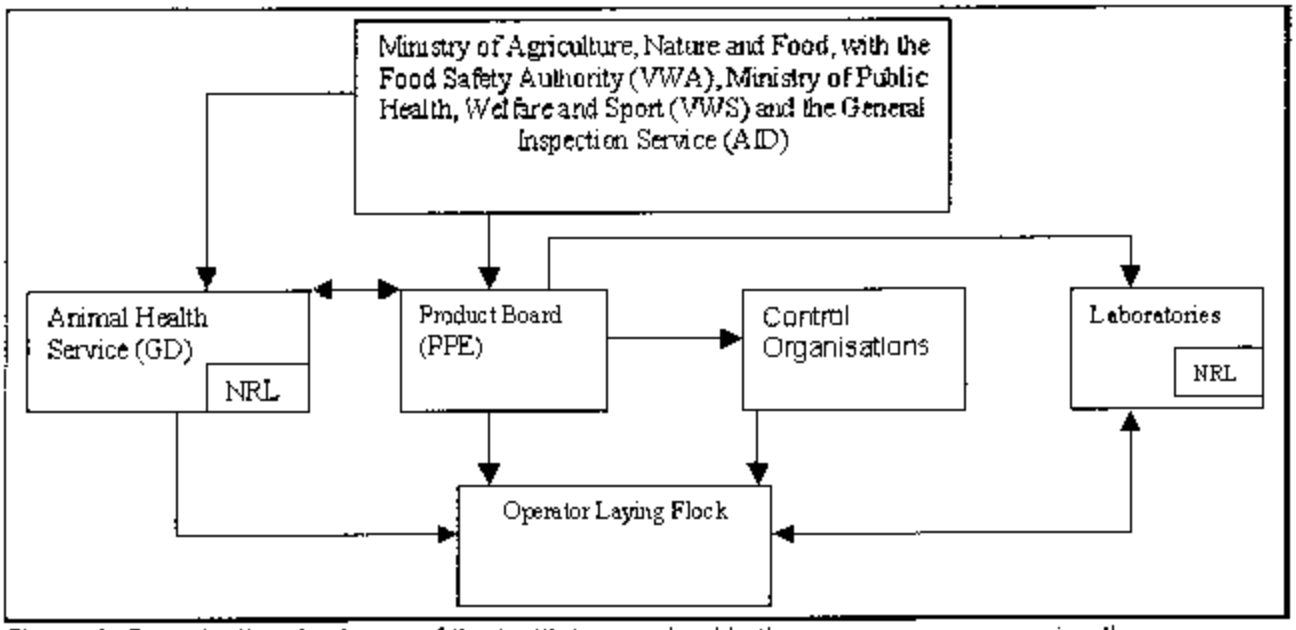


Figure 1: Organizational scheme of the institutes involved in the programme concerning the control of Salmonella in poultry

1. PPE

The Product Board for Poultry and Eggs (PPE) is a delegated authority. This is legally laid down in the following regulation by the Ministry of Agriculture, Nature and Food Quality: "Besluit bescherming tegen bepaalde zoönosen en bestrijding van besmettelijke dierziekten" and "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's". The regulations concerning the Action Plans are formulated by the PPE and acknowledged by the ministry of Agriculture. The implementation of the programme is carried out by the PPE. The evaluation of the results is also the responsibility of the Product Board.

2. Animal Health Service (GD)

Concerning poultry, the main objective is to promote optimal health of poultry, particularly by preventing infectious diseases and the presence of microorganisms and residues that may be harmful to consumers. As a competent independent organization, GD occupies a central position in organized poultry health care. On the basis of (government) regulations or by government order, disease control programmes are realized. GD is acknowledged by the ministry of Agriculture, Nature and Food Quality to perform these tasks. GD will do official sampling.

3. VWA and AID

The Food and Consumers Product Safety Authority (VWA) checks if GD and other laboratories perform according to the agreed work process. Both the VWA and the General Inspection Service (AID) are able to prosecute in specific cases when measures were not followed correctly (e.g. by laboratory or farmer).

4. Control organizations
The control organizations audit the procedures in the Action Plan and the sampling done by the operators. These control organizations must be independent and are acknowledged by the PPE.

5. Laboratories
In total 21 (private) laboratories are acknowledged by the PPE to perform analysis to determine the Salmonella status of samples taken concerning the Action plans. This is legally laid down in the PPE directive "Besluit erkenningsvoorwaarden en werkwijzen laboratoria (PPE) 2007". Every acknowledged laboratory has to participate in the ring-survey for the determination and serotyping of Salmonella that is performed by the RIVM (NRL) every twelve months. Positive test results for the relevant Salmonella serotypes are reported to the PPE.
The authorization of the laboratories is delegated by the Ministry of Agriculture, Nature and Food Quality to the PPE. This is legally laid down in the following regulation by the Ministry of Agriculture, Nature and Food Quality: "Besluit bescherming tegen bepaalde zoönosen en bestrijding van besmettelijke dierziekten" and "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's" in Article 96, section 2, subsection b, point 8.

6. NRL (RIVM, National Institute of Public Health and Environment)
The RIVM is the national reference laboratory for Salmonella. RIVM falls under the Ministry of Public Health, Welfare and Sport, and also undertakes commissions from other ministries such as the Ministry for Agriculture, Nature and Food Quality.
The RIVM organizes regular bacteriological ring surveys among laboratories, including GD, participating in the Dutch national programme for control of Salmonella in the poultry sector. Results of these ring surveys are reported to the PPE.

A.d.1.3: Approved laboratories

Approved laboratories:
1. A.R.S.I.A.
2. Alex Stewart Bioconsult
3. Bacteriologisch Adviesbureau
4. C.C.L. – Nutricontrol
5. Demetris DierGezondheid BV
6. DGZ Vlaanderen – locatie Torhout
7. GD
8. Heijs Groep Pluimveeverwerkende Industrie (Lab Heijs/ de Vries)
9. K.B.B.L. Wijhe
10. Laboratorium Pro Health BV
11. Lavetan NV
12. Lebensmittel- und veterinärlabor GmbH
13. Lohmann Tierzucht
14. Masterlab BV
15. Opinion Test & Taste
16. Plukon Poultry BV
17. ROBA Laboratorium
18. SGS Laboratory Services
19. Silliker Netherlands BV
20. Storteboom Fresh BV Laboratorium
21. Veterinair Centrum Someren

A.d.1.4: Methods used in examination

The tests that are performed in the National Plan: PVE branch method for Salmonella analysis: this method includes the use of Modified Semi solid Rapport Vassiliadis agar (MSRV) as a

selective enrichment medium. The semi solid medium should be incubated at 41.5 °C +/- 1 °C for 48 h. Alternative methods for detection will be permitted (for example Salmonella analysis by PCR), when the methods are approved as valid by the CRL.
In case of a positive finding, serotyping is performed according to the Kaufmann-White scheme.

A.d.1.5: Official controls at feed and flock level

Official sampling is carried out at the holding three times during a production cycle of every flock:
1. within the first 4 weeks
2. within 8 weeks before the end of the production cycle
3. sometime in between the two samples mentioned above.

This shall replace on that occasion the corresponding sampling at the initiative of the operator.

Due to the fact that the Netherlands have reached the community target for breeding flocks in two consecutive years, the official sampling, in accordance with EU Regulation 200/2010, is reduced to two occasions at any times which are sufficiently distant in time from each other during the production cycle of a flock.

A.d.1.6: Measures taken by the competent authorities

With regard to breeding flocks where the competent authority has confirmed an infection with SE or ST the following measures are taken by the competent authority:

- All birds, including day-old chicks, in the flock must be slaughtered or destroyed so as to educe as much as possible the risk of spreading salmonella. Slaughtering must be carried out in accordance with Community legislation on food hygiene. Products derived from such birds may be placed on the market for human consumption in accordance with Community legislation on food hygiene and, once applicable, part E. If not destined for human consumption, such products must be used or disposed of in accordance with Regulation (EC) No 1774/2002 of the European Parliament and of the Council of 3 October 2002 laying down health rules concerning animal by-products not intended for human consumption.
- Non-incubated eggs from the flock must be destroyed. Such eggs may be used for human consumption if they are treated in a manner that guarantees the elimination of Salmonella enteritidis and Salmonella typhimurium in accordance with Community legislation on food hygiene. Where eggs for hatching from flocks in which Salmonella enteritidis or Salmonella typhimurium is present are still present in a hatchery, they must be destroyed or treated in accordance with Regulation (EC) No 1774/2002.

Preventive measures
50% of the breeding flocks for broiler production and 100% of the breeding flocks for egg production are vaccinated against Salmonella.

A.d.1.7: National legislation relevant to the implementation of the programme

The implementation of the programme is laid down in the PPE Directive 'Verordening Hygiënevoorschriften Pluimveehouderij (PPE) 2007'.

A.d.1.8: Financial assistance provided to food and feed business

There is financial assistance for the purchase of vaccine doses and for compensation of culled breeding flocks (including hatching eggs). This assistance is in accordance with the relevant EU legislation (e.g. Decision EC (No) 470/2009). This financial assistance and the contribution from the Community is approved every year by the Commission when approving the national programmes of the member states. The value and compensation of the birds culled is defined on

a central level by the Dutch government institute for agricultural economics (LEI). This information is publicly available.

A.d.2: Food and feed businesses covered by the programme

A.d.2.1: Structure of the production (number of flocks in 2009)

1.	Rearing grant parent stock meat production:	107 flocks
2.	Rearing grant parent stock egg production:	15 flocks
3.	Grant parent stock meat production:	111 flocks
4.	Grant parent stock egg production:	18 flocks
5.	Rearing parent stock meat production:	395 flocks
6.	Rearing parent stock egg production:	59 flocks
7.	Parent stock meat production:	662 flocks
8.	Parent stock egg production:	59 flocks

A.d.2.2: Structure of the production of feed

Directives for the production of feed are laid down in the "Kaderwet Diervoeders" by the Ministry of Agriculture, Nature and Food Quality. The Product board for Feed (PDV) is a delegated authority and publishes specific regulations on the production of feed. The most important regulations for the poultry sector are the "Verordening Monitoring Zoönosen en Zoönoseverwekkers Diervoedersector 2005" and the "Besluit PDV Salmonella in de diervoedersector 2005". In the latter one the monitoring are presented in the Dutch annual zoönoses report.

Next to these regulations there is also a quality assurance program for feed. This is called Good Manufacturing / Managing Practice system, in short the GMP-system. Combined with the HACCP principles this quality assurance system is called GMP+. Almost all feed producers for the poultry chain are GMP+ certified. All IKB certified poultry farmers are obligated to use GMP+ certified food. IKB is a voluntary Dutch Integral Chain Control program. The GMP+ standards include control measures for base materials, rules for additives, sampling scheme for zoönoses, hygiene and process criteria and compulsory regularly controls by an independent control organization.

A.d.2.3: Relevant guidelines

Hygiene management at farms, measures to prevent incoming infections carried by animals, feed, drinking water, people working at farms and hygiene transporting animals to and from farms.

1. Hygiene management at farms:
    a. No pets, stock of (other) poultry is allowed in the poultry house;
    b. If pets, stock or (other) poultry is on the location of the poultry farm special hygiene measurements are required (like separate care);
    c. No wild birds can enter the poultry house;
    d. Visitors are only allowed to enter the poultry house when this is necessary and under strict hygiene measurements (including special clothing);
    e. Every farm has a rodent control program or charter an acknowledged rodent control company (at least every 2 months);
    f. Once a year bacteriological research and in case of a natural source of water also chemical research of drinking water for poultry;
    g. Every farm has a clear boundary and it is visible for visitors where they must announce themselves. The poultry houses are locked.
    h. The poultry house, the broiler farm and its close environment is clean;
    i. Before entering the broiler house there is a hygiene barrier with clothing and shoes;
    j. The drive- and walking routes to the farm are paved and cleanable;
    k. The silo is placed on a paved underground, is easy to clean and refillable from outside the poultry house. When there are more silo's, every silo has a unique number;
    l. Feed and litter is in such a way stored that it stays clean, dry and mould free;
    m. Every poultry house must have a hand-washing facility.
2. Cleaning and disinfection:
    a. After removing the birds the litter is removed and the poultry house is cleaned and disinfected;
    b. Once a year a hygiene check in the cleaned and disinfected empty poultry house is done by and by PPE acknowledged company.

A.d.2.4: Routine veterinary supervision of farms

Every farm is inspected at least once a year by a qualified veterinarian on behalf of the Competent Authority to enforce national legislation (e.g. legislation based on EU Directive 90/593/EC). This visit is not considered as official sampling in the frame of the Salmonella control programme. The official sampling therefore is in addition to the routine veterinary visit.

A.d.2.5: Registration of farms

All poultry farms and flocks (with more than 250 birds) are being registered by the PPE. Every farm receives a unique number. When a flock is being transferred from one farm to another the PPE must be informed. This is laid down in the directive 'Verordening productie van en handel in broedeieren en levend pluimvee (PPE)". All the information is stored in the "Koppel Informatiesysteem Pluimvee (KIP-system)". This so called KIP-system is also the base for the registration in according to the EU Regulation 852/2004.

A.d.2.6: Record-keeping at farms

- Farm of origin of the animals

- Number of animals
- Date of birth
- Death rate
- Number of produced eggs
- Results of NCD, AI monitoring
- Salmonella measurements including results
- Information about communication of Salmonella results to PPE, GD and hatchery.

A.d.2.7: Documents to accompany animals when dispatched

When animals are dispatched, they are accompanied by a special document, called 'P-formulier'. For dispatch to the slaughterhouse a document called 'VKI – Voedsel Keten Informatie' (Food Chain Information) is demanded. On this document information like Salmonella status and use of medicine is registered. Operators wishing to export more than 20 birds or hatching eggs to another EU member state (or certain third countries) must comply with EU Directive 90/539/EC and ensure that the consignment is accompanied by a completed and signed Intra-trade Animal Health Certificate (ITAHC) for poultry breeding and production.
The ITAHC will also require the reference number of the operator's poultry health certificate. The ITAHC will be amended to include the results of the last test for *Salmonella* as required in Commission Regulation (EC) 2160/2003 Article 9.1 prior to any dispatching of the live animals, or hatching eggs, from the food business of origin. The date and the result of testing shall be included in the relevant health certificates provided for in Community legislation.This certificate must be completed and signed by the Official Veterinarian as well as the operator to confirm compliance with the relevant articles of Directive.

A.d.2.8: Other relevant measures to ensure traceability of animals

. The TRACES system is managed by the Dutch Food Safety Authority (VWA). An export can only be approved in TRACES if the official veterinarian has given his approval.

PART B

1. Identification of the programme

Member state:	The Netherlands
Disease:	Infection of poultry breeding flocks with zoonotic Salmonella spp
Year of implementation:	1-1-2007 until 31-12-2011
Reference of this document:	final version
Geographical Area:	The Netherlands
Contact:	J.N. (Hans) Schouwenburg Product Board for Poultry and Eggs, PPE Phone: 0031(0)79 3687937 Fax: 0031(0)79 363 4345 E-mail: hschouwenburg@pve.nl

Date sent to the Commission: 30-04-2010

2. Historical data on the epidemiological evolution of zoonotic salmonellosis

The Netherlands has two programmes to control the prevalence of Salmonella, one for the broiler production chain and one for the egg production chain. In this Chapter these two programmes are mentioned together with the infection percentages in the broiler production chain and the egg production chain.

2.1 Broiler production

In May 1997 a programme to control the prevalence of Salmonella in poultry was started. The programme (called: "Plan of Approach Salmonella and Campylobacter in the Poultry meat sector 1997") that was designed, involved strict hygiene rules and the monitoring of Salmonella infections throughout the broiler production chain. The plan was introduced with the aim to decrease the number of Salmonella infections (in slaughtered broilers) to less then 10 % by the year 2000. The actions involved in the Plan were obligatory, pursuant to the legislation of the PPE.

The effects of the programme were evaluated in January 2000. The monitoring results showed a reduction of the percentage of Salmonella infected broilers after slaughter. In the fourth quarter of 1999 16 % of the slaughtered broilers were infected with Salmonella which meant that the initial aim was not achieved. This result led to the formulation of a stricter programme (called: "Action Plan Salmonella and Campylobacter in the Poultry meat sector 2000+"). In this programme the Dutch industry aims for an elimination of all Salmonella serotypes in poultry meat. This means that this target is beyond that of the Zoonoses Regulation EU 2160/2003, since this directive only aims on serotypes with public health significance. Again, the actions involved are obligatory.

One of the objects of the current programme is to monitor the prevalence of Salmonella infections in all links of the production chain. In Figure 2 the monitoring results are presented

from the 1st quarter of 2000 until the 4th quarter of 2009 The monitoring data per year are presented in Table 1. In this figure:

Status: Is the Salmonella status of the hatching eggs as they are delivered to the hatcheries.

Fluff: Is the percentage of Salmonella positive fluff-samples taken from the hatcheries at the end of the hatching process.

Box paper: Is the percentage of Salmonella positive samples taken from day-old chicken box paper at the broiler farms.

S-faeces: Is the percentage of Salmonella positive faecal samples taken at the broiler farms.

S-intestine: is the percentage of Salmonella positive intestine samples taken at the slaughterhouse.

,

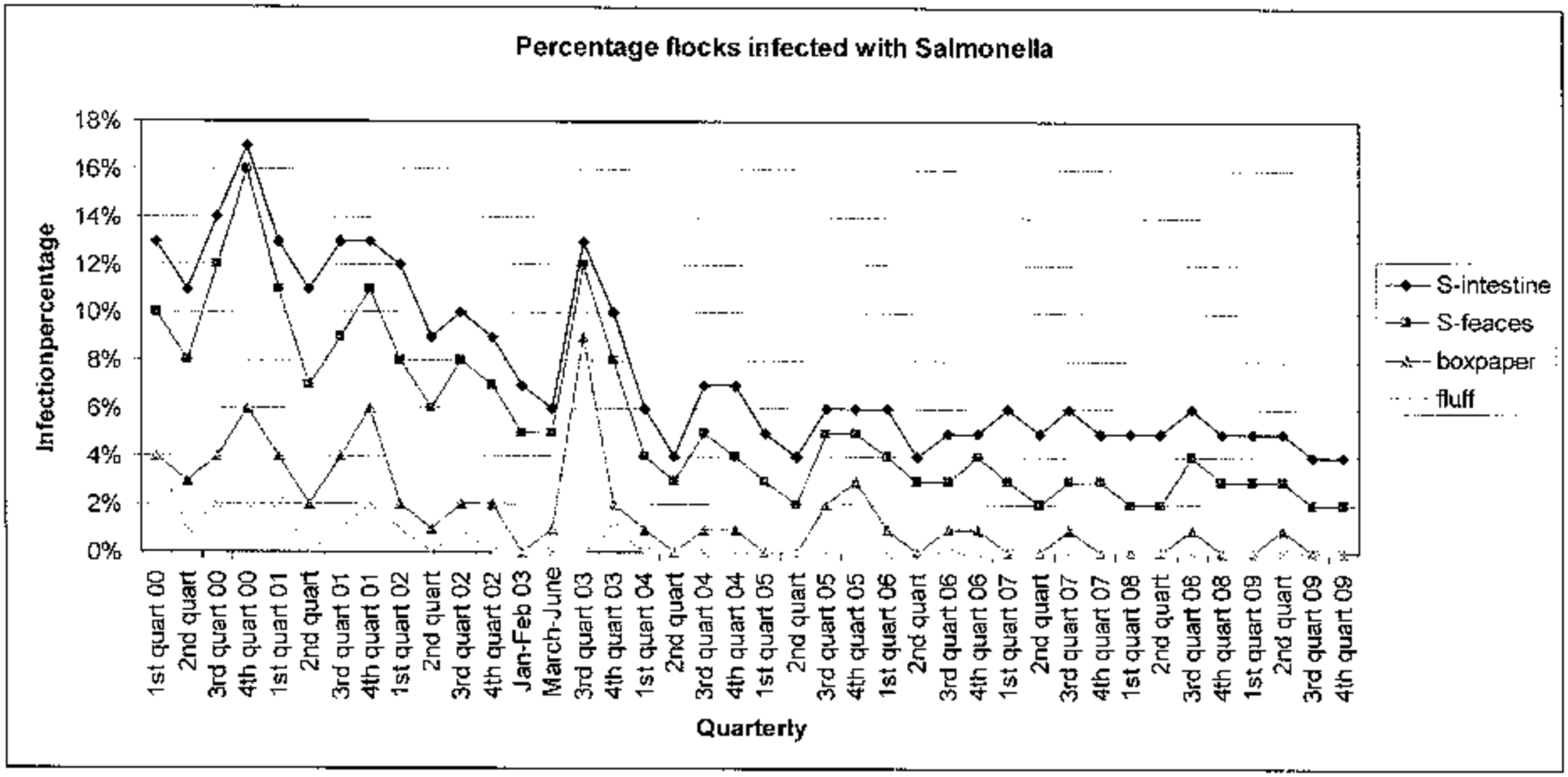


Figure 2: Percentages of Salmonella spp. positive samples taken from different links of the production chain per quarter (PPE, 2010).

Table 1: Percentages of Salmonella spp. positive samples taken from different links of the production chain per quarter (PPE, 2010).

Quart	S-intestine	S-faeces	Boxpaper	Fluff
4th quart 2009	4%	2%	0%	0%
3rd quart 2009	4%	2%	0%	0%
2nd quart 2009	5%	3%	1%	0%
1st quart 2009	5%	3%	0%	0%
4th quart 2008	5%	3%	0%	0%
3rd quart 2008	6%	4%	1%	0%
2nd quart 2008	5%	2%	0%	0%
1st quart 2008	5%	2%	0%	0%
4th quarter 2007	5%	3%	0%	0%
3th quarter 2007	6%	3%	1%	0%
2nd quarter 2007	5%	2%	0%	0%
1st quarter 2007	6%	3%	0%	0%
4th quarter 2006	5%	4%	1%	0%
3th quarter 2006	5%	3%	1%	0%
2nd quarter 2006	4%	3%	0%	0%
1st quarter 2006	6%	4%	1%	0%
4th quarter 2005	6%	5%	3%	0%
3th quarter 2005	6%	5%	2%	0%
2nd quarter 2005	4%	2%	0%	0%
1st quarter 2005	5%	3%	0%	0%
4th quarter 2004	7%	4%	1%	0%
3th quarter 2004	7%	5%	1%	0%
2nd quarter 2004	4%	3%	0%	0%
1st quarter 2004	6%	4%	1%	0%
4th quarter 2003	10%	8%	2%	1%
3th quarter 2003	13%	12%	9%	0%
March till June 2003*	6%	5%	1%	0%
January & February 2003	7%	5%	0%	0%
4th quarter 2002	9%	7%	2%	0%
3th quarter 2002	10%	8%	2%	1%
2nd quarter 2002	9%	6%	1%	0%
1st quarter 2002	12%	8%	2%	1%

* In this period Avian Influenza problems were overruling the monitoring of Salmonella.

The figure below shows the serotypes that have been found in the infected flocks (faecal sampling) in 2009.

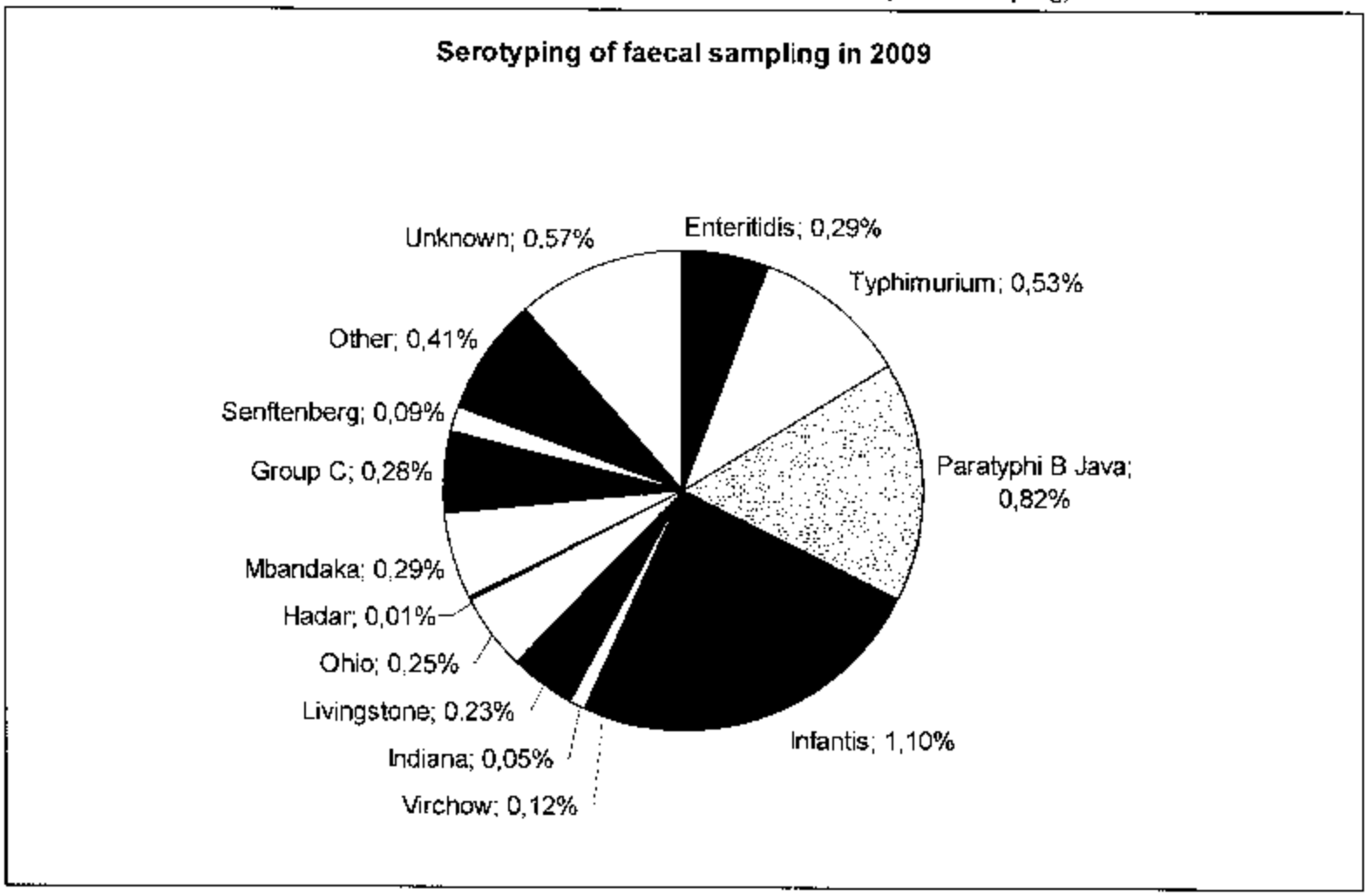


Figure 3: Serotyping of faecal sampling Salmonella in 2009 (PVE 2010)

The figure below shows the serotypes that have been found in the infected flocks (end product) in 2009.

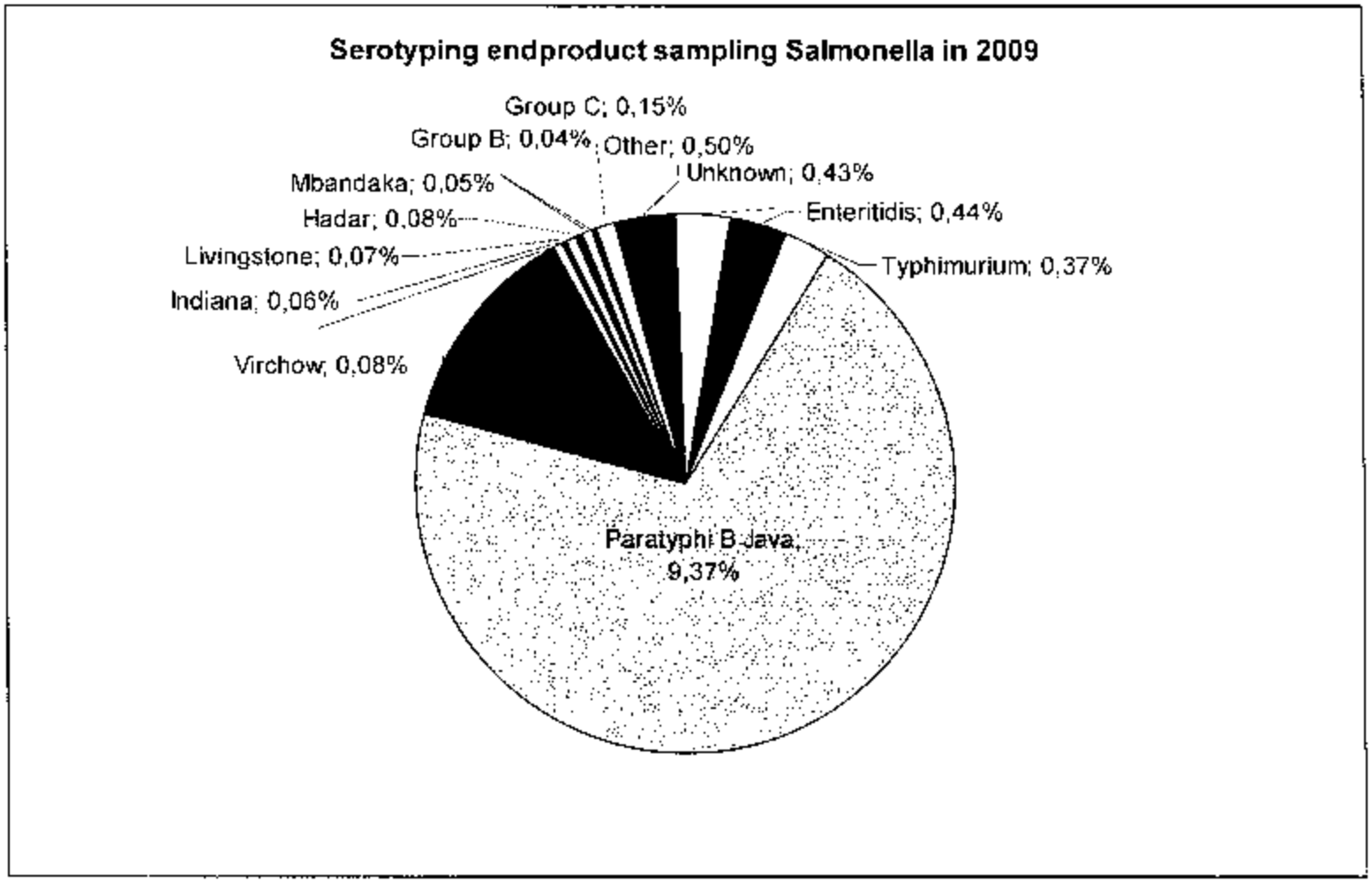


Figure 4: Serotyping of end product Salmonella in 2009 (PVE 2010)

2.2 Egg production

In November 1997 a programme to control the prevalence of Salmonella in laying hens was started. The objective of the programme (called "Plan of Approach prevention and control of Salmonella in the egg industry 1999") was to reduce the Salmonella Enteritidis (SE) and Salmonella Typhimurium (ST) prevalence in flocks of laying hens to 5 percent or less by November 2000. This programme involved strict hygiene rules and the monitoring of Salmonella infections throughout the egg production chain. Because this objective was not reached a new programme was introduced in the beginning of 2001. The target of this programme, called "Action Plan Salmonella in egg production 2001+" was to strive for a 0+ percent of contaminated eggs. In this stricter approach the eggs of contaminated flocks of laying hens are delivered to the egg product industry, for a special allowed treatment. The actions involved in both programmes were obligatory, pursuant to the legislation of the PPE.

Until January 2008 the incidence of SE / ST infections in Dutch flocks of laying hens was monitored by taking a blood sample of at least 0.5 percent (with a minimum of 24 and a maximum of 60 animals) of every flock were taken maximum 9 weeks before removal at end of lay. The test results were analysed by the Animal Health Service and reported to the PPE. Figure 5 and Table 3 show the percentage of SE / ST infected laying hen flocks in the period from November 1997 until December 2007.
From the 1st of February 2008 the monitoring has changed to bacteriological analysis of faecal samples taken every 15 weeks in accordance with EU regulation 1168/2006.

Over the period from February 1999 to December 2000 11,4 percent of the examined layer flocks tested SE / ST positive. After the introduction of the stricter programme "Action Plan Salmonella in egg production 2001+" the SE/ST-infection percentage, based on serological results, of layers decreased towards 5.8 in 2007. This might partly be due to the increased use of vaccines against SE of the layers.
For the Netherlands a SE/ST-infection percentage, based on bacteriological results, of 7.8 was determined through a European study "Analysis of the baseline study on the prevalence of Salmonella in laying hen flocks of Gallus gallus". This percentage is the starting-point for this programme "Veterinary control programme for salmonella in laying flocks". The above-mentioned differences in infection percentage are mainly due to differences in monitoring.

Table 4 shows the results of the bacteriological tests in layer flocks according to the EU-regulation 1168/2006 performed from 2008 onwards. They are in accordance with the COMMUNITY-target set for the Netherlands. In 2009 the percentage of SE/ST infected layer flocks was even below the end target of the community of 2%.

Table 3: SE and ST infections in layers, based on serological results 1997 – 2007 (source PPE)

Year	Number of flocks	SE infected	% SE infected	ST Infected	% ST infected
1997*	258	35	13,6	2	0,8
1998	1631	181	11,1	6	0,4
1999	1705	181	10,6	3	0,2
2000	2010	229	11,4	6	0,3
2001	1978	177	8,9	4	0,2
2002	1873	165	8,8	7	0,4
2003	864	59	6,8	3	0,3
2004	1500	101	6,7	3	0,2
2005	1952	64	3,3	3	0,2
2006	1878	85	4,5	6	0,3
2007	1870	109	5,8	0	0

*Start of programme November 1997

Table 4: SE and ST infections in layers, based on bacteriological results 2008 – 2009 (source PPE)

Year	Number of flocks	SE infected	% SE infected	ST infected	% ST infected
2008	2346	61	2,60	1	0,04
2009	2240	29	1,29	4	0,18

3. Description of the submitted programme

3.1 Target Veterinary Control Programme for breeding flocks

The target for the reduction of Salmonella Enteritidis, Salmonella Hadar, Salmonella Infantis, Salmonella Typhimurium and Salmonella Virchow in breeding flocks of Gallus gallus is a reduction of the maximum percentage of adult breeding flocks comprising at least 250 birds remaining positive to 1 % or less by 1st January 2010. This target is laid down in EU Regulation 200/2010.

3.2 Monitoring of the Veterinary Control Programme

Monitoring is in accordance with EU Regulations 2160/2003 and 200/2010

A. Monitoring through the operator

The test frequency is laid down in the directives of the PPE. Monitoring in breeder flocks is being done according to table 5. The monitoring will take place at the holding. The operator managing the breeding flock is responsible for the monitoring. In accordance with EU Regulation 200/2010 the monitoring frequency can be reduced to once every 3 weeks if the community target has been met during two consecutive years. The Netherlands has reached this target in 2007 t/m 2009 and reduced the monitoring frequency to once every three weeks (starting 25 October 2009).

Table 5: Monitoring in breeder flocks

Part of the production chain	Incoming	Outgoing
Grand parent rearing	day of arrival: box paper (40 pieces) 4 weeks of age: cloacal samples (2×30)	max. 14 days before transfer: faecal samples (6×25)
Grand parent stock	22 –24 weeks of age: faecal samples (2x150) or five pair of boot swabs (two pools)	from 24 weeks of age, every 3 weeks: faecal samples (2x150) or five pair of boot swabs (two pools)[1]
Hatchery		every hatching entity is sampled once: fluff (5x5 g)
Parent rearing	day of arrival: box paper (40 pieces) 4 weeks of age: cloacal samples (2×30) or 5 pair of boot swabs	max. 14 days before transfer: faecal samples (6x25) or 5 pair of boot swabs
Parent stock	22-24 weeks of age: faecal samples (2x150) or five pair of boot swabs (two pools)	from 24 weeks of age, every 3 weeks: faecal samples (2x150) or five pair of boot swabs (two pools)[1]
Hatchery		meat: every hatching entity is sampled once: fluff (5x5 g) laying: every 2 weeks one hatching entity is sampled: fluff (5x5 g)
Meat production		
Broiler farm	day of arrival: box paper (40 pieces)	faecal samples (2×15 samples or two pair of plastic shoes), to be taken from 21 days onwards
Slaughterhouse	faecal samples (small intestine) (1×30)	Breast skin sample (25 grams), every batch filet surface samples (25 grams), one sample / day
Egg Production		
Layer at rearing age	laying: every 2 weeks one hatching entity is sampled: fluff (5x5 g)	max. 14 days before transfer: blood samples (0,5% of the animals in a flock with a min. of 24 and a max. of 60 samples)
Layers		Every 15 weeks (from the age of 24 weeks +/- 2 weeks): samples of faecal material and dust.

[1]Sampling frequency is reduced to once every 3 weeks in accordance with EU Regulation 200/2010

B. Official Sampling:
Official sampling is being done three times during a production cycle at the holdings:

1. within the first 4 weeks
2. within 8 weeks before the end of the production cycle
3. sometime in between the two samples mentioned above.

This shall replace on that occasion the corresponding sampling at the initiative of the operator.

Due to the fact that the Netherlands have reached the community target for breeding flocks in two consecutive years, the official sampling in accordance with EU Regulation 200/2010, is reduced to two occasions at any times which are sufficiently distant in time from each other during a production cycle.

3.3 Measures to be taken in case of Salmonella positive findings at the poultry house

Measures to be taken in case of Salmonella positive findings are represented in table 6 for the broiler production chain and in table 7 for the egg production chain. When detecting Salmonella in the broiler productions chain, serotyping is always performed. Detection of Salmonella in the egg production chain will lead to serotyping to at least the relevant Salmonella's. Guidelines for the tracing survey are laid down in directives of the PPE.

When necessary to reach the community target culling of breeding flocks infected with Salmonella serovars, Virchow, Hadar and Infantis will be compulsory. Recent figures show an increase in the infection numbers of several serovars, e.g. Salmonella Java in the Netherlands. To minimize the risk of vertical transmission through these infections culling can also become compulsory for other Salmonella serovars, e.g. Salmonella Java. Salmonella Java has shown to be extremely persistent on farms that have been infected with this serovar. Therefore every measure has to be considered to prevent the vertical spreading of Salmonella Java therefore culling of (grand)parent animals will be considered. These costs are taken into account in the cost estimate of the programme for 2011 that can be found in Chapter 8.

Table 6: Measures in the broiler production sector in case of Salmonella infection

Part of the production chain	**Measures**
Grant parent rearing/stock	Verification in case of suspicion. When verification results in SE/ST, then culling of the flock. In addition, or when any other type of Salmonella is found, the following steps are compulsory: Tracing survey, under supervision of the veterinarian. Thorough cleaning and disinfection of the house when empty. Swab test, executed by a by the PPE acknowledged company, of the house after cleaning and disinfection. The new flock can only be placed when the swab test was negative.
Hatchery	After verification at the holding, SE/ST infected eggs are destroyed or processed. When necessary for reaching the specified target of the programme PPE can prescribe that Salmonella infected eggs, including serotypes SH, SV and SI, are hatched logistically.
Parent rearing/stock	Verification in case of suspicion. When verification results in SE/ST, then culling of the flock. In addition, or when any other type of Salmonella is found, the following steps are compulsory: Tracing survey, under supervision of the veterinarian. Thorough cleaning and disinfection of the house when empty. Swab test, executed by a by the PPE acknowledged company, of the house after cleaning and disinfection. The new flock can only be placed when the swab test was negative.
Hatchery	After verification at the poultry house, SE/ST infected eggs are destroyed or processed. When necessary for reaching the specified target of the programme PPE can prescribe that Salmonella infected eggs, are hatched logistically.
Broiler farm	Tracing survey in case of Salmonella, under supervision of the veterinarian. After cleaning and disinfection swab and hygiene check, executed by a by the PPE acknowledged company, in the poultry house.
Slaughterhouse	Logistical slaughter of Salmonella infected flocks.

Table 7: Measures in the egg production sector in case of Salmonella infection.

Part of the production chain	Measures
Grand parent rearing/stock	When SE/ST are found: Verification in case of suspicion of Se/St. When verification results in Se/St, then culling of the flock. When SH, SV or SI are found: Tracing survey under supervision of the veterinarian In addition, or when any other type of Salmonella is found, the following steps are compulsory: Thorough cleaning and disinfection of the house when empty Swab test, executed by a by the PPE acknowledged company, of the house after cleaning and disinfection. The new flock can only be placed when the swab test was negative.
Hatchery	After verification at the poultry house, SE/ST infected eggs are destroyed or processed. When necessary for reaching the specified target of the programme PPE can prescribe that Salmonella infected eggs, including serotypes SH, SV and SI*, are hatched logistically.
Parent rearing / stock	When Se/St are found: Verification in case of suspicion of SE/ST. When verification results in SE/ST, then culling of the flock. When SH, SV or SI are found: Tracing survey under supervision of the veterinarian In addition, or when any other type of Salmonella is found, the following steps are compulsory: Thorough cleaning and disinfection of the house when empty. Swab test, executed by a by the PPE acknowledged company, of the house after cleaning and disinfection. The new flock can only be placed when the swab test was negative.
Hatchery	After verification at the poultry house, SE/ST infected eggs are destroyed or processed. When necessary for reaching the specified target of the programme PPE can prescribe that Salmonella infected eggs, including serotypes SH, SV and SI*, are hatched logistically.
Layers rearing	Verification in case of Se/St suspicion. After verification culling of Se/St infected flock. Tracing survey in case of Se/St., under supervision of the veterinarian. After cleaning and disinfection swab and hygiene check, executed by a by the PPE acknowledged company, in the poultry house. The new flock can only be placed when the swab test was negative.
Layers	Se/St infected eggs to the egg processing industry. After professional cleaning and disinfection swab test, executed by a by the PPE acknowledged company, of the poultry house. The new flock can only be placed when the swab test was negative.

Part of the production chain	Measures
	Vaccination of the following flocks in the house.

4. Measures of the submitted programme

4.1 Summary of measures under the programme

Duration of the programme:

1. Broiler production: programme runs since 1997, since 2002 adopted co financing for culling of SE / ST infected breeding flocks. The programme has slightly been adjusted due to the requirements laid down in EU Regulations 2160/2003 and 200/2010. The programme is ongoing, at least up to 31-12-2011.
2. Egg production: programme runs since 1997, since 2002 adopted co financing for culling of SE / ST infected breeding flocks. The programme has slightly been adjusted due to the requirements laid down in EU Regulations 2160/2003 and 200/2010. The programme is ongoing, at least up to 31-12-2011.

First year

- ☐ Control:
  - ☐ Testing
  - ☐ Killing of animals tested positive
  - ☐ Vaccination (voluntary)
  - ☐ Treatment of animal products
- ☐ Monitoring or surveillance
- ☐ Other measures:
  - ☐ Hygiene measurements
  - ☐ Cleaning and disinfection
  - ☐ Sampling
  - ☐ Exchange sampling results throughout the chain
  - ☐ Measures taken in case of Salmonella infections

Last year

- ☐ Control:
  - ☐ Testing
  - ☐ Killing of animals tested positive
  - ☐ Vaccination (voluntary)
  - ☐ Treatment of animal products
- ☐ Monitoring or surveillance
- ☐ Other measures:
  - ☐ Hygiene measurements
  - ☐ Cleaning and disinfection
  - ☐ Sampling
  - ☐ Exchange sampling results throughout the chain
  - ☐ Measures taken in case of Salmonella infections

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

In the Netherlands the Product Board for Poultry and Eggs is responsible for the implementation of the programme. The Ministry of Agriculture, Nature and Food Quality is the central authority and supervising this implementation. In the scheme on the next page all organisations involved are mentioned, including their relation to the programme.

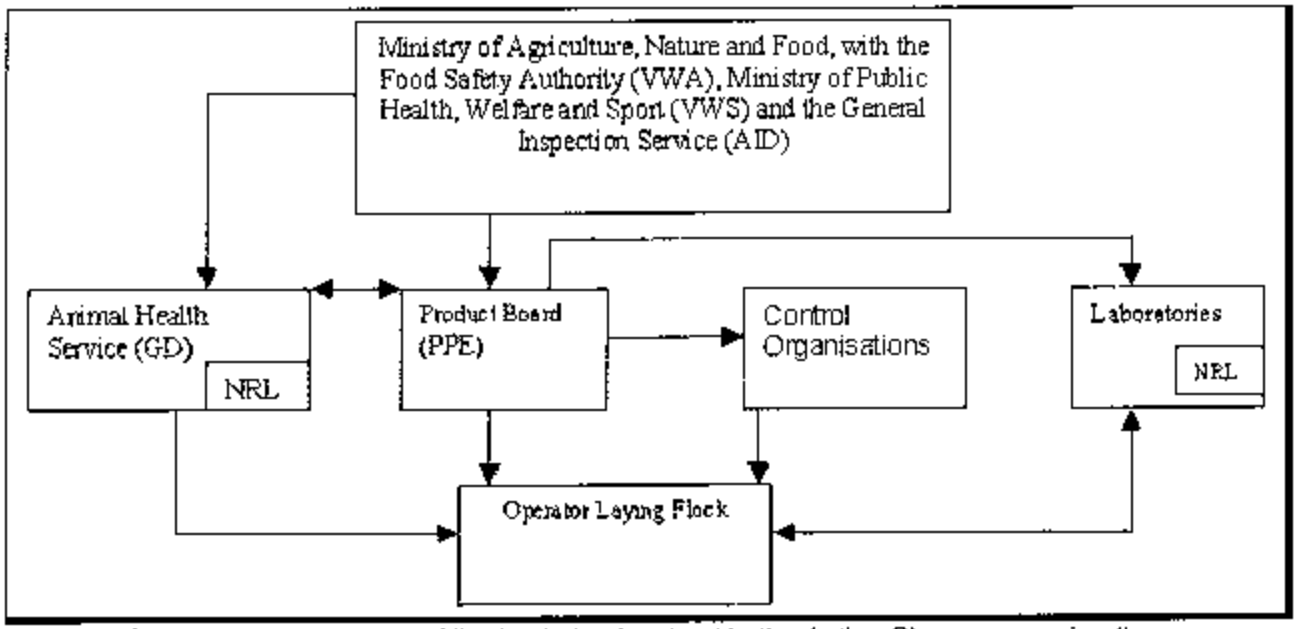


Figure 5: Organisational scheme of the institutes involved in the Action Plans concerning the control of Salmonella in poultry:

1. PPE

The Product Board for Poultry and Eggs (PPE) is a delegated authority. This is legally laid down in the following regulation by the Ministry of Agriculture, Nature and Food Quality: "Besluit bescherming tegen bepaalde zoönosen en bestrijding van besmettelijke dierziekten" and "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's". The regulations concerning the Action Plans are formulated by the PPE and acknowledged by the Ministry of Agriculture. The implementation of the programme is carried out by the PPE. The evaluations of the results are also the responsibility of the Product Board. The relevant EU Regulations (2160/2003, 200/2010) are implemented in the PPE-Directive "Verordening Hygiënevoorschriften Pluimveehouderij 2007".

2. Animal Health Service (GD)

Concerning poultry, the main objective is to promote optimal health of poultry, particularly by preventing infectious diseases and the presence of microorganisms and residues that may be harmful to consumers. As a competent independent organisation, the GD occupies a central position in organised poultry health care. On the basis of (government) regulations or by government order, disease control programmes are realised. The GD is acknowledged by the Ministry of Agriculture, Nature and Food Quality to perform these tasks.
The GD performs the official sampling, analysis and confirmation of Salmonella infections in the poultry reproduction populations. Positive test results for the relevant Salmonella serotypes are reported to the PPE.

3. VWA and AID

The Food and Consumers Product Safety Authority (VWA) checks if the GD and other laboratories perform according to the agreed work process. Both the VWA and the General Inspection Service (AID) are able to prosecute in specific cases when measures were not followed correctly (e.g. by laboratory or farmer).

4. Control organisations

The control organisations audit the procedures in the Action Plan and the sampling done by de operators. These control organisations must be independent and are acknowledged by the PPE.

5. Laboratories

In total 22 (private) laboratories are acknowledged by the PPE to perform analysis to determine the Salmonella status of samples taken concerning the Action plans. This is legally laid down in

the PPE directive "Besluit erkenningsvoorwaarden en werkwijzen laboratoria (PPE) 2007". Every acknowledged laboratory has to participate in the ring-survey for the determination and serotyping of Salmonella that is performed by the RIVM (NRL) every twelve months. Positive test results for the relevant Salmonella serotypes are reported to the PPE. The authorization of the laboratories is delegated by the Ministry of Agriculture, Nature and Food Quality to the PPE. This is legally laid down in the following regulation by the Ministry of Agriculture, Nature and Food Quality: "Besluit bescherming tegen bepaalde zoönosen en bestrijding van besmettelijke dierziekten" and "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's" in Article 96, section 2, subsection b, point 8.

6. NRL (RIVM, National Institute of Public Health and Environment)
The RIVM is the national reference laboratory for Salmonella. RIVM falls under the Ministry of Public Health, Welfare and Sport (VWS), and also undertakes commissions from other ministries such as the Ministry for Agriculture, Nature and Food Quality. The RIVM organises regular bacteriological ring surveys among laboratories, including the GD, participating in the Dutch national programme for control of Salmonella in the poultry sector. Results of these ring surveys are reported to the PPE.

Structure of the production of feed
Directives for the production of feed are laid down in the "Kaderwet Diervoeders" by the Ministry of Agriculture, Nature and Food Quality. The Product board for Feed (PDV) is a delegated authority and publishes specific regulations on the production of feed. The most important regulations for the poultry sector are the "Verordening Monitoring Zoönosen en Zoönoseverwekkers Diervoedersector 2005" and the "Besluit PDV Salmonella in de diervoedersector 2005". In the latter one the monitoring are presented in the Dutch annual zoönoses report.

Next to these regulations there is also a quality assurance program for feed. This is called Good Manufacturing / Managing Practice system, in short the GMP-system. Combined with the HACCP principles this quality assurance system is called GMP+. Almost all feed producers for the poultry chain are GMP+ certified. All IKB certified poultry farmers are obligated to use GMP+ certified food. IKB is a voluntary Dutch Integral Chain Control program. The GMP+ standards include control measures for base materials, rules for additives, sampling scheme for zoönoses, hygiene and process criteria and compulsory regularly controls by an independent control organization.

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

Geographical limitations: The Netherlands.

4.4 Measures implemented under the programme

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

All poultry farms and flocks are being registered by the PPE. Every farm receives a unique number. When a flock is being transferred from one farm to another the PPE must be informed. This is laid down in the directive "Verordening productie van en handel in broedeieren en levend pluimvee (PPE)". All the information is stored in the "Koppel Informatiesysteem Pluimvee (KIP-system)". This so-called KIP system is also the bases for the registration in according to the EU Regulation 852/2004.

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

Not applicable for Poultry.

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

In case of a any Salmonella infection the laboratory that signalises the first indication/suspicion has to inform the GD (Animal Health Service) and the farmer. After this a verification study is being executed by the veterinarian of the GD. When the infection is confirmed the PPE and the farmer are informed. If necessary (see chapter 3.3) PPE organises the destruction of the infected animals and the breeding eggs.

The veterinarian has the obligation to notify Salmonella. This is specified in legislation of the Ministry of Agriculture, Nature and Food Quality, "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's".
Directives of the PPE state that the farmer has to notify Salmonella. In most cases the veterinarian will do this for the farmer.

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

The measures that have to be taken in case of a positive result are laid down in directives of the PPE. The Ministry of Agriculture, Nature and Food Quality and Ministry of Public Health, Welfare and Sport have to approve these directives. All measures are mentioned in Chapter 3. Whenever a positive flock is found by own-check sampling in the frame of the programme in breeding flocks, than this flock should be considered as a **suspect flock** and **movement restrictions are mandatorily imposed** on this **flock. In the frame of the *Salmonella* control programme in breeding flocks of *Gallus gallus* the provisions of paragraph 1 and 2 (frequency of sampling) 4 (results and reporting) of Annex of Commission Regulation (EC) No 213/2009 (particularly provisions on exceptional cases)** are implemented

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

Not applicable for poultry.

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

The animals and eggs are transported in sealed transportation equipment. The sealing is carried out by an inspection body. This inspection body also takes care of the counting of all the animals and eggs (in order to check the correct number that can be co financed). The seal is applied at the farm and is removed at the slaughterhouse or destruction company, also by the inspection body.

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

The test frequency is laid down in the directives of the PPE. For technical details on test frequency consult table 5.

Laboratory tests and analyses
The tests that are performed in the Action Plan are:
PVE branche method for Salmonella analysis: this method includes the use of Modified Semi solid Rapport Vassiliadis agar (MSRV) as a selective enrichment medium. The semi solid medium should be incubated at 41.5 °C +/- 1 °C for 48 h. Alternative methods for detection will be permitted (for example Salmonella analysis by PCR), when the methods are approved as valid by the CRL.
In case of a positive finding, serotyping is performed according to the Kaufmann-White scheme.

Salmonella vaccines
In the Netherlands al large number of the parent flocks (egg production sector and broiler production sector) are vaccinated against Salmonella. Grandparent flocks are not vaccinated. There is no central database with information on the number of vaccinated flocks.
In the broiler production sector Salmonella vaccines are used only for parent flocks. Approximately 50% of the parent flocks are vaccinated.
In the egg production sector Salmonella vaccines are used for parent flocks and layer flocks. 100% of the parent flocks and 95% of the layer flocks are vaccinated.

Only vaccines that are officially registered for use in poultry can be administered:
Parent flocks: SG9R (Intervet), TAD Vac E en Vac T (Lohmann), Gallivac SE (Merial),Nobilis Salenvac T (Intervet)
).
These vaccines comply with the regulations laid down in EU Regulation 1177/2006, Article 3.1 and 3.2.

Antimicrobials
The use of antimicrobials is prohibited except for circumstances laid down in EU Regulation 1177/2006, article 1.

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

Depending on the content of the EU regulations compensation will be given for culling of breeding flocks, vaccination of breeding flocks, official analysis. The financial contribution for the farmer and the measures to be taken to receive the contribution are specified in legislation of the Product Board for Poultry and Eggs,

4.4.9 Information and assessment on bio-security measures management and infrastructure in place in flocks / holdings involved

Besides the control programme for Salmonella, each flock will be checked once by a veterinarian, in accordance to the GVP-code (Good Veterinarian Practice).
In addition to that every poultry farmer has to comply with the following bio-security measures, laid down in the directive "Verordening Hygiënevoorschriften Pluimveehouderij (PPE) 2007":

1. Hygiene management at farms:
    a. No pets, stock of (other) poultry is allowed in the poultry house;
    b. If pets, stock or (other)poultry is on the location of the poultry farm special hygiene measurements are required (like separate care);
        a. No wild birds can enter the poultry house;
        b. Visitors are only allowed to enter the poultry house when this is necessary and under strict hygiene measurements (including special clothing);
        c. Every farm has a rodent control program or charter an acknowledged rodent control company (at least every 2 months);
        d. Once a year bacteriological analysis and in case of a natural source of water also chemical analysis of drinking water for poultry;

e. Every farm has a clear boundary and it is visible for visitors where they must announce themselves. The poultry houses are locked.
f. The poultry house, the poultry farm and its close environment is clean;
g. Before entering the poultry house there is a hygiene barrier with clothing and shoes;
h. The drive- and walking routes to the farm are paved and cleanable;
i. The feed silo is placed on a paved underground, is easy to clean and refillable from outside the poultry house. When there are more silo's, every silo has a unique number;
j. Feed and litter is in such a way stored that it stays clean, dry and mouldfree.
k. Every poultry house must have a hand-washing facility.

2. Cleaning and disinfection;
   a. After removing the poultry from the house the litter is removed and the poultry house is cleaned and disinfected;
   b. Once a year a hygiene check in the cleaned and disinfected empty poultry house is done by an by PPE acknowledged company.

All farmers are inspected once a year for compliance with these regulations.

In according to EU Regulations 852/2004 and 853/2004 Guides for Good Practices are being developed for the poultry sector. In these guides HACCP principles and traceability measures are implemented. The guides for poultry farms are based on the quality system IKB. This quality assurance system for the whole poultry chain is developed in the Netherlands by the PPE. More then 80 % of the poultry farms are certified for IKB. IKB standards include hygiene management at farms, measures to prevent incoming infections and the hygienic transportation of animals.

5. General description of the costs and benefits

5.1 Human salmonellosis

The incidence of human salmonellosis from 1984 till 2009 in the Netherlands, is outlined in the graph below:

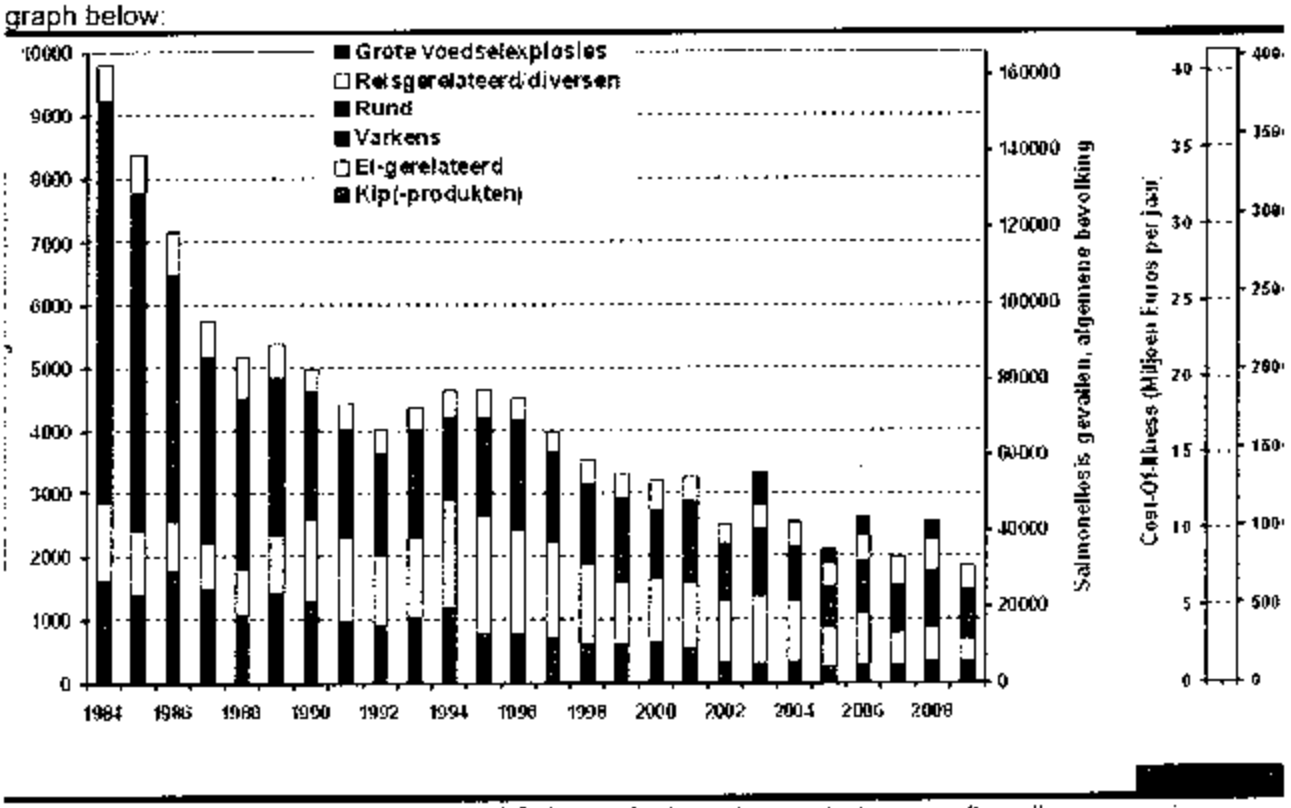


Figure 6: Occurrence of human cases of Salmonellosis and expected source (in yellow: eggs, in green: poultrymeat).

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

6.1 Evolution of zoonotic salmonellosis

6.1.2. Data on evolution of zoonotic salmonellosis

Year: 2005 **Situation on date:** December 2005
Animal species: poultry **Disease/infection**[a]: Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[d]	Number of positive[e] flocks[f]			Number of flocks depopulated[g]		Total number of animals slaughtered or destroyed[h]		Quantity of eggs destroyed (number or kg)[i]		Quantity of eggs channelled t egg product (number or kg)[c]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3
Netherlands	Grand Parent	150	0,6 million	150	0,6 million	150	0	0	0	0	0	0	0	0	0	0	0
	Parent broiler production	295	3,5 million	295	3,5 million	295	3	4	0	7	0	98.909	0	211.842	0	242.343	0
	Parent egg production	65	65.000	65	65.000	65	0	0	0	0	0	0	0	0	0	0	0
Total		510	4,165 million	510	4,165 million	510	3	4	0	0	0	98.909	0	211.842	0	242.343	0

Year: 2006 **Situation on date:** December 2006

Animal species: poultry **Disease/infection**[a]**:** Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[g]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[d]	Number of positive[e] flocks[a]			Number of flocks depopulated[f]		Total number of animals slaughtered or destroyed[a]		Quantity of eggs destroyed (number or kg)[a]		Quantity of eggs channelled t egg product (number or kg)[a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3
Netherlands	Grand Parent	159	0,75 million	159	0,75 million	159	1	0	0	1	0	11.000	0	49.416	0	90.000	0
	Parent broiler production	347	3,4 million	347	3,4 million	347	4	1	0	5	0	36.904	0	0	0	78.765	0
	Parent egg production	46	0,4 million	46	0,4 million	46	0	0	0	0	0	0	0	0	0	0	0
Total		552	4,55 million	552	4,55 million	552	5	1	0	6	0	47.904	0	49.416	0	168.765	0

Year: 2007 **Situation on date:** December 2007

Animal species: poultry **Disease/infection**[a]: Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[d]	Number of positive flocks[e]			Number of flocks depopulated[a]		Total number of animals slaughtered or destroyed[a]		Quantity of eggs destroyed (number or kg)[a]		Quantity of eggs channelled to egg product (number or kg)[a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Grand Parent	130	0,7 million	130	0,7 million	130	0	0	0	0	0	0	0	0	0	0	0
	Parent broiler production	601	4,8 million	601	4,8 million	601	4	0	1	4	0	36.000	0	139.000	0	179.000	0
	Parent egg production	69	0,65 million	69	0,65 million	69	0	0	1	0	1	0	1350	0	0	0	0
Total		800	6,15 million	800	6,15 million	800	4	0	2	4	1	36.000	1350	139.000	0	179.000	0

Year: 2008 **Situation on date:** December 2008

Animal species: poultry **Disease/infection**[a]: Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[d]	Number of positive flocks[e]			Number of flocks depopulated[f]		Total number of animals slaughtered or destroyed[g]		Quantity of eggs destroyed (number or kg)[a]		Quantity of eggs channelled t egg product (number or kg)[a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3
Netherlands	Grand Parent	148	0,7 million	148	0,7 million	148	0	0	0	0	0	0	0	0	0	0	0
	Parent broiler production	675	5,2 million	675	5,2 million	675	3	1	0	4	0	48.000	0	260.000	0	475 000	0
	Parent egg production	68	0,8 million	68	0,8 million	68	0	0	0	0	0	0	0	0	0	0	0
Total		891	6,7 million	891	6,7 million	891	4	0	0	4	0	48.000	0	260.000	0	475.000	0

Year: 2009 **Situation on date:** December 2009

Animal species: poultry **Disease/infection**[a]: Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[d]	Number of positive[e] flocks[a]			Number of flocks depopulated[e]		Total number of animals slaughtered or destroyed[a]		Quantity of eggs destroyed (number or kg)[a]		Quantity of eggs channelled t egg product (number or kg)[a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3
Netherlands	Grand Parent	129	0,7 million	129	0,7 million	129	0	0	0	0	0	0	0	0	0	0	0
	Parent broiler production	662	5,3 million	662	5,3 million	662	3	0	1	3	0	32,000	0	255,000	0	207,000	0
	Parent egg production	59	0,7 million	59	0,7 million	59	0	0	0	0	0	0	0	0	0	0	0
Total		850	6,7 million	850	6,7 million	850	3	0	1	3	0	32,000	0	255,000	0	207,000	0

(a) For zoonotic Salmonellosis indicate the serotypes covered by the control programmes: (a1) for *Salmonella* Enteritidis, (a2) for *Salmonella* Typhimurium, (a3) for other serotypes-specify as appropriate, (a4) for *Salmonella* Enteritidis or *Salmonella* Typhimurium.

(a1) Region as defined in the approved control and eradication programme of the Member State.

(b) For example, breeding flocks (rearing, adult flocks), production flocks, laying hen flocks, breeding turkeys, broiler turkeys, breeding pigs, slaughter pigs, etc. Flocks or herds or as appropriate.

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

(d) Check means to perform a flock level test under the programme for the presence of salmonella. In this column a flock must not be counted twice even if it has been checked more than once.

(e) If a flock has been checked, in accordance with footnote (d), more than once, a positive sample must be taken into account only once.

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: 2008 **Animal species [a]:** poultry **Category[b]:** breeding flocks
Description of the used serological tests: N/A

Description of the used microbiological or virological tests: MSRV method in faeces

Description of the other used tests: N/A

Region[c]	Serological tests		Microbiological or virological tests		Other tests	
	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]
Netherlands	N/A	N/A	35.000	9	N/A	N/A
Total	N/A	N/A	35.000	9	N/A	N/A

Year: 2009 **Animal species [a]:** poultry **Category[b]:** breeding flocks
Description of the used serological tests: N/A

Description of the used microbiological or virological tests: MSRV method in faeces

Description of the other used tests: N/A

Region[c]	Serological tests		Microbiological or virological tests		Other tests	
	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]
Netherlands	N/A	N/A	35.000	16	N/A	N/A
Total	N/A	N/A	35.000	16	N/A	N/A

(a) Animal species if necessary.
(b) Category/further specifications such as breeders, laying hens, broilers ,breeding turkeys, broiler turkeys, breeding pigs, slaughter pigs, etc, when appropriate.
(c) Region as defined in the approved control and eradication programme of the Member State.
(d) Number of samples tested.
(e) Number of positive samples.

6.3 Data on infection

Year: 2005 **Animal species**[a]:: poultry (breeding flocks)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	7	98.909
Total	7	98.909

Year: 2006 **Animal species**[a]:: poultry (breeding flocks)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	6	47.904
Total	6	47.904

Year: 2007 **Animal species**[a]:: poultry (breeding flocks)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	5	37.350
Total	5	37.350

Year: 2008 **Animal species**[a]:: poultry (breeding flocks)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	4	48.000
Total	4	48.000

Year: 2009 **Animal species**[a]: poultry (laying hens)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	3	32.000
Total	3	32.000

(a) Animal species if necessary.
(b) Region as defined in the control and eradication programme of the Member State.
(c) Herds or flocks or holdings as appropriate.

6.4 Data on vaccination programmes

Year: 2008 **Animal species:** [a]: poultry (breeding flocks)
Description of the used vaccination), SG9R (Intervet), TAD Vac E en Vac T (Lohmann), Gallivac SE (Merial), Nobilis Salenvac T (Intervet)

Region[b]	Total number of herds[c]	Total number of animals	Information on vaccination programme			
			Number of herds[c] in vaccination programme	Number of herds[c] vaccinated	Number of animals vaccinated	Number of doses of vaccine administered
Netherlands	891	6,7 million	700	410	3,4 million	7 million
Total	891	6,7 million	700	410	3,4 million	7 million

Year: 2009 **Animal species:** [a]: poultry (breeding flocks)
Description of the used vaccination), SG9R (Intervet), TAD Vac E en Vac T (Lohmann), Gallivac SE (Merial), Nobilis Salenvac T (Intervet)

Region[b]	Total number of herds[c]	Total number of animals	Information on vaccination programme			
			Number of herds[c] in vaccination programme	Number of herds[c] vaccinated	Number of animals vaccinated	Number of doses of vaccine administered
Netherlands	850	6,1 million	720	390	3 million	7 million
Total	850	6,1 million	720	390	3 million	7 million

(a) Animal species if necessary.
(b) Region as defined in the approved control and eradication programme of the Member State.
(c) Herds or flocks or holdings as appropriate.

7. Targets

7.1 Targets related to testing

7.1.1. Targets on diagnostic tests

Year: 2011 **Animal species:**[a]: poultry (breeding flocks)

Region[b]	Type of the test[c]	Target population[d]	Type of sample[e]	Objective[f]	Number of planned tests
Netherlands	MSRV	Breeding flocks	faeces	monitoring	20.000
Total					20.000

(a) Species if necessary.
(b) Region as defined in the approved control and eradication programme of the Member State.
(c) Description of the test.
(d) Specification of the targeted species and the categories of targeted animals if necessary.
(e) Description of the sample (for instance faeces).
(f) Description of the objective (for instance surveillance, monitoring, , control of vaccination).

7.1.2 Targets on testing flocks

Year: 2011 **Situation on date:** December 2009
Animal species: poultry **infection**[a]**:** Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Expected number of flocks to be checked[d]	Number of flocks[e] expected to be positive[a]			Number of flocks expected to be depopulated[a1]		Total number of animals expected to be slaughtered or destroyed[a]		Expected quantity of eggs to be destroyed (number or kg)[a]		Expected quantity of eggs channelled to egg products (number or kg)[a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Grandparent broiler production	111	0,65 million	111	0,65 million	111	1	0	0	1	0	5800	0	40.000	0	40.000	0
	Parent rearing broiler production	395	7,5 million	395	7,5 million	395	1	0	2	1	2	19.000	38.000	0	0	0	0
	Parent broiler production	662	5,3 million	662	5,3 million	662	3	0	3	3	3	48.000	48.000	225.000	225.000	225.000	225.000
	Grandparent egg production	18	77.000	18	77.000	18	0	0	0	0	0	0	0	0	0	0	0
	Parent rearing egg production	59	680.000	59	680.000	59	0	0	0	0	0	0	0	0	0	0	0
	Parent egg production	59	675.000	59	675.000	59	1	0	1	1	1	11.400	11.400	80.000	80.000	80.000	80.000
Total		1304	14,9 million	1304	14,9 million	1304	6	0	6	6	6	84.200	97.400	345.000	305.000	345.000	305.000

(a) For zoonotic salmonellosis indicate the serotypes covered by the control programmes: (a1) for *Salmonella* Enteritidis, (a2) for *Salmonella* Typhimurium, (a3) for other serotypes-specify as appropriate, (a4) for *Salmonella* Enteritidis or *Salmonella* Typhimurium.

(a1) Region as defined in the approved control and eradication programme of the Member State.

(b) For example, breeding flocks (rearing, adult flocks), production flocks, laying hen flocks, breeding turkeys,broiler turkeys, breeding pigs, slaughter pigs, etc. Flocks or herds or as appropriate.

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

(d) Check means to perform a flock level test under the programme for the presence of salmonella. In this column a flock must not be counted twice even if it has been checked more than once.

(e) If a flock has been checked, in accordance with footnote (d), more than once, a positive sample must be taken into account only once.

7.2 Targets on vaccination

7.2.1. Targets on vaccination [1]

Year: 2011 **Animal species:** [a]: poultry (breeding flocks)

Region[b]	Total number of herds[c] in vaccination programme	Total number of animals in vaccination programme	Targets on vaccination programme			
			Number of herds[c] in vaccination programme	Number of herds[c] expected to be vaccinated	Number of animals expected to be vaccinated	Number of doses of vaccine expected to be administered
Netherlands	850	6,1 million	720	390	3 million	7 million
Total	850	6,1 million	720	390	3 million	7 million

(a) Species if necessary.
(b) Region as defined in the approved control and eradication programme of the Member State.
(c) Herds or flocks or holdings as appropriate.

[1] Data to provide only if appropriate.

8. Detailed analysis of the costs of the programme

Costs related to	*Specification*	*Number of units*	*Unitary cost in EUR*	*Total amount in EUR*	*Community funding requested (yes/no)*
1. Testing					
1.1. Cost of the analysis	*Test:* Number of bacteriological tests (cultivation) planned to be carried out in the framework of official sampling	3400	18,39	62.526	yes
	Test: Number of serotyping of relevant isolates tests planned to be carried out	200	33,80	6.760	yes
1.2. Cost of sampling		1700	104	176.800	No
1.3. Other costs		NA	NA	NA	No

2. Vaccination or treatment of animal products					
2.1. Purchase of vaccine/treatment of animal products					
	Number of purchase of vaccine doses planned if a vaccination policy is part of the programme as set out explicitly under point 4 of Annex II	7 million	0,07	490.000	yes
2.2. Distribution costs		NA	NA	NA	No
2.3. Administering costs		NA	NA	NA	No
2.4. Control costs		NA	NA	NA	No
3. Slaughter and destruction					
3.1. Compensation of animals	Grandparent broiler production (1 flock)	5800	30,65	177.770	yes
	Parent rearing broiler production (3 flocks)	57.000	8,73	497.610	yes
	Parent broiler production (6 flocks)	96.000	10,79	1.035.840	yes
	Parent egg production (2 flocks)	22.800	11,75	267.900	yes
3.2. Transport costs		NA	NA	NA	No

3.3. Destruction costs		181.600	1	181.600	yes
3.4. Loss in case of slaughtering		NA	NA	NA	No
3.5 Costs from treatment of animal products (milk, eggs, hatching eggs, etc)	Grandparent	80.000	1	80.000	yes
	Parent	1.22 million	0,18	219.600	yes
4. Cleaning and disinfection		NA	NA	NA	No
5. Salaries (staff contracted for the programme only)		NA	NA	NA	No
6. Consumables and specific equipment		NA	NA	NA	No

7. Other costs		Na	NA	NA	No
TOTAL				3.019.606	yes

TOTAL COSTS REQUESTED FOR REFUNDING IN 2011 FOR BREEDING FLOCKS BY THE NETHERLANDS

Cost of official analysis	(Subtotal A1)	€ 69.286
Costs of vaccination:	(Subtotal A2)	€ 490.000
Compensation of eradicated animals	(Subtotal A3 + A4)	€ 1.979.120
Destruction costs:	(Subtotal A5)	€ 181.600
Cost of treatment of products:	(Subtotal A6)	€ 299.600
	TOTAL	**€ 3.019.606**

The Netherlands confirm that all measures mentioned in Table 8 for which we ask for co-financing are fundable according to current national rules

PROPOSED
VETERINARY CONTROL PROGRAMME
FOR

SALMONELLA IN BROILERS
PRESENTED FOR 2011*

BY
THE NETHERLANDS

*In accordance with Regulation (EG) 2160/2003 and (EG) Nr. 646/2007

INDEX

PART A

A.a: Aim of the programme

The aim of the programme is to monitor and reduce the prevalence of Salmonella Enteritidis (Se) and Salmonella Typhimurium (St) in broiler flocks of Gallus gallus. The target is to reduce the percentage of broiler flocks infected with Salmonella Enteritidis (Se) and Salmonella Typhimurium (St) to 1% or less

A.b: Animal population and phases of production which sampling covers

Broilers – birds leaving for slaughter

A.c: Evidence that programme complies requirements laid down in Part E of Annex II regulation No 2160 / 2003

The requirements laid down in part E of Annex II of Regulation No 2160/2003 will come into force from 2011. From that date fresh poultry meat from broilers may not be placed on the market for human consumption unless it meets the following criterion:
'Salmonella: absence in 25 grams'

A.d.1: General

A.d.1.1: Short summary referring to the occurrence of Salmonellosis

Regulation 646 / 2007 was implemented on 1st January 2009. The result with regard to the occurrence of SE and ST in 2009 was for

- SE: 1, and
- ST: 5

Infected flocks out of 7535 flocks.

A.d.1.2: Structure and organization of the relevant competent authorities

In the Netherlands the Product Board for Livestock, Meat and Eggs executes the implementation of the programme. The Ministry of Agriculture, Nature and Food Quality are coordinating this implementation. In Figure 1, all organizations involved are mentioned, including their relation to the programme.

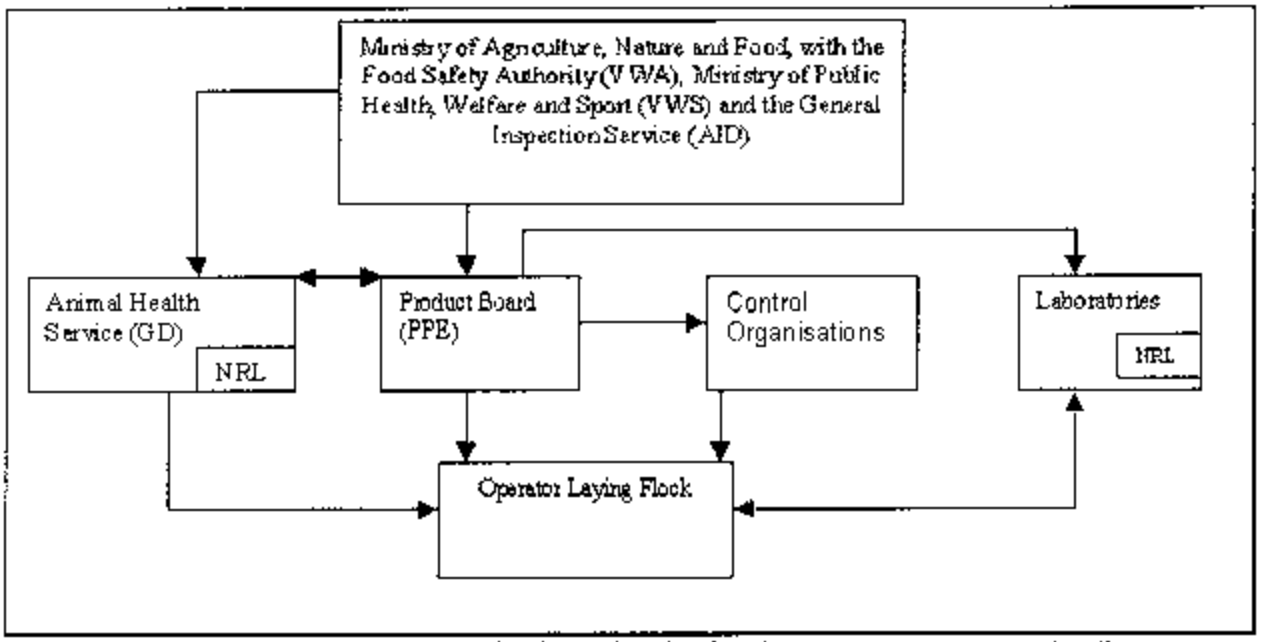


Figure 1: Organizational scheme of the institutes involved in the programme concerning the control of Salmonella in poultry

1. PPE

The Product Board for Poultry and Eggs (PPE) is a delegated authority. This is legally laid down in the following regulation by the Ministry of Agriculture, Nature and Food Quality: "Besluit bescherming tegen bepaalde zoönosen en bestrijding van besmettelijke dierziekten" and "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's". The regulations concerning the Action Plans are formulated by the PPE and acknowledged by the ministry of Agriculture. The implementation of the programme is carried out by the PPE. The evaluation of the results is also the responsibility of the Product Board.

2. Animal Health Service (GD)

Concerning poultry, the main objective is to promote optimal health of poultry, particularly by preventing infectious diseases and the presence of microorganisms and residues that may be harmful to consumers. As a competent independent organization, GD occupies a central position in organized poultry health care. On the basis of (government) regulations or by government order, disease control programmes are realized. GD is acknowledged by the ministry of Agriculture, Nature and Food Quality to perform these tasks. GD will do official sampling.

3. VWA and AID

The Food and Consumers Product Safety Authority (VWA) checks if GD and other laboratories perform according to the agreed work process. Both the VWA and the General Inspection Service (AID) are able to prosecute in specific cases when measures were not followed correctly (e.g. by laboratory or farmer).

4. Control organizations

The control organizations audit the procedures in the Action Plan and the sampling done by the operators. These control organizations must be independent and are acknowledged by the PPE.

5. Laboratories

In total 21 (private) laboratories are acknowledged by the PPE to perform analysis to determine the Salmonella status of samples taken concerning the Action plans. This is legally laid down in the PPE directive "Besluit erkenningsvoorwaarden en werkwijzen laboratoria (PPE) 2007". Every acknowledged laboratory has to participate in the ring-survey for the determination and

serotyping of Salmonella that is performed by the RIVM (NRL) every twelve months. Positive test results for the relevant Salmonella serotypes are reported to the PPE.
The authorization of the laboratories is delegated by the Ministry of Agriculture, Nature and Food Quality to the PPE. This is legally laid down in the following regulation by the Ministry of Agriculture, Nature and Food Quality: "Besluit bescherming tegen bepaalde zoönosen en bestrijding van besmettelijke dierziekten" and "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's" in Article 96, section 2, subsection b, point 8.

6. NRL (RIVM, National Institute of Public Health and Environment)
The RIVM is the national reference laboratory for Salmonella. RIVM falls under the Ministry of Public Health, Welfare and Sport, and also undertakes commissions from other ministries such as the Ministry for Agriculture, Nature and Food Quality.
The RIVM organizes regular bacteriological ring surveys among laboratories, including GD, participating in the Dutch national programme for control of Salmonella in the poultry sector. Results of these ring surveys are reported to the PPE.

A.d.1.3: Approved laboratories

Approved laboratories:
1. A.R.S.I.A.
2. Alex Stewart Bioconsult
3. Bacteriologisch Adviesbureau
4. C.C.L. – Nutricontrol
5. Demetris DierGezondheid BV
6. DGZ Vlaanderen – locatie Torhout
7. GD
8. Heijs Groep Pluimveeverwerkende Industrie (Lab Heijs/ de Vries)
9. K.B.B.L. Wijhe
10. Laboratorium Pro Health BV
11. Lavetan NV
12. Lebensmittel- und veterinärlabor GmbH
13. Lohmann Tierzucht
14. Masterlab BV
15. Opinion Test & Taste
16. Plukon Poultry BV
17. ROBA Laboratorium
18. SGS Laboratory Services
19. Silliker Netherlands BV
20. Storteboom Fresh BV Laboratorium
21. Veterinair Centrum Someren

A.d.1.4: Methods used in examination

The tests that are performed in the National Plan: PVE branch method for Salmonella analysis: this method includes the use of Modified Semi solid Rapport Vassiliadis agar (MSRV) as a selective enrichment medium. The semi solid medium should be incubated at 41.5 °C +/- 1 °C for 48 h. Alternative methods for detection will be permitted (for example Salmonella analysis by PCR), when the methods are approved as valid by the CRL.
In case of a positive finding, serotyping is performed according to the Kaufmann-White scheme.

A.d.1.5: Official controls at feed and flock level

Official sampling will be done at 10% of the farms by GD. This official sampling will be risked based. Risk in this case is defined as farms with false negative results in sampling done by the operator of the broiler farm.
To define this risk group, results of monitoring by the operator of the broiler farm are compared with monitoring results at the slaughterhouse. In the slaughterhouse intestine samples for monitoring at Salmonella are taken (see paragraph 3.3). In case of different outcome, results of operator of the broiler farm are negative and results of slaughterhouse are positive tested for Salmonella, twice in a row a year, official sampling is performed at the operator of this broiler farm.
When this risk group does not reach 10% of the total amount of broilers farms in the Netherlands a random selection will take place to fill up the group until 10%. Official sampling replaces monitoring by the operator.

A.d.1.6: Measures taken by the competent authorities

Measures to be taken in case of positive findings in broilers are:
a) swab check executed by a by the PPE acknowledged company in the poultry house after cleaning and disinfection;
b) in case of a positive swab result the poultry house has to be cleaned and disinfected by a professional company after the next round;
c) tracing survey under supervision of a veterinarian;
d) in case of a Salmonella Java infection the farmer has to take some extra measures compared with an infection of another serotype. Especially when there are two or three Salmonella Java infections in a row. These extra measures are cleaning of the feeding system, keeping the poultry house empty for at least 10 days and take extra samples to monitor Salmonella.

A.d.1.7: National legislation relevant to the implementation of the programme

The implementation of the programme is laid down in the PPE Directive 'Verordening Hygiënevoorschriften Pluimveehouderij (PPE) 2007'.

A.d.1.8: Financial assistance provided to food and feed business

At the moment there is no financial assistance for broiler flocks.

A.d.2: Food and feed businesses covered by the programme

A.d.2.1: Structure of the production of broilers

1. Rearing grant parent stock: 107 flocks in 2009
2. Grant parent stock: 111 flocks in 2009
3. Rearing parent stock: 395 flocks in 2009
4. Parent stock: 662 flocks in 2009
5. Broilers: 7535 flocks in 2009

A.d.2.2: Structure of the production of feed

Directives for the production of feed are laid down in the "Kaderwet Diervoeders" by the Ministry of Agriculture, Nature and Food Quality. The Product board for Feed (PDV) is a delegated authority and publishes specific regulations on the production of feed. The most important regulations for the poultry sector are the "Verordening Monitoring Zoönosen en Zoönoseverwekkers Diervoedersector 2005" and the "Besluit PDV Salmonella in de diervoedersector 2005". In the latter one the monitoring are presented in the Dutch annual zoönoses report.

Next to these regulations there is also a quality assurance program for feed. This is called Good Manufacturing / Managing Practice system, in short the GMP-system. Combined with the HACCP principles this quality assurance system is called GMP+. Almost all feed producers for the poultry chain are GMP+ certified. All IKB certified poultry farmers are obligated to use GMP+ certified food. IKB is a voluntary Dutch Integral Chain Control program. The GMP+ standards include control measures for base materials, rules for additives, sampling scheme for zoönoses, hygiene and process criteria and compulsory regularly controls by an independent control organization.

A.d.2.3: Relevant guidelines

Hygiene management at farms, measures to prevent infocming infections carried by animals, feed, drinking water, people working at farms and hygiene transporting animals to and from farms.

1. Hygiene management at farms:
    a. No pets, stock of (other) poultry is allowed in the broiler house;
    b. If pets, stock or (other) poultry is on the location of the broiler farm special hygiene measurements are required (like separate care);
    c. No wild birds can enter the broiler house;
    d. Visitors are only allowed to enter the broiler house when this is necessary and under strict hygiene measurements (including special clothing);
    e. Every farm has a rodent control program or charter an acknowledged rodent control company (at least every 2 months);
    f. Once a year bacteriological research and in case of a natural source of water also chemical research of drinking water for poultry;
    g. Every farm has a clear boundary and it is visible for visitors where they must announce themselves. The broiler houses are locked.
    h. The broiler house, the broiler farm and its close environment is clean;
    i. Before entering the broiler house there is a hygiene barrier with clothing and shoes;
    j. The drive- and walking routes to the farm are paved and cleanable;
    k. The silo is placed on a paved underground, is easy to clean and refillable from outside the broiler house. When there are more silo's, every silo has a unique number;
    l. Feed and litter is in such a way stored that it stays clean, dry and mould free;
    m. Every broiler house must have a hand-washing facility.
2. Cleaning and disinfection;
    a. After removing the broilers the litter is removed and the broiler house is cleaned and disinfected;
    b. Once a year a hygiene check in the cleaned and disinfected empty broiler house is done by and by PPE acknowledged company.
3. Besides measurements 1 and 2 we have a specific Salmonella Java control programme.
4. Slaughterhouses take special measurements to clean and inspect trucks and containers used to transport broilers from farm to slaughterhouse.

A.d.2.4: Routine veterinary supervision of farms

Every farm is inspected at least once a year by a qualified veterinarian on behalf of the Competent Authority to enforce national legislation (e.g. legislation based on EU Directive 90/593/EC). This visit is not considered as official sampling. In the frame of the Salmonella control programme. The official sampling therefore is in addition to the routine veterinary visit.

A.d.2.5: Registration of farms

All poultry farms and flocks (with more than 250 birds) are being registered by the PPE. Every farm receives a unique number. When a flock is being transferred from one farm to another the PPE must be informed. This is laid down in the directive 'Verordening productie van en handel in broedeieren en levend pluimvee (PPE)". All the information is stored in the "Koppel Informatiesysteem Pluimvee (KIP-system)". This so called KIP-system is also the base for the registration in according to the EU Regulation 852/2004.

A.d.2.6: Record-keeping at farms

- Hatchery
- Number of animals
- Death rate
- Salmonella measurements including result
- Date of birth
- Communication of Salmonella information to PPE and slaughterhouses.

A.d.2.7: Documents to accompany animals when dispatched

When animals are dispatched the are accompanied by a special document, called 'P-formulier'. For dispatch to slaughterhouse a document called 'VKI – Voedsel Keten Informatie' is demanded. On this document information like Salmonella status and use of medicine is registrated.
Operators wishing to export more than 20 birds or hatching eggs to another EU member state (or certain third countries) must comply with EU Directive 90/539/EC and ensure that the consignment is accompanied by a completed and signed Intra-trade Animal Health Certificate (ITAHC) for poultry breeding and production.
The ITAHC will also require the reference number of the operator's poultry health certificate.
The ITAHC will be amended to include the results of the last test for *Salmonella* as required in Commission Regulation (EC) 2160/2003 Article 9.1 prior to any dispatching of the live animals, or hatching eggs, from the food business of origin. The date and the result of testing shall be included in the relevant health certificates provided for in Community legislation.This certificate must be completed and signed by the Official Veterinarian as well as the operator to confirm compliance with the relevant articles of Directive.

A.d.2.8: Other relevant measures to ensure traceability of animals

The TRACES system is managed by the Dutch Food Safety Authority (VWA). An export can only be approved in TRACES if the official veterinarian has given his approval.

PART B

1. Identification of the programme

Member state:	The Netherlands
Disease:	Infection of broilers with zoonotic Salmonella spp
Year of implementation:	1-1-2009 until 31-12-2011
Reference of this document:	final version
Geographical Area:	The Netherlands

Contact:
ir. J.A. (Judith) Dietvorst
Product Board for Poultry and Eggs, PPE
Phone: 0031(0)79 363 4316
Fax: 0031(0)79 363 4345
E-mail: jdietvorst@pve.nl

Date sent to the commission: 30-04-2010

2. Historical data on the epidemiological evolution of zoonotic Salmonellosis

The Netherlands has two programmes to control the prevalence of Salmonella, one for the broiler production chain (the basis for this programme) and one for the egg production chain. In this Chapter these two programmes are mentioned together with the infection percentages in the broiler production chain and the egg production chain.

2.1 Broiler production

In May 1997 a programme to control the prevalence of Salmonella in poultry was started. The programme (called: "Plan of Approach Salmonella and Campylobacter in the Poultry meat sector 1997") that was designed involved strict hygiene rules and the monitoring of Salmonella infections throughout the broiler production production chain. The programme obligatory for all broiler production operators (from grandparent flock to slaughterhouse and cutting plant) in the Netherlands. The plan was introduced with the aim to decrease the number of Salmonella infections (in slaughtered broilers) to less then 10% by the year 2000. The actions involved in the Plan were obligatory, pursuant to the legislation of the PPE.

The effects of the programme were evaluated in January 2000. The monitoring results showed a reduction of the percentage of Salmonella infected broilers after slaughter. In the fourth quarter of 1999 16% of the slaughtered broilers were infected with Salmonella, which meant that the initial aim was not achieved. This result led to the formulation of a stricter programme (called: "Action Plan Salmonella and Campylobacter in the Poultry meat sector 2000^{+}"). In this programme the Dutch industry aims for an elimination of all Salmonella serotypes in poultry meat. This means that this target is beyond of the Zoonoses Directive (2003/2160 EG), since this directive only aims on serotypes with public health significance. Again, the actions involved are obligatory.
For the Netherlands a SE / ST-infection percentage, based on bacteriological results, of 1% was determined through a European study by MSs and analysed by EFSA in October 2005–October 2006. This percentage is the starting-point for this programme. So at this moment the Netherlands already reached the target mentioned in EG 464/2007 Article 1:

"The Community target, as referred to in Article 1(1) of Regulation (EC) No 646/2007, for the reduction of Salmonella enteritidis and Salmonella typhimurium in broilers (Community target) shall be a reduction of the maximum percentage of flocks of broilers remaining positive of Salmonella enteritidis and Salmonella typhimurium to 1 % or less by 31 December 2011."

In Figure 2 results of the Action Plan Salmonella and Campylobacter in the Poultry meat sector 2000* for Se en St are shown for the period 4th quarter 2004 until 4th quarter of 2009. Figure 1 represents only the faecal sampling at the broiler farm.

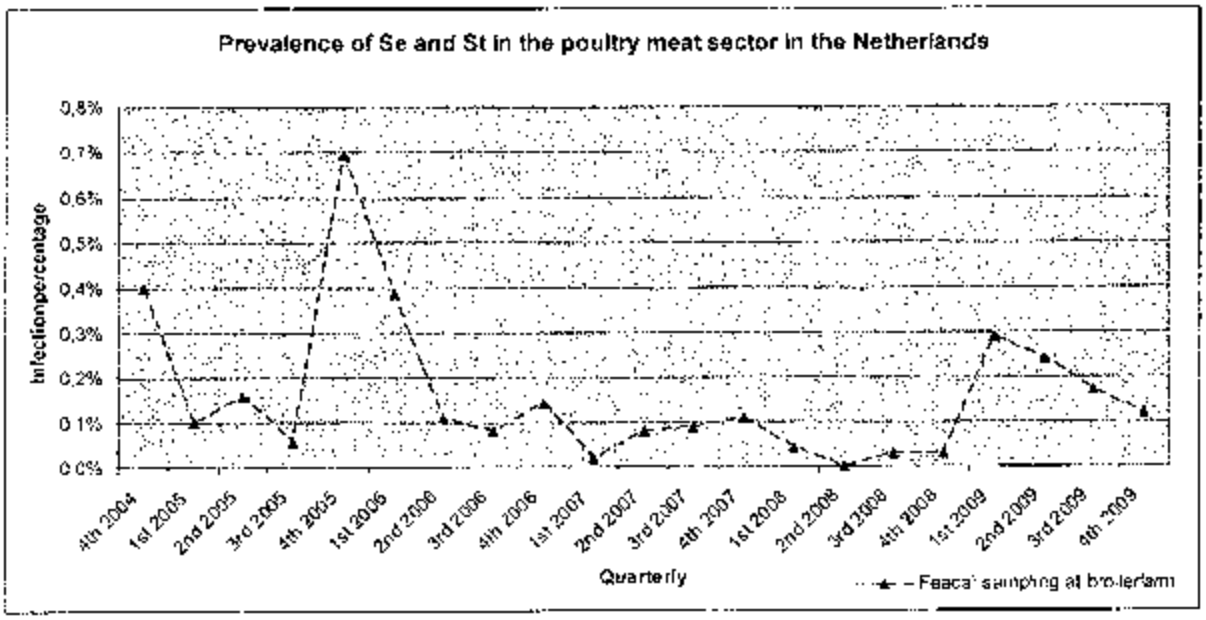


Figure 2: prevalence of Se en St in faecal samples in the broiler production sector in the Netherlands for the period 4th quarter 2004 till 4th quarter 2009 (source PPE, 2010).

Figure 3 shows the results of the Action Plan Salmonella and Campylobacter in the Poultry meat sector 2000* for Se en St in end product for the period 4th quarter 2004 until 4th quarter of 2009. Figure 3 represents only the end product sampling at the slaughterhouse.

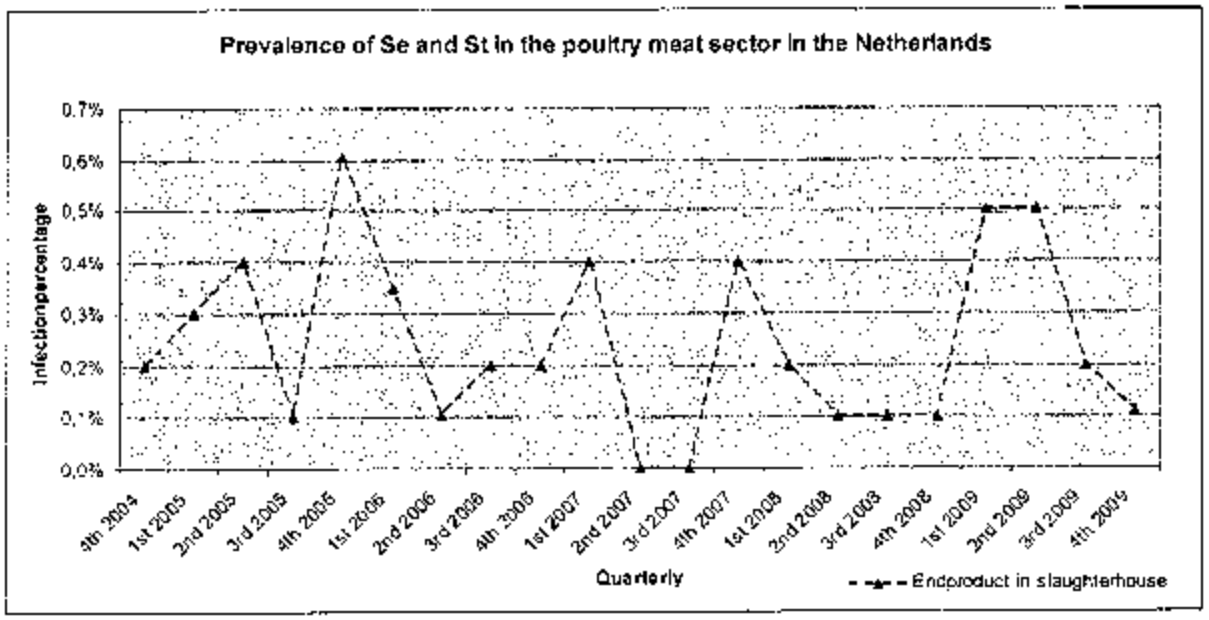


Figure 3: prevalence of Se en St at endproduct in the broiler production sector in the Netherlands for the period 4th quarter 2004 till 4th quarter 2009 (source PPE, 2010)

Figure 2 and 3 cannot be combined in one figure while sampling batches are not comparable. Sampling at the broiler farm is done per poultry house and sampling at the slaughterhouse is done per batch, which can be more than one poultry house.
Both figures are representing the prevalence of Se en St for each level in the production chain. In Figure 1 and 2 also flocks from foreign countries are included. Especially flocks from Germany are slaughtered in the Netherlands. Also flocks from abroad have to be sampled for Salmonella.

One of the objects of the current programme is to monitor the prevalence of all serotypes of Salmonella in all links of the production chain. In Figure 3 and Table 1 the monitoring results for all serotypes of Salmonella are presented from the 1st quarter of 2000 until the 4th quarter of 2009. In this figure:

1. Fluff; is the percentage of Salmonella positive fluff-samples taken from the hatcheries at the end of the hatching process.
2. Box paper; is the percentage of Salmonella positive samples taken from the day-old chicken box paper at the broiler farms.
3. S-faeces; is the percentage of Salmonella positive faecal samples taken at the broiler farms.
4. S-intestine; is the percentage of Salmonella positive intestine samples taken at the slaughterhouse.

Figure 4 shows the serotypes of Salmonella that have been found in the infected flocks (faecal sampling) in the 4th quarter 2009. Figure 5 and Table 2 show the infection percentage in the slaughterhouse. Finally Figure 6 shows the serotyping of end products infected with Salmonella in the 4th quarter of 2009.

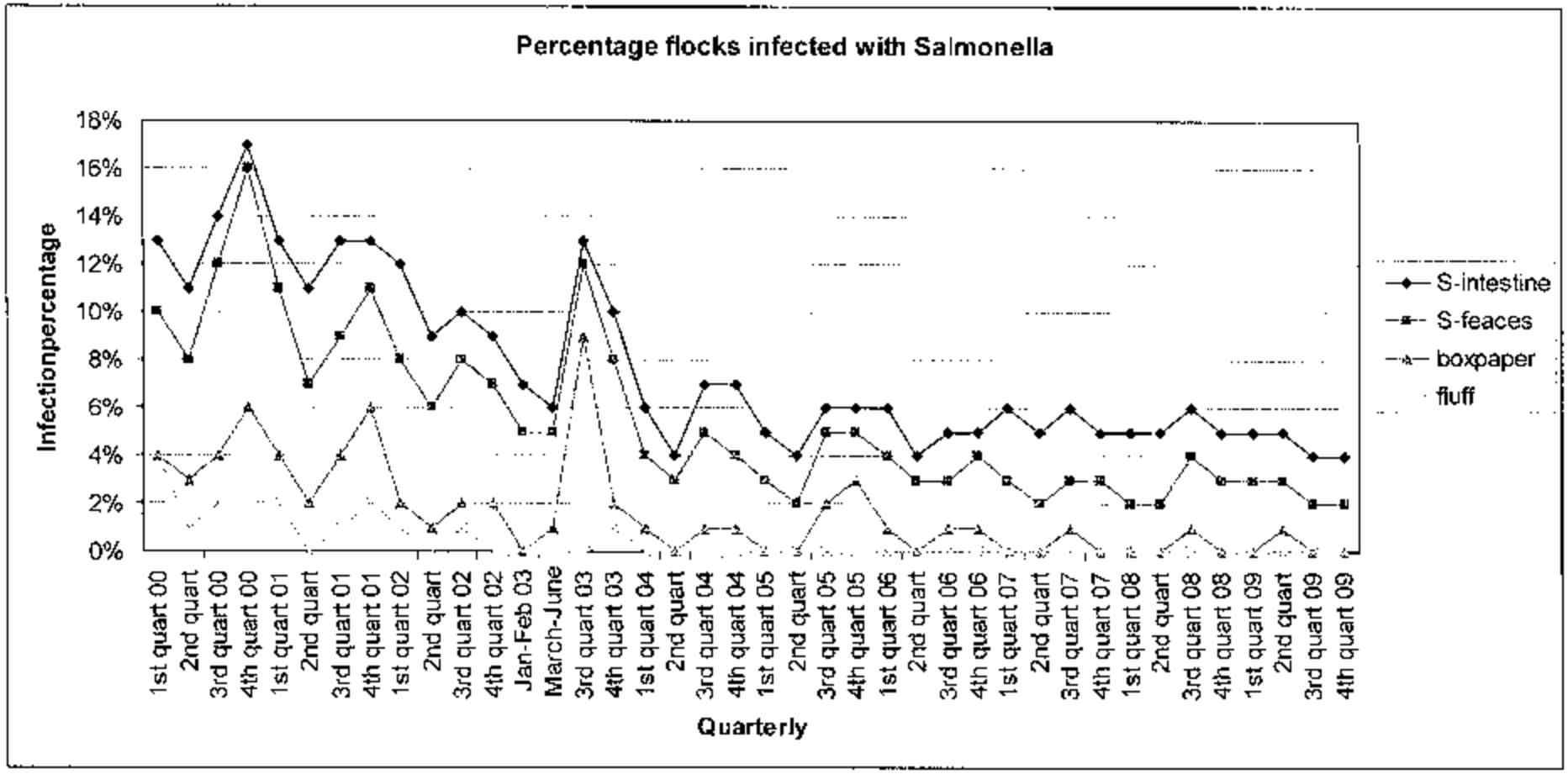


Figure 4: Percentages of Salmonella spp. positive samples taken from different links of the production chain per quarter (source PPE, 2010).

Table 1: Percentages of Salmonella spp. positive samples taken from different links of the production chain per quarter (PPE, 2010).

Quart	S-intestine	S-faeces	Boxpaper	Fluff
4th quart 2009	4%	2%	0%	0%
3rd quart 2009	4%	2%	0%	0%
2nd quart 2009	5%	3%	1%	0%
1st quart 2009	5%	3%	0%	0%
4th quart 2008	5%	3%	0%	0%
3rd quart 2008	6%	4%	1%	0%
2nd quart 2008	5%	2%	0%	0%
1st quart 2008	5%	2%	0%	0%
4th quarter 2007	5%	3%	0%	0%
3th quarter 2007	6%	3%	1%	0%
2nd quarter 2007	5%	2%	0%	0%
1st quarter 2007	6%	3%	0%	0%
4th quarter 2006	5%	4%	1%	0%
3th quarter 2006	5%	3%	1%	0%
2nd quarter 2006	4%	3%	0%	0%
1st quarter 2006	6%	4%	1%	0%
4th quarter 2005	6%	5%	3%	0%
3th quarter 2005	6%	5%	2%	0%
2nd quarter 2005	4%	2%	0%	0%
1st quarter 2005	5%	3%	0%	0%
4th quarter 2004	7%	4%	1%	0%
3th quarter 2004	7%	5%	1%	0%
2nd quarter 2004	4%	3%	0%	0%
1st quarter 2004	6%	4%	1%	0%
4th quarter 2003	10%	8%	2%	1%
3th quarter 2003	13%	12%	9%	0%
March till June 2003*	6%	5%	1%	0%
January & February 2003	7%	5%	0%	0%
4th quarter 2002	9%	7%	2%	0%
3th quarter 2002	10%	8%	2%	1%
2nd quarter 2002	9%	6%	1%	0%
1st quarter 2002	12%	8%	2%	1%

* In this period Avian Influenza problems were overruling the monitoring of Salmonella.

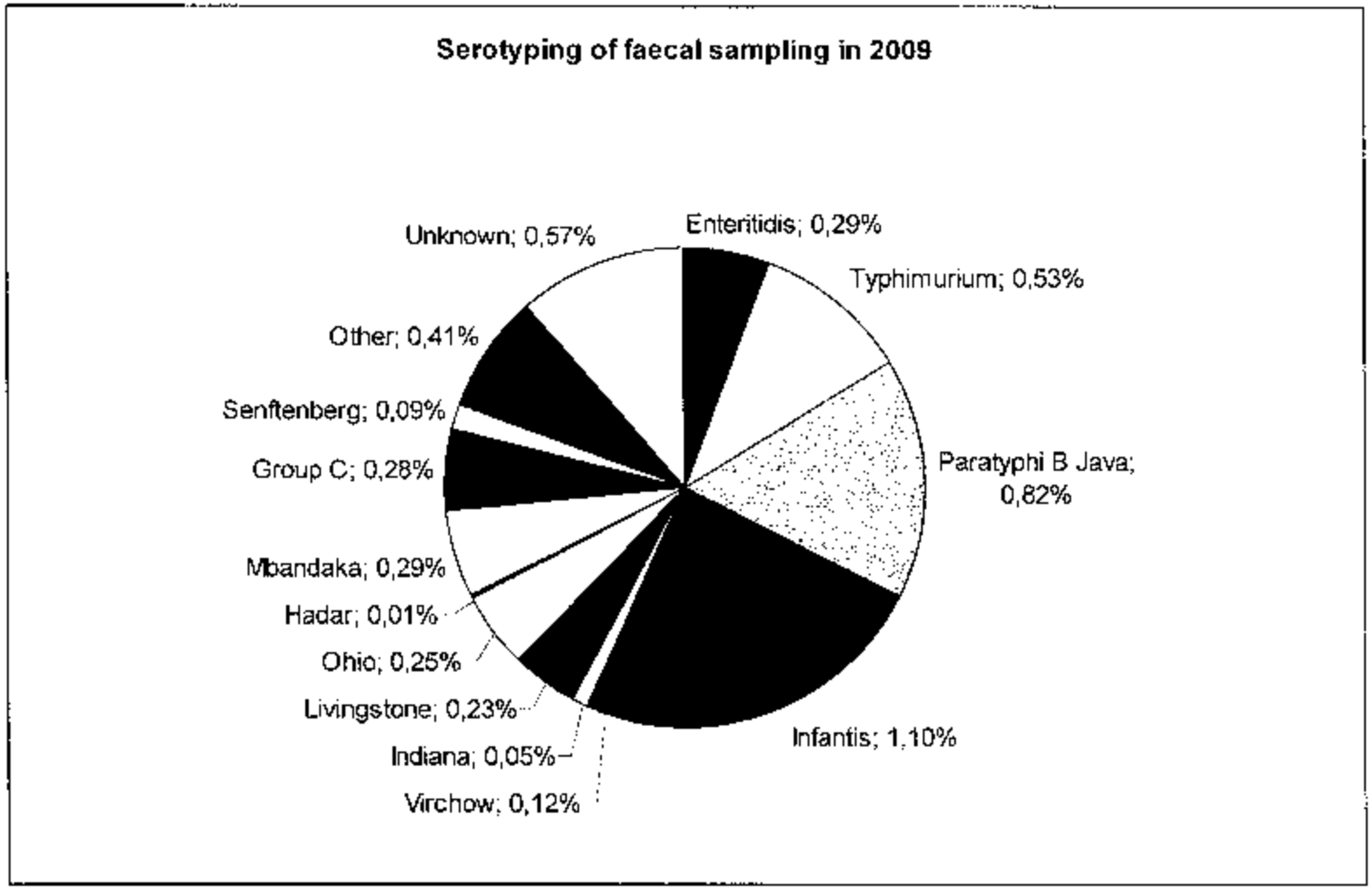


Figure 5: Serotyping of faecal sampling Salmonella, 2009 (PVE 2010)

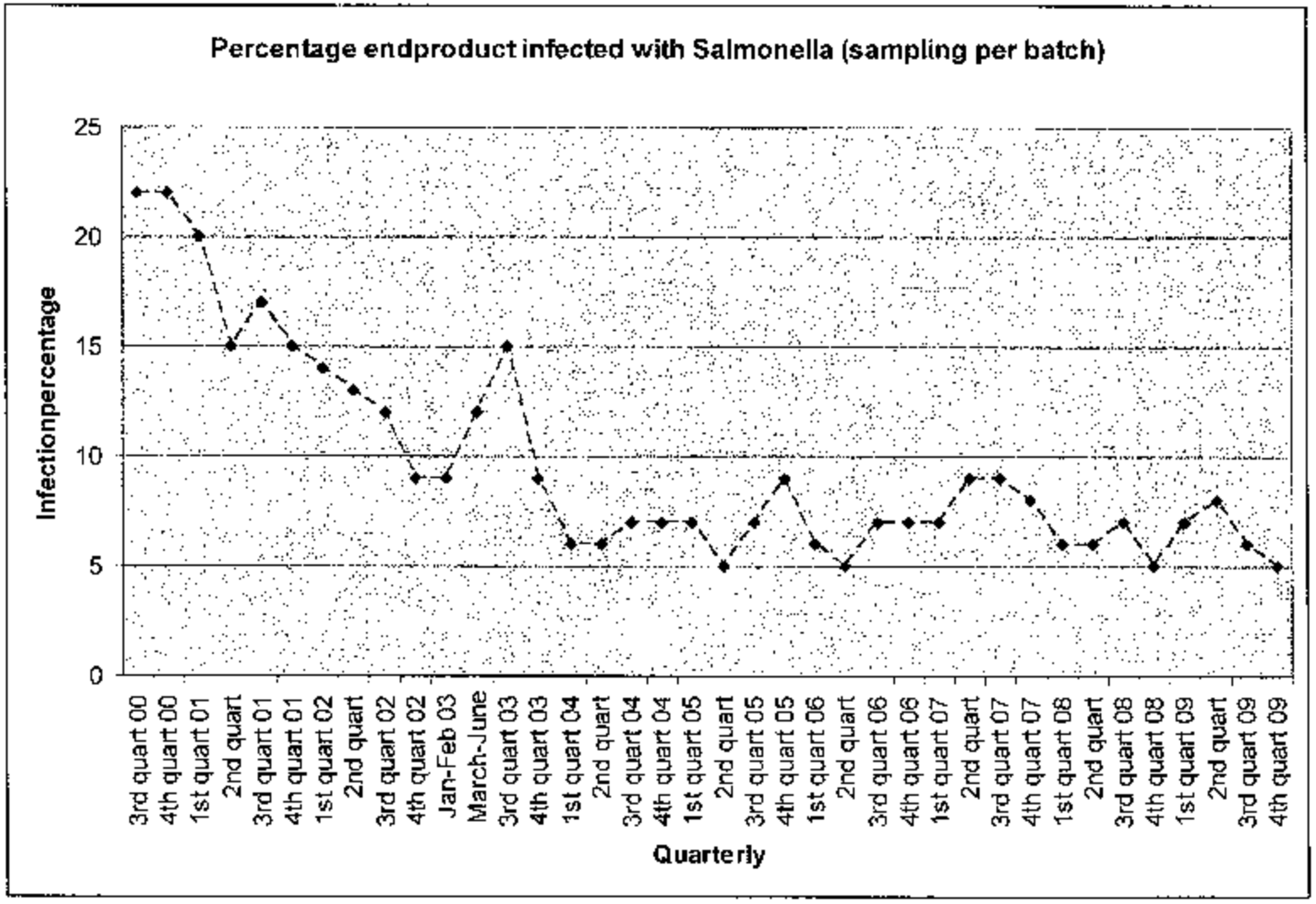


Figure 6: percentage end product infected with Salmonella spp. in the slaughterhouse (source PPE, 2010)

Table 2: Percentage end product infected with Salmonella spp. at the slaughterhouse (PVE, 2010)

End product	Salmonella
4th quart 2009	5%
3rd quart 2009	6%
2nd quart 2009	8%
1st quart 2009	7%
4th quart 2008	5%
3rd quart 2008	7%
2nd quart 2008	6%
1st quart 2008	6%
4th quarter 2007	8%
3th quarter 2007	9%
2nd quarter 2007	9%
1st quarter 2007	7%
4th quarter 2006	7%
3th quarter 2006	7%
2nd quarter 2006	5%
1st quarter 2006	6%
4th quarter 2005	9%
3th quarter 2005	7%
2nd quarter 2005	5%
1st quarter 2005	7%
4th quarter 2004	7%
3th quarter 2004	7%
2nd quarter 2004	6%
1st quarter 2004	6%
4th quarter 2003	9%
3th quarter 2003	15%
March till June 2003*	12%
January & February 2003	9%
4th quarter 2002	9%
3th quarter 2002	12%
2nd quarter 2002	13%
1st quarter 2002	14%
4th quarter 2001	15%
3th quarter 2001	17%
2nd quarter 2001	15%
1st quarter 2001	20%
4th quarter 2000	22%
3th quarter 2000	22%

* In this period Avian Influenza problems were overruling the monitoring of Salmonella.

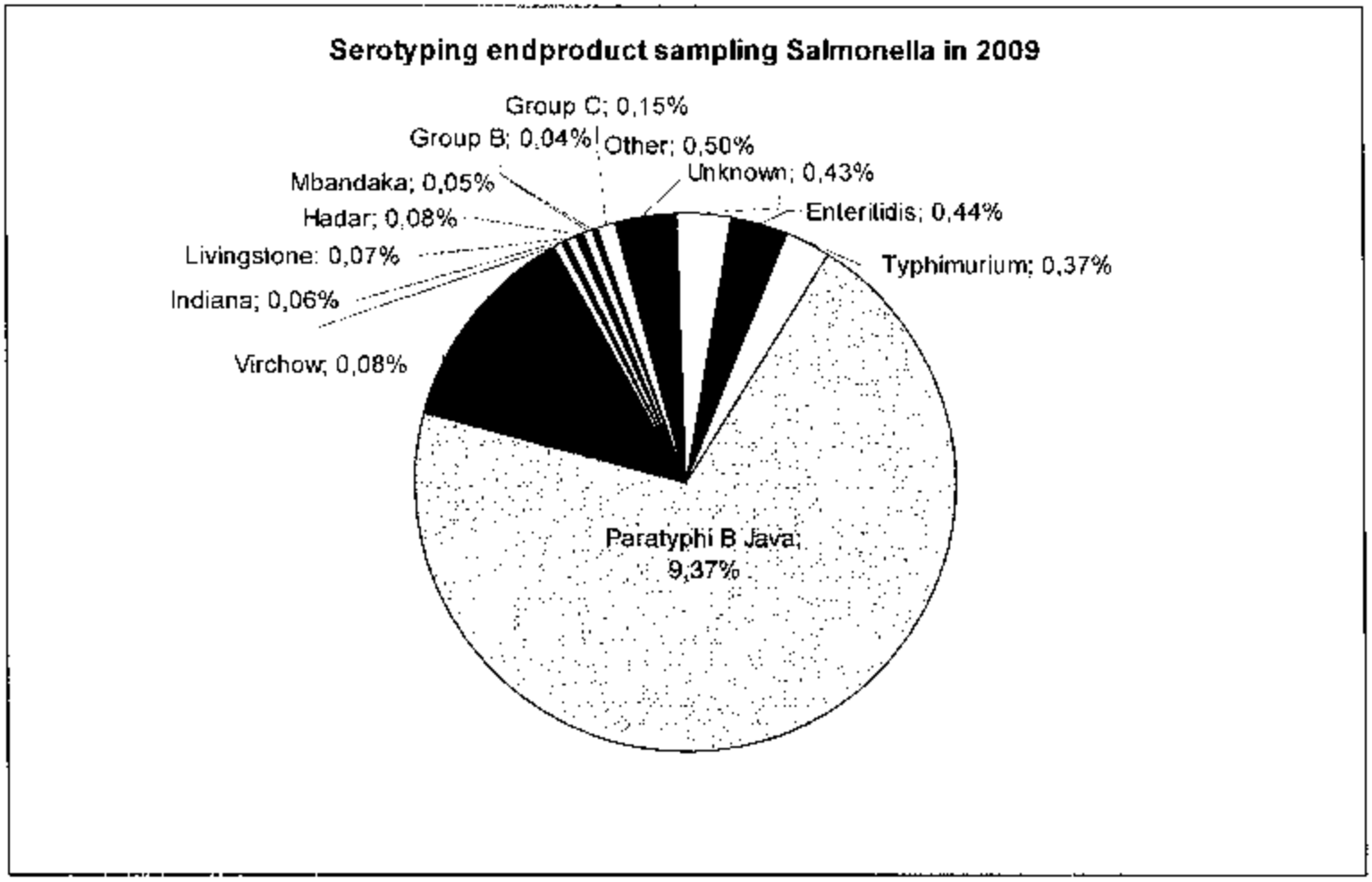


Figure 7: Serotyping endproduct infected with Salmonella 2009 (PVE, 2010)

2.2 Egg production

In November 1997 a programme to control the prevalence of Salmonella in laying hens was started. The objective of the programme (called "Plan of Approach prevention and control of Salmonella in the egg industry 1999") was to reduce the SE and ST prevalence in flocks of laying hens to 5 percent or less by November 2000. This programme involved strict hygiene rules and the monitoring of Salmonella infections throughout the egg production chain. Because this objective was not reached, a new programme was introduced in the beginning of 2001. The target of this programme, called "Action Plan Salmonella in egg production 2001+" was to strive for a 0+ percent of contaminated eggs. In this stricter approach the eggs of contaminated flocks of laying hens are delivered to the egg product industry, for a special allowed treatment. The actions involved in both programmes were obligatory, pursuant to the legislation of the PPE.

Until January 2008 the incidence of SE / ST infections in Dutch flocks of laying hens was monitored by taking a blood sample of at least 0.5 percent (with a minimum of 24 and a maximum of 60 animals) of every flock before removal at the end of the production period. The test results were analyzed by the Animal Health Service and reported to the PPE. Figure 3 and Table 1 show the percentage of SE / ST infected layer hen flocks in the period from November 1997 until December 2007.
From the 1st of February 2008 the monitoring has changed to bacteriological analysis of faecal samples taken every 15 weeks in accordance with EU Regulation 1168/2006.

Over the period from February 1999 to December 2000 11,4 percent of the examined layer flocks tested SE / ST positive. After the introduction of the stricter programme "Action Plan Salmonella in egg production 2001+" the SE/ST-infection percentage, based on serological results, of layers decreased towards 5.8 in 2007. This might partly be due to the increased use of vaccines against SE of the layers.
For the Netherlands a SE/ST-infection percentage, based on bacteriological results, of 7.8 % was determined through a European study "Analysis of the baseline study on the prevalence of Salmonella in laying hen flocks of Gallus Gallus".
From 1st February 2008 EG 1168/2006 will be implemented in the Netherlands in the Action plan Salmonella in egg production 2001+.

Table 3 shows the results of the bacteriological tests in layer flocks according to the EU-regulation 1168/2006 performed from 2008 onwards. They are in accordance with the COMMUNITY-target set for the Netherlands. In 2009 the percentage of SE/ST infected layer flocks was even below the end target of the community of 2%.

Table 3: SE and ST infections in layers, based on serological results 1997 – 2007 (source PPE)

Year	Number of flocks	SE infected	% SE infected	ST infected	% ST infected
1997*	258	35	13,6	2	0,8
1998	1631	181	11,1	6	0,4
1999	1705	181	10,6	3	0,2
2000	2010	229	11,4	6	0,3
2001	1978	177	8,9	4	0,2
2002	1873	165	8,8	7	0,4
2003	864	59	6,8	3	0,3
2004	1500	101	6,7	3	0,2
2005	1952	64	3,3	3	0,2
2006	1878	85	4,5	6	0,3
2007	1870	109	5,8	0	0

*Start of programme November 1997

Table 4: SE and ST infections in layers, based on bacteriological results 2008 – 2009 (source PPE)

Year	Number of flocks	SE infected	% SE infected	ST infected	% ST infected
2008	2346	61	2,60	1	0,04
2009	2240	29	1,29	4	0,18

3. Description of the submitted programme

3.1 Target Veterinary Control Programme

The target for the reduction of Salmonella Enteritidis (SE) and Salmonella Typhimurium (ST) in broilers of Gallus gallus is a reduction of the maximum percentage of broilers remaining positive to 1 percent, or less by 31 December 2011.

3.2 Monitoring of the Veterinary Control Programme

A. Monitoring through the operator

The test frequency is laid down in the directives of the PPE. On day of arrival at least 40 pieces of box paper, per truck, are taken. From 21 days onwards, but at the maximum of 14 days before slaughter, samples are taken at the holding. The operator managing the broilers is responsible for the monitoring. During monitoring at least two pair of boot / sock swabs are taken per poultry house. All compartments of the poultry house are equally represented in the samples. It is ensured that all sections in a poultry house are represented in the sampling in a proportionate way. Each pair should cover about 50% of the area of the house.
On completion of sampling the boot / sock swabs are carefully removed so as not to dislodge adherent material. Boot swabs may be inverted to retain material. The overshoes are transported in a bottle or plastic bag with a label. For free range flocks of broilers samples shall only be collected in the area inside the house.

Before putting on the boot / sock swabs, their surface is moistened with maximum recovery diluents (MRD: 0,8% sodium chloride, 0,1% peptone in sterile deionised water), or sterile water or any other diluent approved by the national reference laboratory. The use of farm water containing antimicrobials or additional disinfectants is prohibited.

Samples will send by (express) mail or courier to the acknowledged laboratory, within 25 hours after collection. At the laboratory samples will be kept refrigerated until examination, which is carried out within 48 hours following receipt. Samples are analyzed according to the MSRV-branch method, which is according to point 3.4 of the Annex of 646/2007 and is based on the latest version of Annex D, ISO 6579(2002). Each positive sample has to be analyzed to a serotype.

However, by way of derogation from point monitoring through the operator the competent authority can decide to sample at least one flock of broilers per round on holdings with several flocks if:
(i) an all in/all out system is used;
(ii) the same management applies to all flocks;
(iii) feed and water supply is common to all flocks;
(iv) during one year and at least six rounds, Salmonella spp were tested according to the monitoring scheme set out as above in all flocks on the holding and samples of all flocks of at least one round were taken by the competent authority; and
(v) all results from the testing for Se or St were negative.

B. Official sampling
Official sampling will be done at 10% of the farms by GD. This official sampling will be risked based. Risk in this case is defined as farms with false negative results in sampling done by the operator of the broiler farm.
To define this risk group, results of monitoring by the operator of the broiler farm are compared with monitoring results at the slaughterhouse. In the slaughterhouse intestine samples for monitoring at Salmonella are taken (see paragraph 3.3). In case of different outcome, results of operator of the broiler farm are negative and results of slaughterhouse are positive tested for Salmonella, twice in a row a year, official sampling is performed at the operator of this broiler farm.
When this risk group does not reach 10% of the total amount of broilers farms in the Netherlands a random selection will take place to fill up the group until 10%. Official sampling replaces monitoring by the operator.

3.3 Measures to be taken in case of Salmonella positive findings at the poultry house

Measures to be taken in case of positive findings in broilers are:
a) swab check executed by a by the PPE acknowledged company in the poultry house after cleaning and disinfection;
b) in case of a positive swab result the poultry house has to be cleaned and disinfected by a professional company after the next round;
c) tracing survey under supervision of a veterinarian;
d) in case of a Salmonella Java infection the farmer has to take some extra measures compared with an infection of another serotype. Especially when there are two or three Salmonella Java infections in a row. These extra measures are cleaning of the feeding system, keeping the poultry house empty for at least 10 days and take extra samples to monitor Salmonella.

3.4 Monitoring in slaughterhouse

When broilers enter the slaughterhouse they are monitored at Salmonella as well. From each flock 30 faecal samples of the small intestine are taken. Before the carcass leaves the slaughterhouse samples form each batch are taken from the skin (25 grams). At the cutting plant each day a sample is taken from filet, drumstick or wing, which is analysed at Salmonella as well. Each positive sample has to be analysed to a serotype.

3.5 Measures to be taken in case of Salmonella positive findings at the slaughterhouse

In case a flock of positive broilers arrive at the slaughterhouse, they have to be slaughtered logistic. This prevents Salmonella transmission between flocks in the slaughterhouse. When a slaughterhouse reach more than 10 percent of Salmonella positive batches based on the skin samples in a period of three months, they have to compose an improvement plan.

3.6 Other bio-security regulations

Besides Salmonella monitoring and measurements in case of a positive sample other bio-security regulations are part of the "Action Plan Salmonella and Campylobacter in the Poultry meat sector 2000+".

The measurements (in short) are:

5. Hygiene management at farms:
    a. No pets, stock of (other) poultry is allowed in the broiler house;
    b. If pets, stock or (other) poultry is on the location of the broiler farm special hygiene measurements are required (like separate care);
    c. No wild birds can enter the broiler house;
    d. Visitors are only allowed to enter the broiler house when this is necessary and under strict hygiene measurements (including special clothing);
    e. Every farm has a rodent control program or charter an acknowledged rodent control company (at least every 2 months);
    f. Once a year bacteriological research and in case of a natural source of water also chemical research of drinking water for poultry;
    g. Every farm has a clear boundary and it is visible for visitors where they must announce themselves. The broiler houses are locked.
    h. The broiler house, the broiler farm and its close environment is clean;
    i. Before entering the broiler house there is a hygiene barrier with clothing and shoes;
    j. The drive- and walking routes to the farm are paved and cleanable;
    k. The silo is placed on a paved underground, is easy to clean and refillable from outside the turkey house. When there are more silo's, every silo has a unique number;
    l. Feed and litter is in such a way stored that it stays clean, dry and mould free;
    m. Every broiler house must have a hand-washing facility.
6. Cleaning and disinfection;
    a. After removing the broilers the litter is removed and the broiler house is cleaned and disinfected;
    b. Once a year a hygiene check in the cleaned and disinfected empty broiler house is done by and by PPE acknowledged company.

Besides those measurements we have a specific Salmonella Java control programme.

4. Measures of the submitted programme

4.1 Summary of measures under the programme

Duration of the programme:
The program runs since 1997. Official sampling is a new part of the programme and will start at 1st January 2009. The rest of the programme is ongoing, at least up to 31 December 2011.

First year:

- ☐ Control:
  - ☐ Testing
- ☐ Monitoring or surveillance
- ☐ Other measures:
  - ☐ Rodent control programme
  - ☐ Hygiene check
  - ☐ Bacteriological research water
  - ☐ Hygiene measurements
  - ☐ Salmonella Java control programme

Last year:

- ☐ Control:
  - ☐ Testing
- ☐ Monitoring or surveillance
- ☐ Other measures:
  - ☐ Rodent control programme
  - ☐ Hygiene check
  - ☐ Bacteriological research water
  - ☐ Hygiene measurements
  - ☐ Salmonella Java control programme

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

In the Netherlands the Product Board for Livestock, Meat and Eggs executes the implementation of the programme. The Ministry of Agriculture, Nature and Food Quality are coordinating this implementation. In Figure 8, all organizations involved are mentioned, including their relation to the programme.

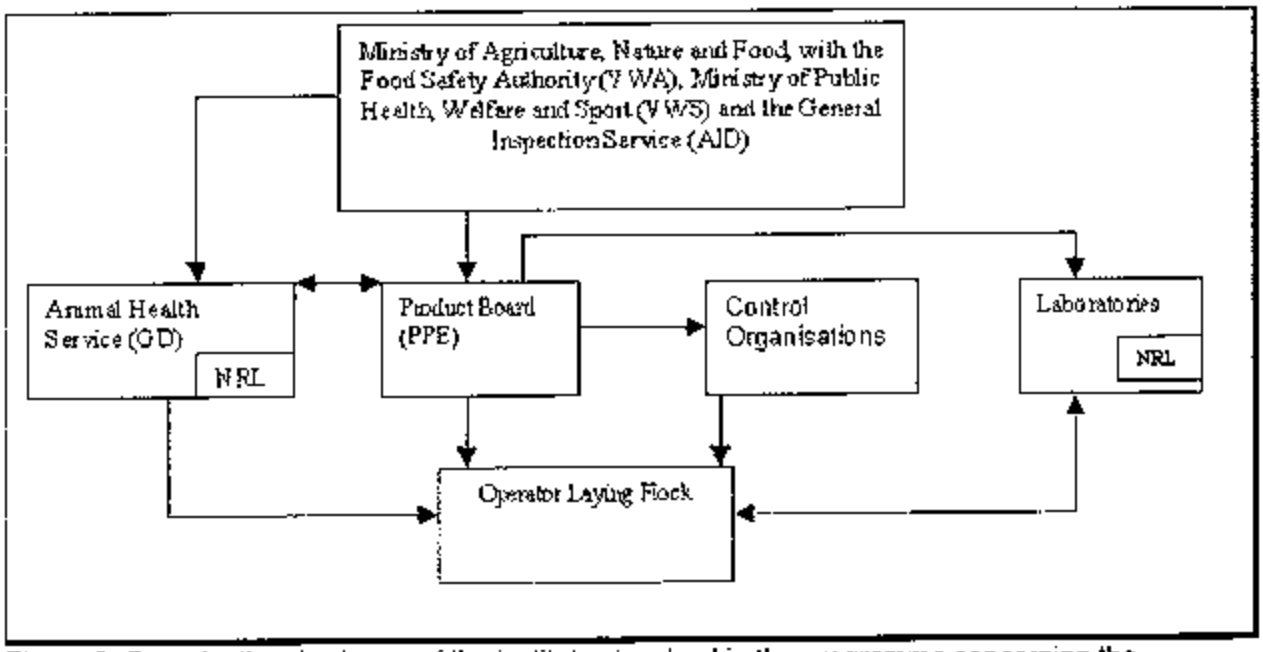


Figure 8: Organizational scheme of the institutes involved in the programme concerning the control of Salmonella in poultry

1. PPE
The Product Board for Poultry and Eggs (PPE) is a delegated authority. This is legally laid down in the following regulation by the Ministry of Agriculture, Nature and Food Quality: "Besluit bescherming tegen bepaalde zoönosen en bestrijding van besmettelijke dierziekten" and "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en

TSE's". The regulations concerning the Action Plans are formulated by the PPE and acknowledged by the ministry of Agriculture. The implementation of the programme is carried out by the PPE. The evaluation of the results is also the responsibility of the Product Board.

2. Animal Health Service (GD)
Concerning poultry, the main objective is to promote optimal health of poultry, particularly by preventing infectious diseases and the presence of microorganisms and residues that may be harmful to consumers. As a competent independent organization, GD occupies a central position in organized poultry health care. On the basis of (government) regulations or by government order, disease control programmes are realized. GD is acknowledged by the ministry of Agriculture, Nature and Food Quality to perform these tasks. GD will do official sampling.

3. VWA and AID
The Food and Consumers Product Safety Authority (VWA) checks if GD and other laboratories perform according to the agreed work process. Both the VWA and the General Inspection Service (AID) are able to prosecute in specific cases when measures were not followed correctly (e.g. by laboratory or farmer).

4. Control organizations
The control organizations audit the procedures in the Action Plan and the sampling done by the operators. These control organizations must be independent and are acknowledged by the PPE.

5. Laboratories
In total 21 (private) laboratories are acknowledged by the PPE to perform analysis to determine the Salmonella status of samples taken concerning the Action plans. This is legally laid down in the PPE directive "Besluit erkenningsvoorwaarden en werkwijzen laboratoria (PPE) 2007". Every acknowledged laboratory has to participate in the ring-survey for the determination and serotyping of Salmonella that is performed by the RIVM (NRL) every twelve months. Positive test results for the relevant Salmonella serotypes are reported to the PPE.
The authorization of the laboratories is delegated by the Ministry of Agriculture, Nature and Food Quality to the PPE. This is legally laid down in the following regulation by the Ministry of Agriculture, Nature and Food Quality: "Besluit bescherming tegen bepaalde zoönosen en bestrijding van besmettelijke dierziekten" and "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's" in Article 96, section 2, subsection b, point 8.

6. NRL (RIVM, National Institute of Public Health and Environment)
The RIVM is the national reference laboratory for Salmonella. RIVM falls under the Ministry of Public Health, Welfare and Sport, and also undertakes commissions from other ministries such as the Ministry for Agriculture, Nature and Food Quality.
The RIVM organizes regular bacteriological ring surveys among laboratories, including GD, participating in the Dutch national programme for control of Salmonella in the poultry sector. Results of these ring surveys are reported to the PPE.

Structure of the production of feed
Directives for the production of feed are laid down in the "Kaderwet Diervoeders" by the Ministry of Agriculture, Nature and Food Quality. The Product board for Feed (PDV) is a delegated authority and publishes specific regulations on the production of feed. The most important regulations for the poultry sector are the "Verordening Monitoring Zoönosen en Zoönoseverwekkers Diervoedersector 2005" and the "Besluit PDV Salmonella in de diervoedersector 2005". In the latter one the monitoring are presented in the Dutch annual zoönoses report.

Next to these regulations there is also a quality assurance programme for feed. This is called Good Manufacturing / Managing Practice system, in short the GMP-system. Combined with the HACCP principles this quality assurance system is called GMP+. Almost all feed producers for the poultry chain are GMP+ certified. All IKB certified poultry farmers are obligated to use GMP+

certified food. IKB is a voluntary Dutch Integral Chain Control programme. The GMP+ standards include control measures for base materials, rules for additives, sampling scheme for zoönoses, hygiene and process criteria and compulsory regularly controls by an independent control organization.

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

Geographical limitations: The Netherlands.

4.4 Measures implemented under the programme

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

All poultry farms and flocks are being registered by the PPE. Every farm receives a unique number. When a flock is being transferred from one farm to another the PPE must be informed. The number of animals and date of birth are registered. This is laid down in the directive 'Verordening productie van en handel in broedeieren en levend pluimvee (PPE)". All the information is stored in the "Koppel Informatiesysteem Pluimvee (KIP-system)". This so called KIP-system is also the base for the registration in according to the EC directive 852/2004.

When broilers are dispatched a so called Voedsel Keten Informatie (VKI) formulier (Food Chain Form) accompanies the transport. On this form details about the farm, vet, slaughterhouse and flocks is administrated. Also details about food, health (medicine) is given. The VKI form is according to directive EG 2074/2005.

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

Not applicable for poultry

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

Farmer has to notify the slaughterhouse about the result of faecal sampling. In case of positive finding slaughterhouse has to slaughter the flock at the end of the day (logistic slaughtering). Also every slaughterhouse has to sent every month an overview of results of Salmonella sampling (positive and negative) at the slaughterhouse, at the broiler flock and at the hatchery to PPE. This is laid down in directives of PPE.

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

The measures that have to be taken in case of a positive result are laid down in directives of the PPE. The Ministry of Agriculture, Nature and Food Quality and Ministry of Public Health, Welfare and Sport have to approve these directives. All measures are stated in Chapter 3. In the frame of the Salmonella control programme in broilers the provisions of paragraphs 1, 2 and 4 of the Annex of Commission Regulation (EC) No 646/2007 are implemented.

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

Not applicable for poultry.

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

When birds from infected flocks are slaughtered or destroyed, steps are taken to reduce the risk of spreading zoonoses as far as possible. Slaughtering will be carried out in accordance with Community legislation on food hygiene. If not destined for human consumption, such products must be used or disposed of in accordance with Regulation (EC) No 1774/2002.

4.4.7 Measures and applicable legislation as regards the control (testing, vaccination) of Salmonella

The tests that are performed in the Action Plan are:
PVE branch method for Salmonella analysis: this method includes the use of Modified Semi solid Rapport Vassiliadis agar (MSRV) as a selective enrichment medium. The semi solid medium should be incubated at 41.5 °C +/- 1 °C for 48 h. Alternative methods for detection will be permitted (for example Salmonella analysis by PCR), when the methods are approved as valid by the CRL. In case of a positive finding, serotyping is performed according to the Kaufmann-White scheme.

At least one isolated strain per house and per year shall be collected by the competent authority and stored for future phagetyping or anti-microbial susceptibility testing, using normal methods for culture collection, which must ensure integrity of the strains for minimum of two years.

Antimicrobials
The use of antimicrobials is prohibited except for circumstances laid down in 1177/2006/EC, Article 2.

Salmonella Vaccines
Vaccination against salmonella is not used in broilers in the Netherlands.

Financial contribution
The financial contribution for the farmer and the measures to be taken to receive the contribution will be specified in legislation of the PPE "Verordening Subsidieverlening terugdringing Salmonella in de pluimveesector". At the moment in this legislation there are no possibilities for financial contribution for broiler flocks.

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

Not applicable

4.4.9 Information and assessment on bio-security measures management and infrastructure in place in flocks / holdings involved

Besides the control programme for Salmonella, each flock will be checked once through a veterinarian, in accordance to the GVP-code (Good Veterinarian Practice). This is a Dutch quality code for veterinarian and ensures that the veterinarian has knowledge of poultry (turkeys).

Every holding is obligated to inform the slaughterhouse where the broilers are transferred, about the Salmonella status. This is laid down in the directive "Verordening Hygiënevoorschriften

Pluimveehouderij (PPE)". In according to 852/2004 and 853/2004 Guides for Good Practices are being developed for the poultry sector. In these guides HACCP principles and traceability measures are implemented. The guides for poultry farms are based on the quality system IKB. This quality assurance system for the whole poultry chain is developed in the Netherlands by the PPE. More then 95% of the poultry farms are certified for IKB. IKB standards include hygiene management at farms, measures to prevent incoming infections and the hygienic transportation of animals. (See paragraph 3.6)

5. General description of the costs and benefits

5.1. Human salmonellosis

The incidence of human salmonellosis from 1984 till 2009 in the Netherlands, is outlined in the graph below:

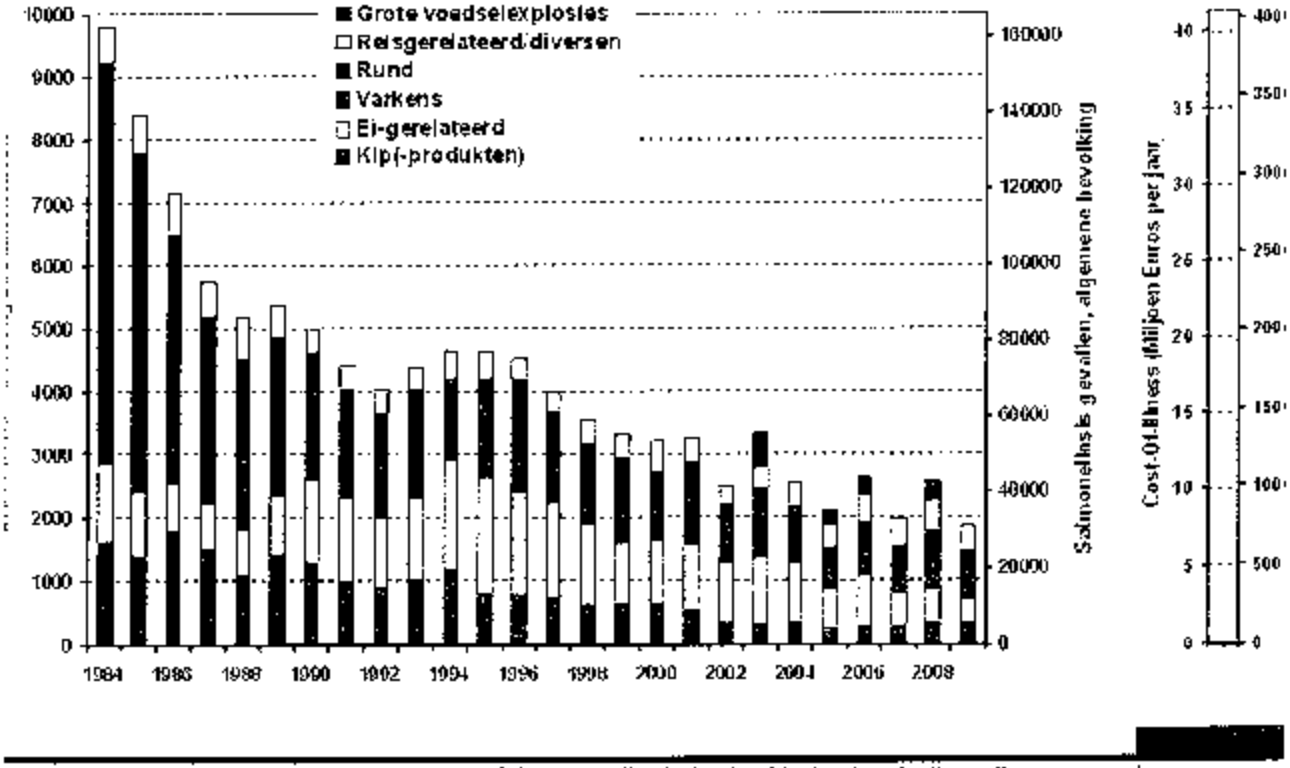


Figure 9: Occurrence of human cases of Salmonellosis in the Netherlands (in yellow: eggs, in green: poultrymeat)

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

6.1 Evolution of the disease

6.1.2. Data on evolution of zoonotic salmonellosis

Year: 2005 **Situation on date:** December 2005
Animal species: poultry **Disease/infection[a]:** Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[c]	Number of positive[e] flocks[a]			Number of flocks depopulated[a]		Total number of animals slaughtered or destroyed[a]		Quantity of eggs destroyed (number or kg)[a]		Quantity of eggs channelled to egg products (number or kg)[a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Broilers	7195	350,7 million	7195	350,7 million	7195	50	39	1184	0	0	0	0	N/A	N/A	N/A	N/A
Total		7195	350,7 million	7195	350,7 million	7195	50	39	1184	0	0	0	0	N/A	N/A	N/A	N/A

Year: 2006
Animal species: poultry

Situation on date: December 2006
Disease/infection[a]: Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[c]	Number of positive[c] flocks[d]			Number of flocks depopulated[e]		Total number of animals slaughtered or destroyed[a]		Quantity of eggs destroyed (number or kg)[a]		Quantity of eggs channelled to egg products (number or kg)[a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	broilers	6486	335,6 million	6486	335,6 million	6486	24	18	884	0	0	0	0	N/A	N/A	N/A	N/A
Total		6486	335,6 million	6486	335,6 million	6486	24	18	884	0	0	0	0	N/A	N/A	N/A	N/A

Year: 2007
Animal species: poultry

Situation on date: December 2007
Disease/infection[a]: Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[c]	Number of positive[c] flocks[d]			Number of flocks depopulated[e]		Total number of animals slaughtered or destroyed[a]		Quantity of eggs destroyed (number or kg)[a]		Quantity of eggs channelled to egg products (number or kg)[a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Broilers	6705	350,6 million	6705	350,6 million	6705	5	21	817	0	0	0	0	N/A	N/A	N/A	N/A
Total		6705	350,6 million	6705	350,6 million	6705	5	21	817	0	0	0	0	N/A	N/A	N/A	N/A

Year: 2008 **Situation on date:** December 2008
Animal species: poultry **Disease/infection[a]:** Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[c]	Number of positive[e] flocks[a]			Number of flocks depopulated[f]		Total number of animals slaughtered or destroyed[a]		Quantity of eggs destroyed (number or kg)[a]		Quantity of eggs channelled to egg products (number or kg)[a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Broilers	6530	356,7 million	6530	356,7 million	6530	1	6	821	0	0	0	0	N/A	N/A	N/A	N/A
Total		6530	356,7 million	6530	356,7 million	6530	1	6	821	0	0	0	0	N/A	N/A	N/A	N/A

Year: 2009 **Situation on date:** December 2009
Animal species: poultry **Disease/infection[a]:** Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[c]	Number of positive[e] flocks[a]			Number of flocks depopulated[f]		Total number of animals slaughtered or destroyed[a]		Quantity of eggs destroyed (number or kg)[a]		Quantity of eggs channelled to egg products (number or kg)[a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Broilers	7535	370,6 million	7535	370,6 million	7535	21	38	699	0	0	0	0	N/A	N/A	N/A	N/A
Total		7535	370,6 million	7535	370,6 million	7535	21	38	699	0	0	0	0	N/A	N/A	N/A	N/A

(a) For zoonotic Salmonellosis indicate the serotypes covered by the control programmes: (a1) for *Salmonella* Enteritidis, (a2) for *Salmonella* Typhimurium, (a3) for other serotypes-specify as appropriate, (a4) for *Salmonella* Enteritidis or *Salmonella* Typhimurium.
(a1) Region as defined in the approved control and eradication programme of the Member State.
(b) For example, breeding flocks (rearing, adult flocks), production flocks, laying hen flocks, breeding turkeys, broiler turkeys, breeding pigs, slaughter pigs, etc. Flocks or herds or as appropriate.
(c) Total number of flocks existing in the region including eligible flocks and non-eligible flocks for the programme.

(d) Check means to perform a flock level test under the programme for the presence of salmonella. In this column a flock must not be counted twice even if it has been checked more than once.

(e) If a flock has been checked, in accordance with footnote (d), more than once, a positive sample must be taken into account only once.

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 Animal species [a]: poultry Category[b]: broilers

Description of the used serological tests: N/A

Description of the used microbiological or virological tests: MSRV method in faeces

Description of the other used tests: N/A

Region[c]	Serological tests		Microbiological or virological tests		Other tests	
	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]
Netherlands	N/A	N/A	6705	843	N/A	N/A
Total	N/A	N/A	6705	843	N/A	N/A

Year: 2008 **Animal species [a]:** poultry **Category[b]:** broilers

Description of the used serological tests: N/A

Description of the used microbiological or virological tests: MSRV method in faeces

Description of the other used tests: N/A

Region[c]	Serological tests		Microbiological or virological tests		Other tests	
	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]
Netherlands	N/A	N/A	6530	828	N/A	N/A
Total	N/A	N/A	6530	828	N/A	N/A

Year: 2009 **Animal species [a]:** poultry **Category[b]:** broilers

Description of the used serological tests: N/A

Description of the used microbiological or virological tests: MSRV method in faeces

Description of the other used tests: N/A

Region[c]	Serological tests		Microbiological or virological tests		Other tests	
	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]
Netherlands	N/A	N/A	7535	758	N/A	N/A
Total	N/A	N/A	7535	758	N/A	N/A

(a) Animal species if necessary.
(b) Category/further specifications such as breeders, laying hens, broilers ,breeding turkeys, broiler turkeys, breeding pigs, slaughter pigs, etc, when appropriate.
(c) Region as defined in the approved control and eradication programme of the Member State.
(d) Number of samples tested.
(e) Number of positive samples.

6.3 Data on infection

Year: 2005 **Animal species[a]:** poultry (broilers)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	1273 (all serotypes)	NA
Total	1273 (all serotypes)	NA

Year: 2006 **Animal species[a]:** poultry (broilers)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	926 (all serotypes)	NA
Total	926 (all serotypes)	NA

Year: 2007 **Animal species[a]:** poultry (broilers)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	843 (all serotypes)	NA
Total	843 (all serotypes)	NA

Year: 2008 **Animal species[a]:** poultry (broilers)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	828 (all serotypes)	NA
Total	828 (all serotypes)	NA

Year: 2009 **Animal species[a]:** poultry (broilers)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	758 (all serotypes)	NA
Total	758 (all serotypes)	NA

(a) Animal species if necessary.
(b) Region as defined in the control and eradication programme of the Member State.
(c) Herds or flocks or holdings as appropriate.

NA: data not available

6.4 Date on vaccination programmes
Not applicable. There is no vaccination programme for broilers in the Netherlands.

7. Targets

7.1 Targets related to testing

7.1.1. Targets on diagnostic tests

Year: 2011 **Animal species:** [a] poultry (broilers)

Region[b]	Type of the test[c]	Target population[d]	Type of sample[e]	Objective[f]	Number of planned tests
Netherlands	MSRV	Broilers	faeces	monitoring	7535
Total					7535

(a) Species if necessary.
(b) Region as defined in the approved control and eradication programme of the Member State.
(c) Description of the test.
(d) Specification of the targeted species and the categories of targeted animals if necessary.
(e) Description of the sample (for instance faeces).
(f) Description of the objective (for instance surveillance, monitoring, , control of vaccination).

7.1.2 Targets on testing of flocks

Year: 2011 **Situation on date:** December 2009
Animal species: poultry **infection[a]:** Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Expected number of flocks to be checked[d]	Number of flocks[e] expected to be positive [a]			Number of flocks expected to be depopulated[a]		Total number of animals expected to be slaughtered or destroyed [a]		Expected quantity of eggs to be destroyed (number or kg) [a]		Expected quantity of eggs channelled to egg products (number or kg) [a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Broilers	7535	370,6 million	7535	370,6 million	7535	21	38	699	0	0	0	0	N/A	N/A	N/A	N/A
Total		7535	370,6 million	7535	370,6 million	7535	21	38	699	0	0	0	0	N/A	N/A	N/A	N/A

(a) For zoonotic salmonellosis indicate the serotypes covered by the control programmes: (a1) for *Salmonella* Enteritidis, (a2) for *Salmonella* Typhimurium, (a3) for other serotypes-specify as appropriate, (a4) for *Salmonella* Enteritidis or *Salmonella* Typhimurium.
(a1) Region as defined in the approved control and eradication programme of the Member State.
(b) For example, breeding flocks (rearing, adult flocks), production flocks, laying hen flocks, breeding turkeys,broiler turkeys, breeding pigs, slaughter pigs, etc. Flocks or herds or as appropriate.
(c) Total number of flocks existing in the region including eligible flocks and non-eligible flocks for the programme.
(d) Check means to perform a flock level test under the programme for the presence of salmonella. In this column a flock must not be counted twice even if it has been checked more than once.
(e) If a flock has been checked, in accordance with footnote (d), more than once, a positive sample must be taken into account only once.

7.2 Targets on vaccination

Not applicable. There is no vaccination programme for broilers in the Netherlands.

8. Detailed analyses of the cost of the programme for 2011

Costs related to	Specification	Number of units	Unitary cost in EUR	Total amount in EUR	Community funding requested (yes/no)
1. Testing					
1.1. Cost of the analysis	Test: Number of bacteriological tests (cultivation) planned to be carried out in the framework of official sampling	753	18,39	13.847	yes
	Test: Number of serotyping of relevant isolates tests planned to be carried out	100	33,80	3.380	yes
1.2. Cost of sampling		753	104	78.312	No
1.3. Other costs		NA	NA	NA	No
2. Vaccination or treatment of animal products					
2.1. Purchase of vaccine/treatment of animal products					
	Number of purchase of vaccine doses planned if a vaccination policy is part of the programme as set out explicitly under point 4 of Annex II	NA	NA	NA	No
2.2. Distribution costs		NA	NA	NA	No
2.3. Administering costs		NA	NA	NA	No
2.4. Control costs		NA	NA	NA	No
3. Slaughter and destruction					
3.1. Compensation of animals		NA	NA	NA	NA
3.2. Transport costs		NA	NA	NA	No
3.3. Destruction costs		NA	NA	NA	No
3.4. Loss in case of slaughtering		NA	NA	NA	No

3.5 Costs from treatment of animal products (milk, eggs, hatching eggs, etc)	Depreciation of poultrymeat from infected flocks (due to heattreatment).	1.222.032	0,50	611.016	yes
4. Cleaning and disinfection	Cleaning and disinfection of houses with infected flocks	39.180.587	0,033	1.292.940	yes
5. Salaries (staff contracted for the programme only)		NA	NA	NA	No
6. Consumables and specific equipment		NA	NA	NA	No
7. Other costs					
Biosecurity	Rodent control	670	500	335.000	yes
	Hygienecheck	670	115	77.050	yes
	Water analysis	670	40	26.800	yes
	Cleaning and disinfection of poultry house	370.648.354	0,033	12.231.396	yes
	Salmonella test after cleaning and desinfection	1175	18,39	21.617	yes
TOTAL				14.613.045	yes

TOTAL COSTS REQUESTED FOR REFUNDING IN 2011 FOR BROILER FLOCKS

1.1 Costs of official analysis	€	17.227
3.5 Costs of treatment of animal products	€	611.016
4. Cleaning and disinfection	€	1.292.940
7. Other costs	€	12.691.862
	Total €	**14.613.045**

The Netherlands confirm that all measures mentioned in Table 8 for which we ask for co-financing are fundable according to current national rules.

PROPOSED
VETERINARY CONTROL PROGRAMME
FOR
SALMONELLA IN LAYING HEN FLOCKS
PRESENTED FOR 2011*
BY
THE NETHERLANDS

*In accordance with Regulation 2160/2003 and 1168/2006

INDEX

PART A

A.a: Aim of the programme

The aim of the programme is to monitor and reduce the prevalence of Salmonella Enteritidis (Se) and Salmonella Typhimurium (St) in laying hen flocks of Gallus gallus. The target is to reduce the percentage of adult laying hen flocks infected with Salmonella Enteritidis (Se) and Salmonella Typhimurium (St) to 2% or less.

A.b: Animal population and phases of production which sampling covers

Laying flocks of Gallus gallus

- Rearing flocks (day-old chicks and pullets two weeks before moving to laying phase or unit);
- Laying flocks (every 15 weeks during the laying phase)

A.c: Evidence that programme complies requirements laid down in Part D of Annex II regulation (EC) No 2160 / 2003

Eggs originating from a SE/ST suspected or infected flock or from flocks with an unknown health status must be adequately marked. They must be destroyed or destined for the egg processing industry. They can only be used for human consumption if treated in a manner that guarantees the elimination of all salmonella serotypes with public health significance, in accordance with Community legislation (EU Regulation 1237/2007).

- Suspicion= positive result after first test
- Infection= positive result after verification test

A.d.1: General

A.d.1.1: Short summary referring to the occurrence of Salmonellosis

Regulation (EC) 2006/1186/EC was implemented on 1st February 2008. The results with regard to the occurence of Salmonella Enteritidis and Salmonella Typhimurium were:

- 2008: 61 SE/ST infected flocks out of 2346 (2,64%)
- 2009: 33 SE/ST infected flocks out of 2240 (1,47%)

A.d.1.2: Structure and organization of the relevant competent authorities

In the Netherlands the Product Board for Livestock, Meat and Eggs executes the implementation of the programme. The Ministry of Agriculture, Nature and Food Quality are coordinating this implementation. In Figure 1, all organizations involved are mentioned, including their relation to the programme.

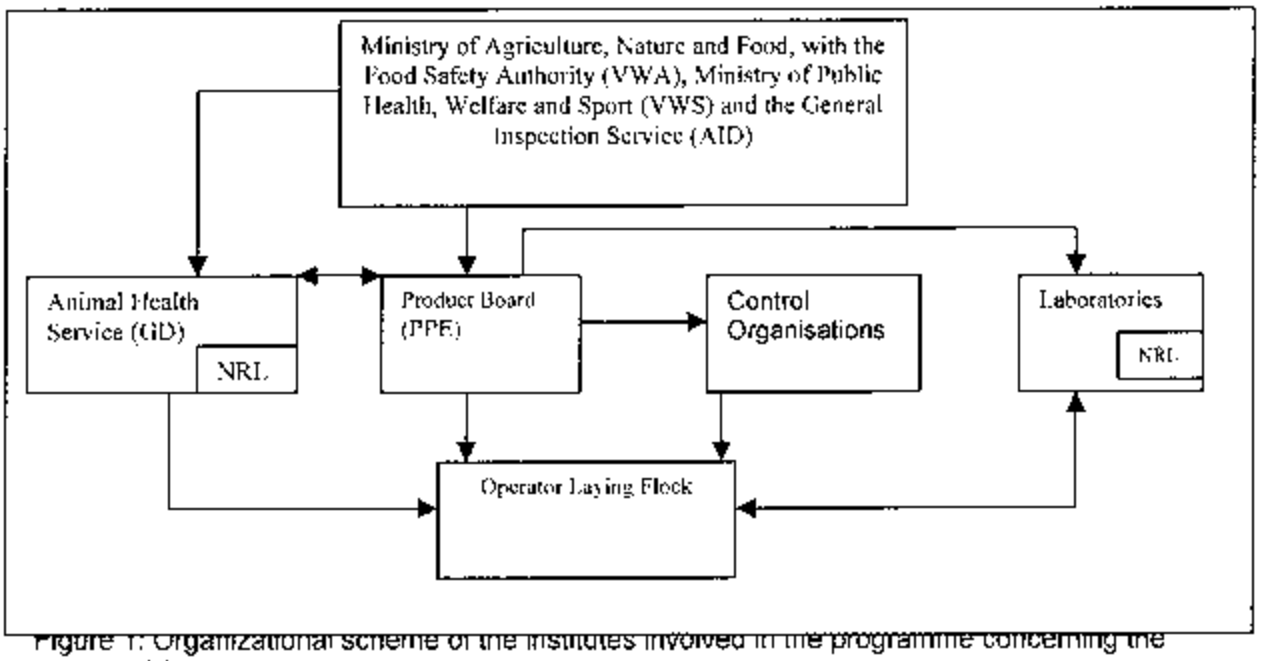


Figure 1: Organizational scheme of the institutes involved in the programme concerning the control of Salmonella in poultry

1. PPE

The Product Board for Poultry and Eggs (PPE) is a delegated authority. This is legally laid down in the following regulation by the Ministry of Agriculture, Nature and Food Quality: "Besluit bescherming tegen bepaalde zoönosen en bestrijding van besmettelijke dierziekten" and "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's". The regulations concerning the Action Plans are formulated by the PPE and acknowledged by the ministry of Agriculture. The implementation of the programme is carried out by the PPE. The evaluation of the results is also the responsibility of the Product Board.

2. Animal Health Service (GD)

Concerning poultry, the main objective is to promote optimal health of poultry, particularly by preventing infectious diseases and the presence of microorganisms and residues that may be harmful to consumers. As a competent independent organization, GD occupies a central position in organized poultry health care. On the basis of (government) regulations or by government order, disease control programmes are realized. GD is acknowledged by the ministry of Agriculture, Nature and Food Quality to perform these tasks. GD will do official sampling.

3. VWA and AID

The Food and Consumers Product Safety Authority (VWA) checks if GD and other laboratories perform according to the agreed work process. Both the VWA and the General Inspection Service (AID) are able to prosecute in specific cases when measures were not followed correctly (e.g. by laboratory or farmer).

4. Control organizations

The control organizations audit the procedures in the Action Plan and the sampling done by the operators. These control organizations must be independent and are acknowledged by the PPE.

5. Laboratories

In total 21 (private) laboratories are acknowledged by the PPE to perform analysis to determine the Salmonella status of samples taken concerning the Action plans. This is legally laid down in the PPE directive "Besluit erkenningsvoorwaarden en werkwijzen laboratoria (PPE) 2007". Every acknowledged laboratory has to participate in the ring-survey for the determination and

serotyping of Salmonella that is performed by the RIVM (NRL) every twelve months. Positive test results for the relevant Salmonella serotypes are reported to the PPE.
The authorization of the laboratories is delegated by the Ministry of Agriculture, Nature and Food Quality to the PPE. This is legally laid down in the following regulation by the Ministry of Agriculture, Nature and Food Quality: "Besluit bescherming tegen bepaalde zoönosen en bestrijding van besmettelijke dierziekten" and "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's" in Article 96, section 2, subsection b, point 8.

6. NRL (RIVM, National Institute of Public Health and Environment)
The RIVM is the national reference laboratory for Salmonella. RIVM falls under the Ministry of Public Health, Welfare and Sport, and also undertakes commissions from other ministries such as the Ministry for Agriculture, Nature and Food Quality.
The RIVM organizes regular bacteriological ring surveys among laboratories, including GD, participating in the Dutch national programme for control of Salmonella in the poultry sector. Results of these ring surveys are reported to the PPE.

A.d.1.3: Approved laboratories

Approved laboratories:
1. A.R.S.I.A.
2. Alex Stewart Bioconsult
3. Bacteriologisch Adviesbureau
4. C.C.L. – Nutricontrol
5. Demetris DierGezondheid BV
6. DGZ Vlaanderen – locatie Torhout
7. GD
8. Heijs Groep Pluimveeverwerkende Industrie (Lab Heijs/ de Vries)
9. K.B.B.L. Wijhe
10. Laboratorium Pro Health BV
11. Lavetan NV
12. Lebensmittel- und veterinärlabor GmbH
13. Lohmann Tierzucht
14. Masterlab BV
15. Opinion Test & Taste
16. Plukon Poultry BV
17. ROBA Laboratorium
18. SGS Laboratory Services
19. Silliker Netherlands BV
20. Storteboom Fresh BV Laboratorium
21. Veterinair Centrum Someren

A.d.1.4: Methods used in examination

The tests that are performed in the National Plan: PVE branch method for Salmonella analysis: this method includes the use of Modified Semi solid Rapport Vassiliadis agar (MSRV) as a selective enrichment medium. The semi solid medium should be incubated at 41.5 °C +/- 1 °C for 48 h. Alternative methods for detection will be permitted (for example Salmonella analysis by PCR), when the methods are approved as valid by the CRL.
In case of a positive finding, serotyping is performed according to the Kaufmann-White scheme.

A.d.1.5: Official controls at feed and flock level

Every year an official sampling is being done at the holdings, which shall replace on that occasion the corresponding sampling at the initiative of the operator. Official sampling is being done:

a) In one flock per year per holding comprising at least 1.000 birds;
b) At the age of 24 +/- 2 weeks in laying flocks housed in buildings where Salmonella was detected in the preceding flock;
c) In any case of suspicion of SE or ST infection, as a result of the epidemiological investigation of food-borne outbreaks in accordance with Article 8 of Directive 2003/99/EC of the European Parliament and of the Council.
d) In all other laying flocks on the holding in case SE or ST are detected in one laying flock on the holding;
e) In cases where the competent authority considers it appropriate.
f) When a positive sample is found, a verification test will take place at the holding.

In the case of sampling by the competent authority, 250 ml containing at least 100 gram of dust shall be collected from prolific sources of dust throughout the house. If there is not sufficient dust, an additional sample of 150 grams naturally pooled faeces or an additional pair of boot swabs or sock shall be taken.

In the case of sampling referred to in point b, c or d mentioned above, the competent authority shall satisfy itself by conducting further tests as appropriate that the results of examinations for salmonella in birds are not affected by the use of antimicrobials in the flocks. Where the presence of SE and ST is not detected, but antimicrobials or bacterial growth inhibitory effect is, it shall be accounted for as an infected laying flock.

A.d.1.6: Measures taken by the competent authorities

Eggs originating from a SE/ST suspected or infected flock or from flocks with an unknown health status must be adequately marked. They must be destroyed or destined for the egg processing industry. They can only be used for human consumption if treated in a manner that guarantees the elimination of all salmonella serotypes with public health significance, in accordance with Community legislation (EU Regulation 1237/2007).
Preventive measures
In the Netherlands a large number of the parent flocks (egg production sector and broiler production sector) are vaccinated against Salmonella. Grandparent flocks are not vaccinated.

In the egg production sector Salmonella vaccines are used for parent flocks and layer flocks. An estimated 100% of the parent flocks and 95% of the layer flocks are vaccinated.

A.d.1.7: National legislation relevant to the implementation of the programme

The implementation of the programme is laid down in the PPE Directive 'Verordening Hygiënevoorschriften Pluimveehouderij (PPE) 2007'.

A.d.1.8: Financial assistance provided to food and feed business

There is financial assistance for the purchase of vaccine doses and for compensation of culled laying hen flocks. This assistance is in accordance with the relevant EU legislation (e.g. Decision (EC) No 470/2009). This financial assistance and the contribution from the Community is approved every year by the Commission when approving the programmes of the member states. The value and compensation of the birds culled is defined on a central level by the Dutch government institute for agricultural economics (LEI). This information is publicly available

A.d.2: Food and feed businesses covered by the programme

A.d.2.1: Structure of the production of eggs

1. Rearing grant parent stock: 15 flocks in 2009
2. Grant parent stock: 18 flocks in 2009
3. Rearing parent stock: 59 flocks in 2009
4. Parent stock: 59 flocks in 2009
5. Rearing layers: 1235 flocks in 2009
6. Layers: 2240 flocks in 2009

A.d.2.2: Structure of the production of feed

Directives for the production of feed are laid down in the "Kaderwet Diervoeders" by the Ministry of Agriculture, Nature and Food Quality. The Product board for Feed (PDV) is a delegated authority and publishes specific regulations on the production of feed. The most important regulations for the poultry sector are the "Verordening Monitoring Zoönosen en Zoönoseverwekkers Diervoedersector 2005" and the "Besluit PDV Salmonella in de diervoedersector 2005". In the latter one the monitoring are presented in the Dutch annual zoönoses report.

Next to these regulations there is also a quality assurance program for feed. This is called Good Manufacturing / Managing Practice system, in short the GMP-system. Combined with the HACCP principles this quality assurance system is called GMP+. Almost all feed producers for the poultry chain are GMP+ certified. All IKB certified poultry farmers are obligated to use GMP+ certified food. IKB is a voluntary Dutch Integral Chain Control program. The GMP+ standards include control measures for base materials, rules for additives, sampling scheme for zoönoses, hygiene and process criteria and compulsory regularly controls by an independent control organization.

A.d.2.3: Relevant guidelines

Hygiene management at farms, measures to prevent incoming infections carried by animals, feed, drinking water, people working at farms and hygiene transporting animals to and from farms.

1. Hygiene management at farms:
    a) No pets, stock of (other) poultry is allowed in the broiler house;
    b) If pets, stock or (other) poultry is on the location of the broiler farm special hygiene measurements are required (like separate care);
    c) No wild birds can enter the broiler house;
    d) Visitors are only altowed to enter the broiler house when this is necessary and under strict hygiene measurements (including special clothing);
    e) Every farm has a rodent control program or charter an acknowledged rodent control company (at least every 2 months);
    f) Once a year bacteriological research and in case of a natural source of water also chemical research of drinking water for poultry;
    g) Every farm has a clear boundary and it is visible for visitors where they must announce themselves. The poultry houses are locked.
    h) The broiler house, the poultry farm and its close environment is clean;
    i) Before entering the poultry house there is a hygiene barrier with clothing and shoes;
    j) The drive- and walking routes to the farm are paved and cleanable;
    k) The silo is placed on a paved underground, is easy to clean and refillable from outside the poultry house. When there are more silo's, every silo has a unique number;
    l) Feed and litter is in such a way stored that it stays clean, dry and mould free;
    m) Every poultry house must have a hand-washing facility.
2. Cleaning and disinfection;
    a) After removing the birds, the litter is removed and the poultry house is cleaned and disinfected;

b) Every two rounds a hygiene check in the cleaned and disinfected empty poultry house is done by and by PPE acknowledged company.

A.d.2.4: Routine veterinary supervision of farms

Every farm is inspected at least once a year by a qualified veterinarian on behalf of the Competent Authority to enforce national legislation (e.g. legislation based on EU Directive 90/593/EC). This visit is not considered as official sampling in the frame of the Salmonella control programme. The official sampling therefore is in addition to the routine veterinary visit.

A.d.2.5: Registration of farms

All poultry farms and flocks (with more than 250 birds) are being registered by the PPE. Every farm receives a unique number. When a flock is being transferred from one farm to another the PPE must be informed. This is laid down in the directive 'Verordening productie van en handel in broedeieren en levend pluimvee (PPE)". All the information is stored in the "Koppel Informatiesysteem Pluimvee (KIP-system)". This so called KIP-system is also the base for the registration in according to the EU Regulation 852/2004.

A.d.2.6: Record-keeping at farms

- Farm of origin of the animals
- Number of animals
- Date of birth
- Deathrate
- Number of produced eggs
- Results of NCD. AI monitoring
- Salmonella measurements including results
- Information about communication of Salmonella results to PPE, GD and packingstations

A.d.2.7: Documents to accompany animals when dispatched

When animals are dispatched the are accompanied by a special document, called 'P-formulier'. For dispatch to the slaughterhouse a document called 'VKI – Voedsel Keten Informatie' (Food Chain Information) is demanded. On this document information like Salmonella status and use of medicine is registered. Operators wishing to export more than 20 birds or hatching eggs to another EU member state (or certain third countries) must comply with EU Directive 90/539/EC and ensure that the consignment is accompanied by a completed and signed Intra-trade Animal Health Certificate (ITAHC) for poultry breeding and production.
The ITAHC will also require the reference number of the operator's poultry health certificate.
The ITAHC will be amended to include the results of the last test for *Salmonella* as required in Commission Regulation (EC) 2160/2003 Article 9.1 prior to any dispatching of the live animals, or hatching eggs, from the food business of origin. The date and the result of testing shall be included in the relevant health certificates provided for in Community legislation.This certificate must be completed and signed by the Official Veterinarian as well as the operator to confirm compliance with the relevant articles of Directive.

A.d.2.8: Other relevant measures to ensure traceability of animals

The TRACES system is managed by the Dutch Food Safety Authority (VWA). An export can only be approved in TRACES if the official veterinarian has given his approval.

PART B

1. Identification of the Programme

Member state:	The Netherlands
Disease:	Infection of laying hen flocks with zoonotic Salmonella spp
Year of implementation:	1-2-2008 until 31-12-2011
Reference of this document:	Final version
Geographical Area:	The Netherlands
Contact:	J.N. (Hans) Schouwenburg Product Board for Poultry and Eggs, PPE Phone: 0031(0)79 368 7937 Fax: 0031(0)79 363 4345 E-mail: hschouwenburg@pve.nl

Date sent to the Commission: 30-04-2010

2. Historical data on the epidemiological evolution of zoonotic Salmonellosis

The Netherlands has two programmes to control the prevalence of Salmonella, one for egg production chain and one for the broiler production chain. In this Chapter these two programmes are mentioned together with the infection percentages in the egg production chain and the broiler production chain.

2.1Egg production

In November 1997 a programme to control the prevalence of Salmonella in laying hens was started. The objective of the programme (called "Plan of Approach prevention and control of Salmonella in the egg industry 1999") was to reduce the Salmonella Enteritidis (SE) and Salmonella Typhimurium (ST) prevalence in flocks of laying hens to 5 percent or less by November 2000. This programme involved strict hygiene rules and the monitoring of Salmonella infections throughout the egg production chain. Because this objective was not reached a new programme was introduced in the beginning of 2001. The target of this programme, called "Action Plan Salmonella in egg production 2001+" was to strive for a 0+ percent of contaminated eggs. In this stricter approach the eggs of contaminated flocks of laying hens are delivered to the egg product industry, for a special allowed treatment. The actions involved in both programmes were obligatory, pursuant to the legislation of the PPE.

Until January 2008 the incidence of SE / ST infections in Dutch flocks of laying hens was monitored by taking a blood sample of at least 0.5 percent (with a minimum of 24 and a maximum of 60 animals) of every flock 9 weeks before removal at the end of the production period. The test results were analysed by the Animal Health Service and reported to the PPE. Figure 1 and Table 1 show the percentage of SE / ST infected layer hen flocks in the period from November 1997 until December 2007.

From the 1st of February 2008 the monitoring has changed to bacteriological analysis of faecal samples taken every 15 weeks in accordance with EU Regulation 1168/2006.

Over the period from February 1999 to December 2000 11,4 percent of the examined layer flocks tested SE / ST positive. After the introduction of the stricter programme "Action Plan Salmonella in egg production 2001+" the SE/ST-infection percentage, based on serological results, of layers decreased towards 5.8 in 2007. This might partly be due to the increased use of vaccines against SE of the layers.
For the Netherlands a SE/ST-infection percentage, based on bacteriological results, of 7.8 was determined through a European study "Analysis of the baseline study on the prevalence of Salmonella in laying hen flocks of Gallus gallus". This percentage is the starting-point for this programme "Veterinary control programme for salmonella in laying flocks". The above-mentioned differences in infection percentage are mainly due to differences in monitoring.

Table 2 shows the results of the bacteriological tests in layer flocks according to the EU-regulation 1168/2006 performed from 2008 onwards. They are in accordance with the community-target set for the Netherlands. In 2009 the percentage of SE/ST infected layer flocks was even below the end target of the community of 2%.

Table 1: SE and ST infections in layers, based on serological results 1997 – 2007 (source PPE)

Year	Number of flocks	SE infected	% SE infected	ST infected	% ST infected
1997*	258	35	13,6	2	0,8
1998	1631	181	11,1	6	0,4
1999	1705	181	10,6	3	0,2
2000	2010	229	11,4	6	0,3
2001	1978	177	8,9	4	0,2
2002	1873	165	8,8	7	0,4
2003	864	59	6,8	3	0,3
2004	1500	101	6,7	3	0,2
2005	1952	64	3,3	3	0,2
2006	1878	85	4,5	6	0,3
2007	1870	109	5,8	0	0

*Start of programme November 1997

Table 2: SE and ST infections in layers, based on bacteriological results 2008 – 2009 (source PPE)

Year	Number of flocks	SE infected	% SE infected	ST Infected	% ST infected
2008	2346	61	2,60	1	0,04
2009	2240	29	1,29	4	0,18

2.2 Broiler Production

In May 1997 a programme to control the prevalence of Salmonella in poultry was started. The programme (called: "Plan of Approach Salmonella and Campylobacter in the Poultry meat sector 1997") that was designed, involved strict hygiene rules and the monitoring of Salmonella infections throughout the broiler production chain. The plan was introduced with the aim to decrease the number of Salmonella infections (in slaughtered broilers) to less then 10 % by the year 2000. The actions involved in the Plan were obligatory, pursuant to the legislation of the PPE.

The effects of the programme were evaluated in January 2000. The monitoring results showed a reduction of the percentage of Salmonella infected broilers after slaughter. In the fourth quarter of 1999 16 % of the slaughtered broilers were infected with Salmonella which meant that the initial aim was not achieved. This result led to the formulation of a stricter programme (called: "Action Plan Salmonella and Campylobacter in the Poultry meat sector 2000*"). In this programme the Dutch industry aims for an elimination of all Salmonella serotypes in poultry meat. This means that this target is beyond that of the Zoonoses Regulation EU 2160/2003, since this directive only aims on serotypes with public health significance. Again, the actions involved are obligatory.

One of the objects of the current programme is to monitor the prevalence of Salmonella infections in all links of the production chain. In Figure 3 the monitoring results are presented from the 1st quarter of 2000 until the 4th quarter of 2009. The monitoring data per year are presented in Table 2. In this figure:

Status:	Is the Salmonella status of the hatching eggs as they are delivered to the hatcheries.
Fluff:	Is the percentage of Salmonella positive fluff-samples taken from the hatcheries at the end of the hatching process.
Box paper:	Is the percentage of Salmonella positive samples taken from day-old chicken box paper at the broiler farms.
S-faeces:	Is the percentage of Salmonella positive faecal samples taken at the broiler farms.
S-intestine:	is the percentage of Salmonella positive intestine samples taken at the slaughterhouse.

Figure 1 shows the serotypes of Salmonella that have been found in the infected flocks (faecal sampling) in the 4th quarter 2009. Figure 2 and Table 3 show the infection percentage in the slaughterhouse. Finally Figure 3 shows the serotyping of end products infected with Salmonella in the 4th quarter of 2009.

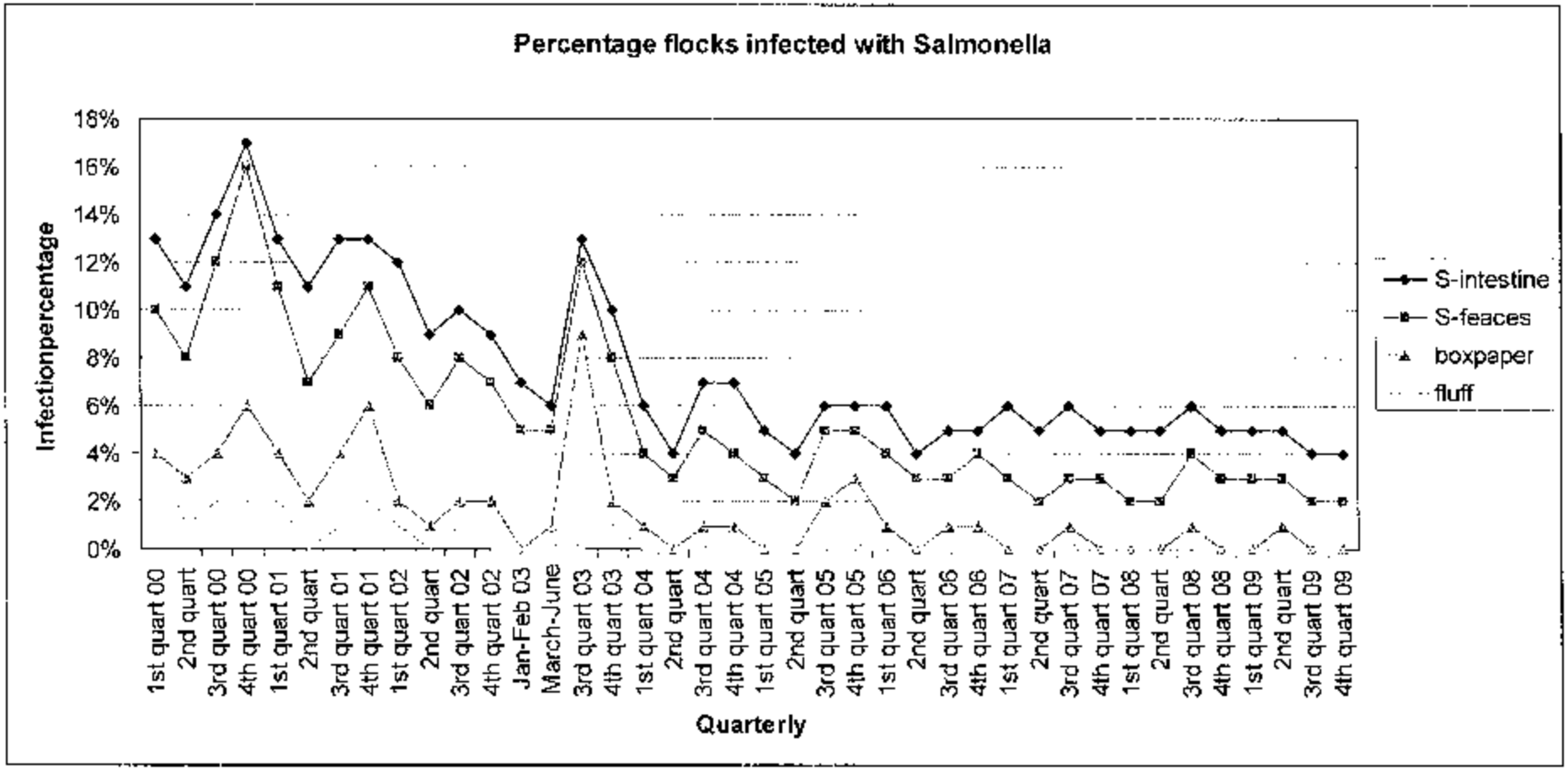


Figure 1: Percentages of Salmonella spp. positive samples taken from different links of the production chain per quarter (PPE, 2010).

Table 3: Percentages of Salmonella spp. positive samples taken from different links of the production chain per quarter (PPE, 2010).

Quart	S-Intestine	S-faeces	Boxpaper	Fluff
4th quart 2009	4%	2%	0%	0%
3rd quart 2009	4%	2%	0%	0%
2nd quart 2009	5%	3%	1%	0%
1st quart 2009	5%	3%	0%	0%
4th quart 2008	5%	3%	0%	0%
3rd quart 2008	6%	4%	1%	0%
2nd quart 2008	5%	2%	0%	0%
1st quart 2008	5%	2%	0%	0%
4th quarter 2007	5%	3%	0%	0%
3th quarter 2007	6%	3%	1%	0%
2nd quarter 2007	5%	2%	0%	0%
1st quarter 2007	6%	3%	0%	0%
4th quarter 2006	5%	4%	1%	0%
3th quarter 2006	5%	3%	1%	0%
2nd quarter 2006	4%	3%	0%	0%
1st quarter 2006	6%	4%	1%	0%
4th quarter 2005	6%	5%	3%	0%
3th quarter 2005	6%	5%	2%	0%
2nd quarter 2005	4%	2%	0%	0%
1st quarter 2005	5%	3%	0%	0%
4th quarter 2004	7%	4%	1%	0%
3th quarter 2004	7%	5%	1%	0%
2nd quarter 2004	4%	3%	0%	0%
1st quarter 2004	6%	4%	1%	0%
4th quarter 2003	10%	8%	2%	1%
3th quarter 2003	13%	12%	9%	0%
March till June 2003*	6%	5%	1%	0%
January & February 2003	7%	5%	0%	0%
4th quarter 2002	9%	7%	2%	0%
3th quarter 2002	10%	8%	2%	1%
2nd quarter 2002	9%	6%	1%	0%
1st quarter 2002	12%	8%	2%	1%

* In this period Avian Influenza problems were overruling the monitoring of Salmonella

The figure below shows the serotypes that have been found in the infected flocks (faecal sampling) in 2009.

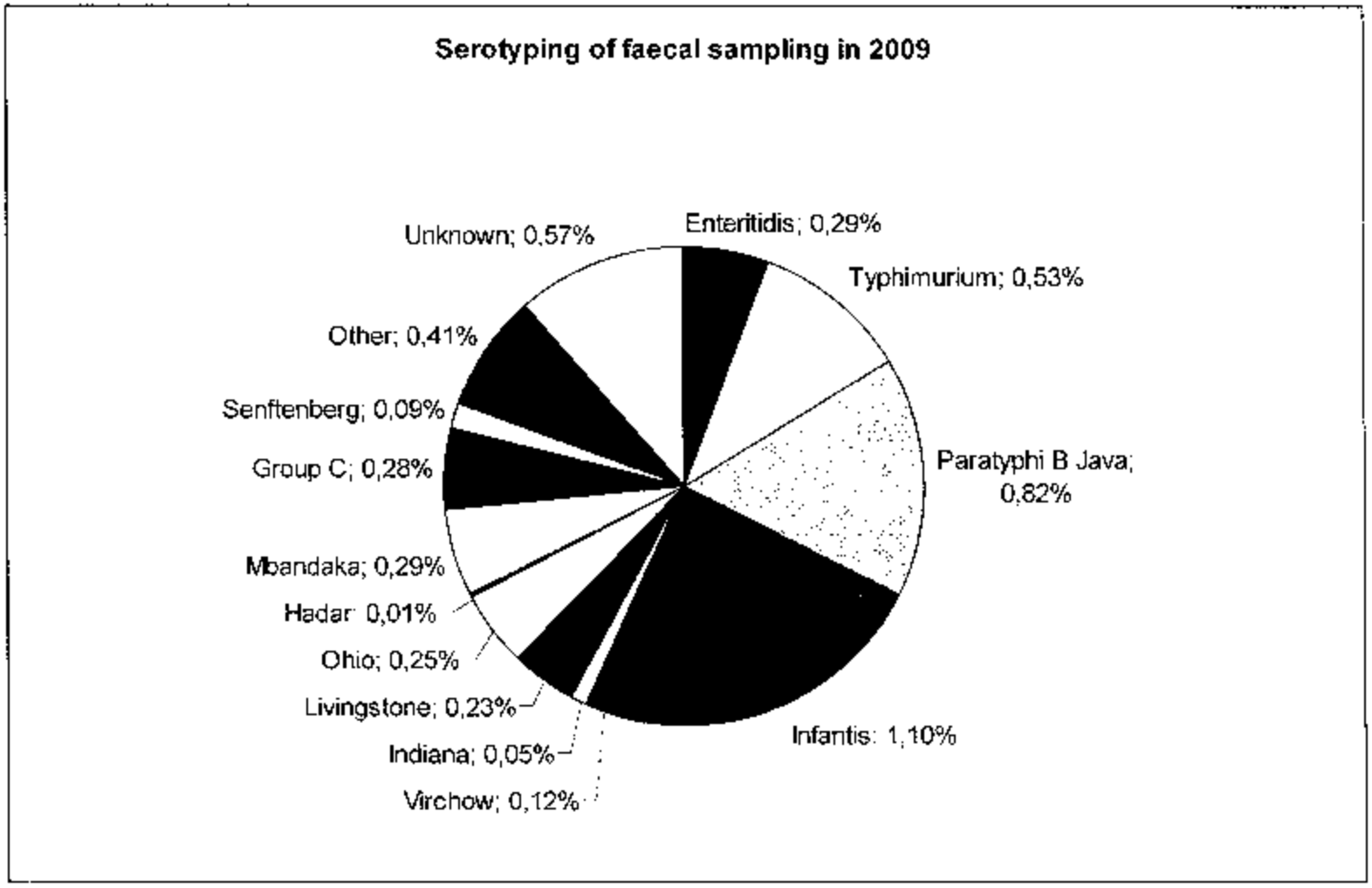


Figure 2: Serotyping of faecal sampling Salmonella in 2009 (PVE 2010)

The figure below shows the serotypes that have been found in the infected flocks (endproduct) in 2009.

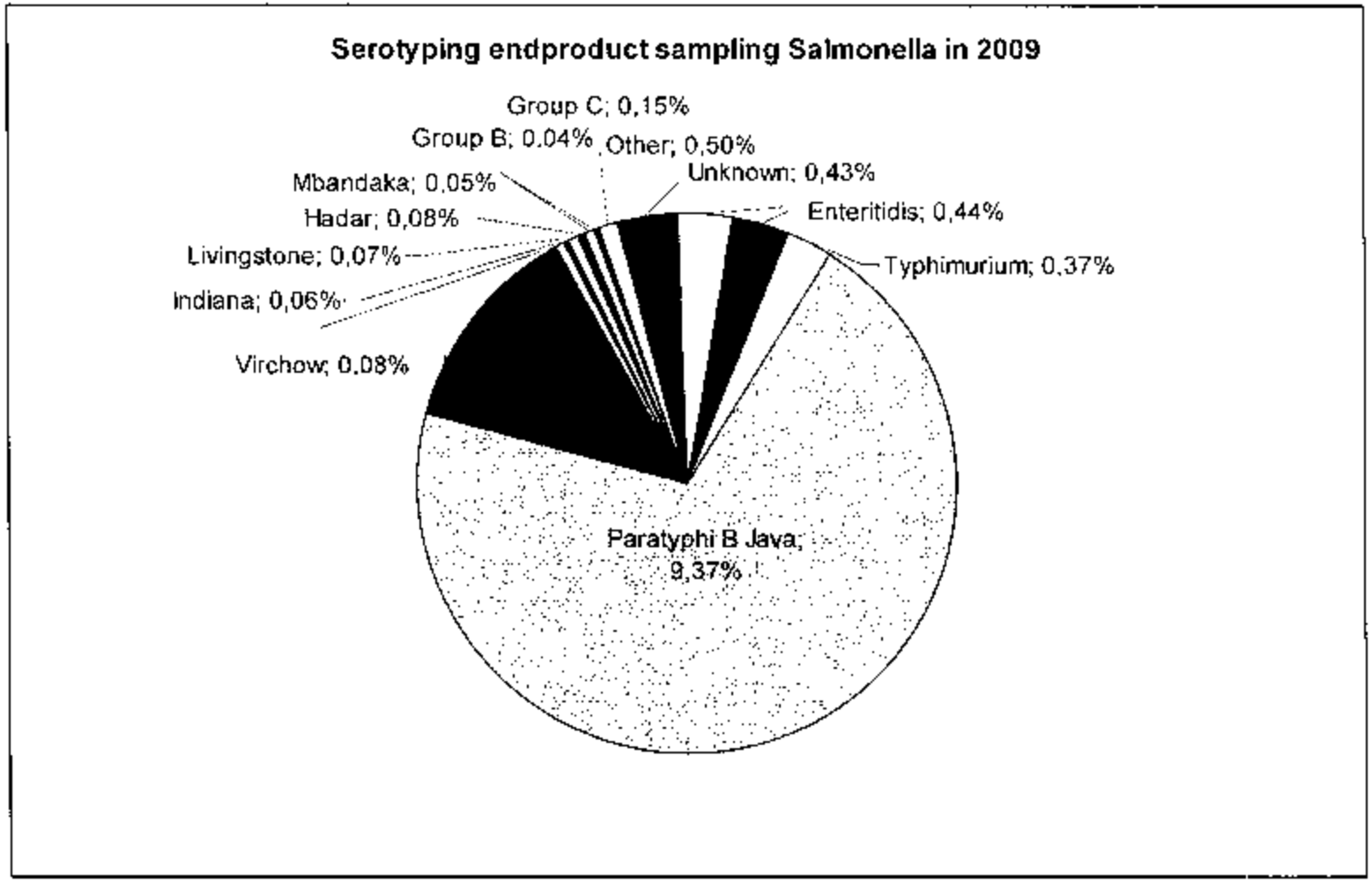


Figure 3: Serotyping of end product Salmonella in 2009 (PVE 2010)

3. Description of the submitted programme

3.1 Target Veterinary Control Programme for laying hen flocks.

The target for the reduction of SE and ST in laying hen flocks of Gallus gallus is a reduction of the maximum percentage of infected flocks with 10 percent each year or a reduction of the maximum percentage to 2 percent or less. In accordance with EU Regulation 1168/2006 the scope of this programme is limited to laying hen flocks. Starting-point is an infection percentage of 7.8 in 2006.

3.2 Monitoring of the Veterinary Control Programme

Monitoring is in accordance with EU Regulations 2160/2003 and 1168/2006.
In Table 3 a short overview of the monitoring programme in rearing layers and laying hens is given. In paragraph 3.2.1 and 3.2.2 the monitoring programme is explained in more detail .

Table 4: Monitoring in rearing layers and laying hen flocks

Part of the production chain	Monitoring
Rearing layers	Max. 14 days before transfer: blood samples (0,5% of the animals in a flock with a min. of 24 and a max. of 60 samples) or samples of faecal material.
Laying hens	Every 15 weeks (as of the age of 24 weeks +/- 2 weeks): samples of faecal material.

3.1.1 Laying flocks

A. Monitoring through the operator
Monitoring in laying hen flocks is being done each 15 weeks as of the age of 24 weeks +/- 2 weeks. The monitoring takes place at the holding. The operator managing the laying hen flock is responsible for the monitoring. When a SE/ST positive sample is found, a verification test will take place at the holding. The verification test is carried out by the Animal Health Service (GD) and guarantees quality and independency. If verification is negative, the flock is not considered to be infected with Salmonella.
During monitoring samples are taken from faecal material, according to the following protocol:

a) In cage flocks, 2 x 150 grams of naturally pooled faeces shall be taken from all belts or scrapers in the house after running the manure removal system; however, in the case of step cage houses without scrapers or belts 2 x 150 grams of mixed fresh faeces must be collected from 60 different places beneath the cages in the dropping pits.
b) In barn or free-range houses, two pairs of boot swabs or socks are taken, without changing over boots between boot swabs.

B. Official sampling
Every year an official sampling is being done at the holdings, which shall replace on that occasion the corresponding sampling at the initiative of the operator. Official sampling is being done:

a) In one flock per year per holding comprising at least 1.000 birds;
b) At the age of 24 +/- 2 weeks in laying flocks housed in buildings where Salmonella was detected in the preceding flock;
c) In any case of suspicion of SE or ST infection, as a result of the epidemiological investigation of food-borne outbreaks in accordance with Article 8 of Directive 2003/99/EC of the European Parliament and of the Council.
d) In all other laying flocks on the holding in case SE or ST are detected in one laying flock on the holding;
e) In cases where the competent authority considers it appropriate.

When a positive sample is found, a verification test will take place at the holding.

In the case of sampling by the competent authority, 250 ml containing at least 100 gram of dust shall be collected from prolific sources of dust throughout the house. If there is not sufficient dust, an additional sample of 150 grams naturally pooled faeces or an additional pair of boot swabs or sock shall be taken.

In the case of sampling referred to in point b, c or d mentioned above, the competent authority shall satisfy itself by conducting further tests as appropriate that the results of examinations for salmonella in birds are not affected by the use of antimicrobials in the flocks. Where the presence of SE and ST is not detected, but antimicrobials or bacterial growth inhibitory effect is, it shall be accounted for as an infected laying flock.

3.1.2 Rearing layers

Day-old chicks are monitored in the hatchery according to PPE directive "Hygiënebesluit kuikenbroederijen legsector". To monitor the incidence of SE / ST infections in Dutch pullets a blood sample of at least 0.5 percent (with a minimum of 24 and a maximum of 60 animals) of every flock is taken maximum 14 days before moving to laying phase or laying unit. As an alternative to the blood sample, sampling with two pairs of boot swabs (as prescribed for layers) is possible. The test results are analysed by Animal Health Service and reported to the PPE. When a SE/ST positive sample is found, GD will carry out a verification test at the holding.

3.2 Measures to be taken in case of Salmonella positive findings

3.2.1 Laying hens

Measures to be taken in case of SE / ST positive findings in laying hen flocks are: verification in case of suspicion. After verification with a positive result:

a) after professional cleaning and disinfection a swab test of the poultry house must be done, executed by a by the PPE acknowledged company;
b) vaccination of all new flocks placed in the holding, until all flocks in the holding are vaccinated.

Eggs originating from a SE/ST suspected or infected flock or from flocks with an unknown health status must be adequately marked. They must be destroyed or channelled to the egg processing industry. They can only be used for human consumption if treated in a manner that guarantees the elimination of all salmonella serotypes with public health significance, in accordance with Community legislation (EU Regulation 1237/2007).

Suspicion= positive result after first test
Infection= positive result after verification test
In case of a SE/ST-positive flock of up to 43 weeks of age, the flock can be eradicated
If a SE/ST-positive flock is not eradicated or over 43 weeks of age, then the flock will stay in the programme and will be monitored according to the programme (every 15 weeks).

3.2.2 Rearing layers

Measures to be taken in case of SE / ST positive findings in rearing layers:

a) verification in case of suspicion;
b) After verification with a positive result: the flock can be eradicated and additional measures will be taken according to PPE directive "Hygiënebesluit opfokleghennenbedrijven 2007".

3.3 Measures in Action Plan Salmonella in egg production 2001+

Components of current Action Plan Salmonella in egg production 2001+:
1. hygiene requirements;
2. cleaning and disinfection;
3. sampling;
4. exchange sampling results throughout the chain;
5. measures taken in case of Salmonella infection.

Additional hygiene requirements are laid down in a Quality Assurance Programme for the egg production sector (called IKB). Participation with this programme is voluntary. Almost 70% of the laying hen farmers do participate.

3.4 Additional measures if target Veterinary Control Programme is not met

If the target of the programme is not met after one year, compulsory vaccination of all laying hen flocks, as an additional measure will be considered.

4. MEASURES OF THE SUBMITTED PROGRAMME

4.1 Summary of measures under the programme

Duration of the programme:
The programme runs from 1 February 2008 until at least 31 December 2011. The Veterinary Control Programme is in accordance with the requirements laid down in EU Regulations 1260/2003, 1168/ 2006 and 1237/2007.

First year (2008):

- ☐ Control:
  - ☐ Testing
  - ☐ Killing of animals tested positive
  - ☐ Vaccination (voluntary)
  - ☐ Treatment of animal products
- ☐ Monitoring or surveillance
- ☐ Other measures:
  - ☐ Hygiene measurements
  - ☐ Cleaning and disinfection
  - ☐ Sampling
  - ☐ Exchange sampling results throughout the chain
  - ☐ Measures taken in case of Salmonella infections

Last year:

- ☐ Control:
  - ☐ Testing
  - ☐ Killing of animals tested positive
  - ☐ Vaccination (voluntary)
  - ☐ Treatment of animal products
- ☐ Monitoring or surveillance
- ☐ Other measures:
  - ☐ Hygiene measurements
  - ☐ Cleaning and disinfection
  - ☐ Sampling
  - ☐ Exchange sampling results throughout the chain
  - ☐ Measures taken in case of Salmonella infections

4.2 Designation of the central authority in charge of supervising and coordinating the departments responsible for implementing the programme

In the Netherlands the Product Board for Livestock, Meat and Eggs is responsible for the implementation of the programme. The Ministry of Agriculture, Nature and Food Quality is the central authority and supervising this implementation. In Figure 6, all organisations involved are mentioned, including their relation to the programme.

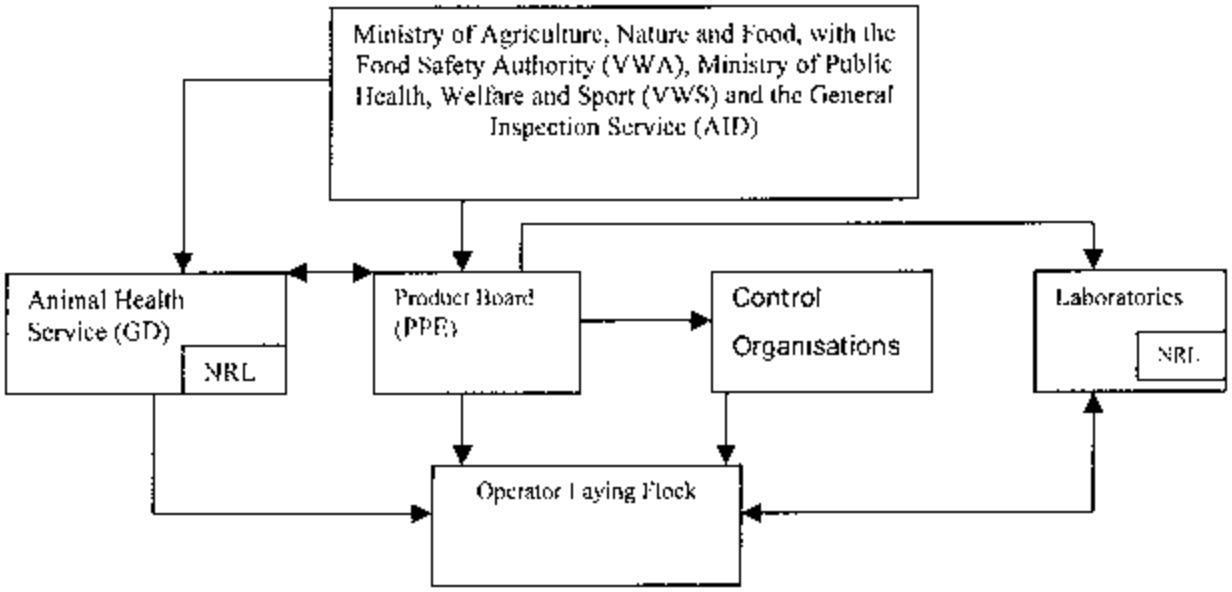


Figure 4: Organisational scheme of the institutes involved in the programme concerning the control of Salmonella in poultry

1. PPE

The Product Board for Poultry and Eggs (PPE) is a delegated authority. This is legally laid down in the following regulation by the Ministry of Agriculture, Nature and Food Quality: "Besluit bescherming tegen bepaalde zoönosen en bestrijding van besmettelijke dierziekten" and "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's". The regulations concerning the Action Plans are formulated by the PPE and acknowledged by the ministry of Agriculture. The implementation of the programme is carried out by the PPE. The evaluation of the results is also the responsibility of the Product Board. The relevant EU Regulations (2160/2003, 1168/2006 and 1237/2007) are implemented in the PPE-Directive "Verordening Hygiënevoorschriften Pluimveehouderij 2007".

2. Animal Health Service (GD)

Concerning poultry, the main objective is to promote optimal health of poultry, particularly by preventing infectious diseases and the presence of microorganisms and residues that may be harmful to consumers. As a competent independent organisation, GD occupies a central position in organised poultry health care. On the basis of (government) regulations or by government order, disease control programmes are realised. GD is acknowledged by the ministry of Agriculture, Nature and Food Quality to perform these tasks.

GD is responsible for the official sampling, analysis and verification of salmonella infections in the poultry laying flock populations. Positive test results for the relevant Salmonella serotypes are reported to the PPE.

3. VWA and AID

The Food and Consumers Product Safety Authority (VWA) checks if GD and other laboratories perform according to the agreed work process. Both the VWA and the General Inspection Service (AID) are able to prosecute in specific cases when measures were not followed correctly (e.g. by laboratory or farmer).

4. Control organisations

The control organisations audit the procedures in the Action Plan and the sampling done by the operators. These control organisations must be independent and are acknowledged by the PPE.

5. Laboratories

In total 21 (private) laboratories are acknowledged by the PPE to perform analysis to determine the Salmonella status of samples taken concerning the Action plans. This is legally laid down in the PPE directive "Besluit erkenning laboratoria". Every acknowledged laboratory has to participate in the ring-survey for the determination and serotyping of Salmonella that is performed by the RIVM (NRL) every twelve months. Positive test results for the relevant Salmonella serotypes are reported to the PPE. The authorization of the laboratories is delegated by the Ministry of Agriculture, Nature and Food Quality to the PPE. This is legally laid down in the following regulation by the Ministry of Agriculture, Nature and Food Quality: "Besluit bescherming tegen bepaalde zoönosen en bestrijding van besmettelijke dierziekten" and "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's" in Article 96, section 2, subsection b, point 8.

6. NRL (RIVM, National Institute of Public Health and Environment)
The RIVM is the national reference laboratory for Salmonella. RIVM falls under the Ministry of Public Health, Welfare and Sport (VWS), and also undertakes commissions from other ministries such as the Ministry for Agriculture, Nature and Food Quality.
The RIVM organises regular bacteriological ring surveys among laboratories, including GD, participating in the Dutch national programme for control of Salmonella in the poultry sector. Results of these ring surveys are reported to the PPE.

Structure of the production of feed
Directives for the production of feed are laid down in the "Kaderwet Diervoeders" by the Ministry of Agriculture, Nature and Food Quality. The Product board for Feed (PDV) is a delegated authority and publishes specific regulations on the production of feed. The most important regulations for the poultry sector are the "Verordening Monitoring Zoönosen en Zoönoseverwekkers Diervoedersector 2005" and the "Besluit PDV Salmonella in de diervoedersector 2005". In the latter one the monitoring are presented in the Dutch annual zoönoses report.

Next to these regulations there is also a quality assurance program for feed. This is called Good Manufacturing / Managing Practice system, in short the GMP-system. Combined with the HACCP principles this quality assurance system is called GMP+. Almost all feed producers for the poultry chain are GMP+ certified. All IKB certified poultry farmers are obligated to use GMP+ certified food. The GMP+ standards include control measures for base materials, rules for additives, sampling scheme for zoönoses, hygiene and process criteria and compulsory regularly controls by an independent control organisation.

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

Geographical limitations: The Netherlands.

4.4 Measures implemented under the programme

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

All poultry farms and flocks are being registered by the PPE. Every farm receives a unique number. When a flock is being transferred from one farm to another the PPE must be informed. This is laid down in the directive 'Verordening productie van en handel in broedeieren en levend pluimvee (PPE)". All the information is stored in the "Koppel Informatiesysteem Pluimvee (KIP-system)". This so called KIP-system is also the base for the registration in according to the EU Regulation 852/2004.

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

Not applicable for poultry.

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

In case of a SE and ST infection the laboratory that signalises the first indication / suspicion has to inform GD (Animal Health Service) and the farmer. After this a verification study will take place. When the infection is confirmed the PPE and the farmer are informed.

Each veterinarian has the obligation to notify Salmonella to the GD. This is specified in legislation of the Ministry of Agriculture, Nature and Food Quality, "Regeling preventie, bestrijding en monitoring van besmettelijke dierziekten en zoönosen en TSE's". Directives of the PPE state that the farmer has to notify Salmonella. In most cases the veterinarian will do this for the farmer.

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

The measures that have to be taken in case of a positive result are laid down in directives of the PPE. The Ministry of Agriculture, Nature and Food Quality and Ministry of Public Health, Welfare and Sport (VWS) have to approve these directives. All measures are stated in Chapter 3.
Whenever a positive flock is found by own-check sampling in the frame of the programme in laying hens, than this flock should be considered as a **suspect flock** and **movement restrictions are mandatorily imposed** on this **flock.**
In the frame of the *Salmonella* control programme in **laying flocks** of *Gallus gallus* the provisions of paragraph 1 and 2 (frequency of sampling) 4 (results and reporting) of Annex of Commission Regulation (EC) No 1168/2006 **(particularly provisions on exceptional cases)** are implemented

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

Not applicable for poultry.

4.4.6 Control procedures and in particular rules on the movement of animals liable to be contaminated with Salmonella

When birds from infected flocks are slaughtered or destroyed, steps are taken to reduce the risk of spreading zoonoses as far as possible. Slaughtering will be carried out in accordance with Community legislation on food hygiene. If not destined for human consumption, such products must be used or disposed of in accordance with Regulation (EC) No 1774/2002.

4.4.7 Measures and applicable legislation as regards control (testing, vaccination) of Salmonella

The tests that are performed in the Action Plan are:
PVE branch method for Salmonella analysis: this method includes the use of Modified Semi solid Rapport Vassiliadis agar (MSRV) as a selective enrichment medium. The semi solid medium should be incubated at 41.5 °C +/- 1 °C for 48 h. Alternative methods for detection will be permitted (for example Salmonella analysis by PCR), when the methods are approved as valid by the CRL.
In case of a positive finding, serotyping is performed according to the Kaufmann-White scheme.

Salmonella vaccines
Vaccination is not compulsory in the frame of the Salmonella control programme, while the prevalence of Salmonella enteritidis in the Netherlands is below 10% (EU Regulation 1177/2006, Article 3.3).
In the Netherlands a large number of the parent flocks (egg production sector and broiler production sector) are vaccinated against Salmonella. Grandparent flocks are not vaccinated. There is no central database with information on the number of vaccinated flocks.

In the egg production sector Salmonella vaccines are used for parent flocks and layer flocks. An estimated 100% of the parent flocks and 95% of the layer flocks are vaccinated.

Only vaccines that are officially registered for use in poultry can be administered:
Parent flocks:), TAD Vac E en Vac T (Lohmann), Nobilis Salenvac T (Intervet), Gallivac Se (Merial)
Layer flocks:), TAD Vac E (Lohmann), TAD Vac T (Lohmann)and Gallivac SE (Merial), Nobilis Salenvac T (Intervet), Gallimune Se + St (Merial)

These vaccines comply with the regulations laid down in EU Regulation 1177/2006, Article 3.1 and 3.2.

Antimicrobials
The use of antimicrobials is prohibited except for circumstances laid down in EU Regulation 1177/2006, Article 2.

4.4.8 Measures and applicable legislation as regards the compensation for owners of canalized eggs

Depending on the content of the appropriate EU regulations compensation will be given for eradication of laying hens, vaccination of laying flocks, sampling (standard, official and verification) and canalization of eggs. The financial contribution for the farmer and the measures to be taken to receive the contribution will be specified in legislation of the PPE.

4.4.9 Information and assessment on bio-security measures management and infrastructure in place in flocks / holdings involved

Besides the control programme for Salmonella, each flock will be checked once by a veterinarian, in accordance to the GVP-code (Good Veterinarian Practice).
In addition to that every poultry farmer has to comply with the following bio-security measures, laid down in the directive "Verordening Hygiënevoorschriften Pluimveehouderij (PPE) 2007":

1. Hygiene management at farms:
    a) No pets, stock of (other) poultry is allowed in the poultry house;
    b) If pets, stock or (other) poultry is on the location of the poultry farm special hygiene measurements are required (like separate care);
    c) No wild birds can enter the poultry house;
    d) Visitors are only allowed to enter the poultry house when this is necessary and under strict hygiene measurements (including special clothing);
    e) Every farm has a rodent control program or charter an acknowledged rodent control company (at least every 2 months);
    f) Once a year bacteriological analysis and in case of a natural source of water also chemical analysis of drinking water for poultry;
    g) Every farm has a clear boundary and it is visible for visitors where they must announce themselves. The poultry houses are locked.
    h) The poultry house, the poultry farm and its close environment is clean;
    i) Before entering the poultry house there is a hygiene barrier with clothing and shoes;
    j) The drive- and walking routes to the farm are paved and cleanable;
    k) The feed silo is placed on a paved underground, is easy to clean and refillable from outside the poultry house. When there are more silo's, every silo has a unique number;
    l) Feed and litter is in such a way stored that it stays clean, dry and mould free;
    m) Every poultry house must have a hand-washing facility.
2. Cleaning and disinfection;
    a) After removing the poultry from the house the litter is removed and the poultry house is cleaned and disinfected;
    b) Once a year a hygiene check in the cleaned and disinfected empty poultry house is done by and by PPE acknowledged company.

All farmers are inspected once a year for compliance with these regulations.

Every holding is obliged to inform the packing station, about the Salmonella status. This is laid down in the directive "Verordening Hygiënevoorschriften Pluimveehouderij (PPE)". In according to 852/2004 and 853/2004 Guides for Good Practices are being developed for the poultry sector. In these guides HACCP principles and traceability measures are implemented. The guides for poultry farms are based on the quality system IKB. This quality assurance system for the whole poultry chain is developed in the Netherlands by the PPE. More then 80% of the poultry farms (70% of the layer farms) are certified for IKB. IKB standards include hygiene management at farms, measures to prevent incoming infections and the hygienic transportation of animals.

5. General description of the costs and benefits

6.1. Human salmonellosis

The incidence of human salmonellosis health, is outlined in the graph below:

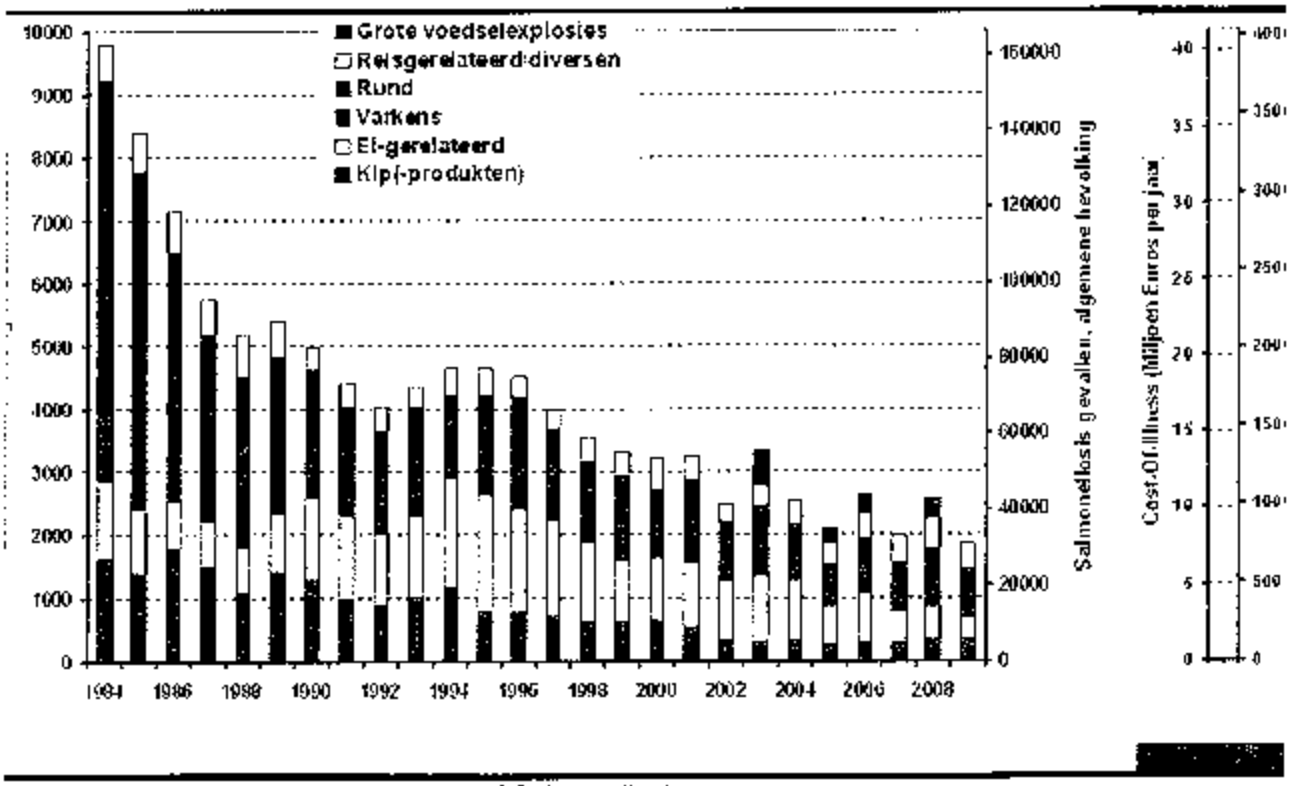


Figure 5: Occurrence of human cases of Salmonellosis

Detailed cost benefits data are not available.

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

6.1 Evolution of zoonotic salmonellosis

6.1.2 Data on evolution of zoonotic salmonellosis

Year: 2005 **Situation on date:** april 2010
Animal species: poultry **Disease/infection**[a]: Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[d]	Number of positive[e] flocks[a]			Number of flocks depopulated[a]		Total number of animals slaughtered or destroyed [a]		Quantity of eggs destroyed (number or kg) [a]		Quantity of eggs channelled t egg product (number or kg) [a]	
							(a1)	(a2)	(a3)	(a3)	(a4)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3
Netherlands	Laying hens	1952	27,7 million	1952	27,7 million	1952	64	3	NA	0	0	0	0	0	0	0	0
	Rearing layers	1691	32,4 million	1691	32,4 million	1691	2	0	NA	0	0	0	0	0	0	0	0
Total		3643	60,1 million	3643	60,1 million	3643	66	3	NA	0	0	0	0	0	0	0	0

Year: 2006 **Situation on date:** april 2010
Animal species: poultry **Disease/infection[a]:** Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[d]	Number of positive[e] flocks[f]			Number of flocks depopulated[g]		Total number of animals slaughtered or destroyed [a]		Quantity of eggs destroyed (number or kg) [a]		Quantity of eggs channelled t egg product (number or kg) [a]	
							(a1)	(a2)	(a3)	(a3)	(a4)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Laying hens	1878	28 million	1878	28 million	1878	85	6	NA	0	0	0	0	0	0	0	0
	Rearing layers	1561	31,2 million	1561	31,2 million	1561	0	1	NA	0	0	0	0	0	0	0	0
Total		3439	59,2 million	3439	59,2 million	3439	85	7	NA	0	0	0	0	0	0	0	0

Year: 2007 **Situation on date:** april 2010
Animal species: poultry **Disease/infection[a]:** Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[d]	Number of positive[e] flocks[f]			Number of flocks depopulated[g]		Total number of animals slaughtered or destroyed [a]		Quantity of eggs destroyed (number or kg) [a]		Quantity of eggs channelled t egg product (number or kg) [a]	
							(a1)	(a2)	(a3)	(a3)	(a4)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Laying hens	1870	30,1 million	1870	30,1 million	1870	109	0	NA	0	0	0	0	0	0	0	0
	Rearing layers	1386	28,1 million	1386	28,1 million	1386	0	0	NA	0	0	0	0	0	0	0	0
Total		3256	58,1 million	3256	58,1 million	3256	109	0	NA	0	0	0	0	0	0	0	0

Year: 2008[1]
Animal species: poultry

Situation on date: april 2010
Disease/infection[a]: Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[d]	Number of positive[e] flocks[a]			Number of flocks depopulated[a]		Total number of animals slaughtered or destroyed[a]		Quantity of eggs destroyed (number or kg)[a]		Quantity of eggs channelled to egg products (number or kg)[a]	
							(a1)	(a2)	(a3)	(a3)	(a4)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Laying hens	2346[2]	35,8 million	2346	35,8 million	2346	61	1	NA	0	0	0	0	0	0	156 million	0
	Rearing layers	1116	31 2 million	1116	31.2 million	1116	0	0	NA	0	0	0	0	0	0	0	0
Total		3462	67 million	3462	67 million	3462	61	1	NA	0	0	0	0	0	0	156 million	0

Year: 2009 **Situation on date:** april 2010
Animal species: poultry **Disease/infection[a]:** Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked[d]	Number of positive[e] flocks[a]			Number of flocks depopulated[a]		Total number of animals slaughtered or destroyed[a]		Quantity of eggs destroyed (number or kg)[a]		Quantity of eggs channelled to egg products (number or kg)[a]	
							(a1)	(a2)	(a3)	(a3)	(a4)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Laying hens	2240	37,1 million	2240	37,1 million	2240	29	4	NA	0	0	0	0	0	0	114 million	0
	Rearing layers	1235	35 million	1235	35 million	1235	0	0	NA	0	0	0	0	0	0	0	0
Total		3475	67 million	3475	67 million	3475	29	4	NA	0	0	0	0	0	0	114 million	0

(a) For zoonotic Salmonellosis indicate the serotypes covered by the control programmes: (a1) for *Salmonella* Enteritidis, (a2) for *Salmonella* Typhimurium, (a3) for other serotypes-specify as appropriate, (a4) for *Salmonella* Enteritidis or *Salmonella* Typhimurium.
(a1) Region as defined in the approved control and eradication programme of the Member State.
(b) For example, breeding flocks (rearing, adult flocks), production flocks, laying hen flocks, breeding turkeys, broiler turkeys, breeding pigs, slaughter pigs, etc. Flocks or herds or as appropriate.
(c) Total number of flocks existing in the region including eligible flocks and non-eligible flocks for the programme.
(d) Check means to perform a flock level test under the programme for the presence of salmonella. In this column a flock must not be counted twice even if it has been checked more than once.
(e) If a flock has been checked, in accordance with footnote (d), more than once, a positive sample must be taken into account only once.
NA: data not available
[1] In 2008 the monitoring changed from serological to bacteriological testing.
[2] Up to 2007 only laying hen flocks at the end of their production period were monitored. From 2008 onwards all laying hen flocks in production were monitored. The production period is approx. 15-16 months. That is the reason for the increase in the number of flocks participating in 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 **Animal species[a]:** poultry **Category[b]:** laying hens
Description of the used serological tests: ELISA in blood

Description of the used microbiological or virological tests: MSRV method in faeces

Description of the other used tests: N/A

Region[c]	Serological tests		Microbiological or virological tests		Other tests	
	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]
Netherlands	3300	109	0	0	N/A	N/A
Total	3300	109	0	0	N/A	N/A

Year: 2008 **Animal species[a]:** poultry **Category[b]:** laying hens
Description of the used serological tests: ELISA in blood

Description of the used microbiological or virological tests: MSRV method in faeces

Description of the other used tests: N/A

Region[c]	Serological tests		Microbiological or virological tests		Other tests	
	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]
Netherlands	1100	0	6000	62	N/A	N/A
Total	1100	0	6000	62	N/A	N/A

Year: 2009 **Animal species [a]:** poultry **Category[b]:** laying hens

Description of the used serological tests: ELISA in blood

Description of the used microbiological or virological tests: MSRV method in faeces

Description of the other used tests: N/A

Region[c]	Serological tests		Microbiological or virological tests		Other tests	
	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]	Number of samples tested[d]	Number of positive samples[e]
Netherlands	600	0	7000	33	N/A	N/A
Total	600	0	7000	33	N/A	N/A

(a) Animal species if necessary.
(b) Category/further specifications such as breeders, laying hens, broilers ,breeding turkeys, broiler turkeys, breeding pigs, slaughter pigs, etc, when appropriate.
(c) Region as defined in the approved control and eradication programme of the Member State.
(d) Number of samples tested.
(e) Number of positive samples.

6.3 Data on infection

Year: 2005 **Animal species**[a]:: poultry (laying hens)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	67	1.072.000
Total	67	1.072.000

Year: 2006 **Animal species**[a]:: poultry (laying hens)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	91	1.456.000
Total	91	1.456.000

Year: 2007 **Animal species**[a]:: poultry (laying hens)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	109	1.744.000
Total	109	1.744.000

Year: 2008[d] **Animal species**[a]:: poultry (laying hens)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	62	992.000
Total	62	992.000

Year: 2009 **Animal species**[a]:: poultry (laying hens)

Region[b]	Number of herds infected[c]	Number of animals infected
Netherlands	33	500.000
Total	33	500.000

(a) Animal species if necessary.
(b) Region as defined in the control and eradication programme of the Member State.
(c) Herds or flocks or holdings as appropriate.
(d) In 2008 the monitoring changed from serological to bacteriological testing

6.4 Data on vaccination programmes

Year: 2008 **Animal species: [a]:** poultry (laying hens)

Description of the used vaccination), SG9R (Intervet), TAD Vac E (Lohmann), TAD Vac T (Lohmann) and Gallivac SE (Merial), Nobilis Salenvac T (Intervet), Gallimune Se + St (Merial)

Region[b]	Total number of herds[c]	Total number of animals	Information on vaccination programme			
			Number of herds[c] in vaccination programme	Number of herds[c] vaccinated	Number of animals vaccinated	Number of doses of vaccine administered
Netherlands	2346	35,7 million	1700[d]	1550	24,3 million	67 million
Total	2346	35,7 million	1700	1550	24,3 million	67 million

Year: 2009 **Animal species: [a]:** poultry (laying hens)

Description of the used vaccination), SG9R (Intervet), TAD Vac E (Lohmann), TAD Vac T (Lohmann) and Gallivac SE (Merial), Nobilis Salenvac T (Intervet), Gallimune Se + St (Merial)

Region[b]	Total number of herds[c]	Total number of animals	Information on vaccination programme			
			Number of herds[c] in vaccination programme	Number of herds[c] vaccinated	Number of animals vaccinated	Number of doses of vaccine administered
Netherlands	2240	37,1 million	1600[d]	1500	27,2 million	71,6 million
Total	2240	37,1 million	1600	1500	27,2 million	71,6 million

(a) Animal species if necessary.
(b) Region as defined in the approved control and eradication programme of the Member State.
(c) Herds or flocks or holdings as appropriate.
(d) The number of animals vaccinated in a year is lower than the total number of hens in production. The reason for that is that the production period of laying hens is longer than one year.

7. Targets

7.1 Targets related to testing

7.1.1. Targets on diagnostic tests

Year: 2011 **Animal species:** [a]: poultry (laying hens)

Region[b]	Type of the test[c]	Target population[d]	Type of sample[e]	Objective[f]	Number of planned tests
Netherlands	ELISA/MSRV	Rearing layers	Blood/faeces	monitoring	600
Netherlands	MSRV	Laying hens	faeces	monitoring	7000
		Total			7600

(a) Species if necessary.
(b) Region as defined in the approved control and eradication programme of the Member State.
(c) Description of the test.
(d) Specification of the targeted species and the categories of targeted animals if necessary.
(e) Description of the sample (for instance faeces).
(f) Description of the objective (for instance surveillance, monitoring, , control of vaccination).

7.1.2 Targets on testing of flocks

Year: 2011 **Situation on date:** December 2009
Animal species: poultry **infection[a]:** Salmonella Enteritidis (a1) and Typhimurium (a2)

Region (a1)	Type of flock[b]	Total number of flocks[c]	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Expected number of flocks to be checked[d]	Number of flocks[e] expected to be positive [a]			Number of flocks expected to be depopulated[f]		Total number of animals expected to be slaughtered or destroyed [a]		Expected quantity of eggs to be destroyed (number or kg) [a]		Expected quantity of eggs channelled to egg products (number or kg) [a]	
							(a1)	(a2)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)	(a4)	(a3)
Netherlands	Laying hens	2240	37,1 million	2240	37,1 million	2240	29	4	NA	6	0	100.000	0	0	0	114 million	0
	Rearing layers	1235	35 million	1235	35 million	1235	1	0	NA	1	0	28.000	0	0	0	0	0
Total		3475	72,1 million	3475	72,1 million	3475	30	4	NA	7	0	128.000	0	0	0	114 million	0

(a) For zoonotic salmonellosis indicate the serotypes covered by the control programmes: (a1) for *Salmonella* Enteritidis, (a2) for *Salmonella* Typhimurium, (a3) for other serotypes-specify as appropriate, (a4) for *Salmonella* Enteritidis or *Salmonella* Typhimurium.

(a1) Region as defined in the approved control and eradication programme of the Member State.

(b) For example, breeding flocks (rearing, adult flocks), production flocks, laying hen flocks, breeding turkeys,broiler turkeys, breeding pigs, slaughter pigs, etc. Flocks or herds or as appropriate.

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

(d) Check means to perform a flock level test under the programme for the presence of salmonella. In this column a flock must not be counted twice even if it has been checked more than once.

(e) If a flock has been checked, in accordance with footnote (d), more than once, a positive sample must be taken into account only once.

7.2 Targets

7.2.1. Targets on vaccination [1]

Year: 2011 **Animal species:** [a]: poultry (laying hens)

Region[b]	Total number of herds[c] in vaccination programme	Total number of animals in vaccination programme	Targets on vaccination programme			
			Number of herds[c] in vaccination programme	Number of herds[c] expected to be vaccinated	Number of animals expected to be vaccinated	Number of doses of vaccine expected to be administered
Netherlands	2240	37 1 million	1600	1500	27 million	73 million
Total	2240	37.1 million	1600	1500	27 million	73 million

(a) Species if necessary.
(b) Region as defined in the approved control and eradication programme of the Member State.
(c) Herds or flocks or holdings as appropriate.

[1] Data to provide only if appropriate.

8. Detailed analysis of the costs estimate of the programme for 2011

Costs related to	*Specification*	*Number of units*	*Unitary cost in EUR*	*Total amount in EUR*	*Community funding requested (yes/no)*
1. Testing					
1.1. Cost of the analysis	*Test:* Number of bacteriological tests (cultivation) planned to be carried out in the framework of official sampling	2240	18,39	41.193	yes
	Test: Number of serotyping of relevant isolates tests planned to be carried out	200	33,80	6.760	yes
1.2. Cost of sampling		2240	106,75	239.120	No
1.3. Other costs		NA	NA	NA	No

Costs related to	Specification	Number of units	Unitary cost in EUR	Total amount in EUR	Community funding requested (yes/no)
2. Vaccination or treatment of animal products					
2.1. Purchase of vaccine/treatment of animal products	Number of purchase of vaccine doses planned if a vaccination policy is part of the programme as set out explicitly under point 4 of Annex II	73 million	0,07	5.110.000	yes
2.2. Distribution costs		NA	NA	NA	No
2.3. Administering costs		NA	NA	NA	No
2.4. Control costs		NA	NA	NA	No
3. Slaughter and destruction					
3.1. Compensation of animals	Rearing (1 flock)	28.000	4	112.000	yes
	Layers (6 flocks)	100.000	5	500.000	yes
3.2. Transport costs		NA	NA	NA	No

Costs related to	Specification	Number of units	Unitary cost in EUR	Total amount in EUR	Community funding requested (yes/no)
3.3. Destruction costs		128.000	1	128.000	yes
3.4. Loss in case of slaughtering		NA	NA	NA	No
3.5 Costs from treatment of animal products (milk, eggs, hatching eggs, etc)		NA	NA	NA	No
4. Cleaning and disinfection		NA	NA	NA	No
5. Salaries (staff contracted for the programme only)		NA	NA	NA	No
6. Consumables and specific equipment		NA	NA	NA	No

Costs related to	Specification	Number of units	Unitary cost in EUR	Total amount in EUR	Community funding requested (yes/no)
7. Other costs	Loss in case of heat treatment of eggs from Se/St infected layer flocks	114 million	0,02	2,28 million	yes
	TOTAL			8.177.953	yes

TOTAL COSTS REQUESTED FOR REFUNDING IN 2011 FOR LAYING HEN FLOCKS

Cost of Official analysis	(subtotal A1)	€	47.953
Costs of vaccination	(subtotal A2)	€	5.110.000
Compensation of eradicated animals	(subtotal A3)	€	612.000
Destruction costs	(subtotal A4)	€	128.000
Other costs	(subtotal A5)	€	2.280.000
	TOTAL	€	**8.177.953**

The Netherlands confirm that all measures mentioned in Table 8 for which we ask for co-financing are fundable according to current national rules.