



EUROPEAN COMMISSION
HEALTH & CONSUMERS DIRECTORATE-GENERAL

Unit 04 - Veterinary Control Programmes

SANCO/10291/2009

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

**Control programme of Salmonella in breeding, laying
and broiler flocks (*Gallus gallus*) and in flocks of
turkeys (*Meleagris gallopavo*)**

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

The Netherlands

* in accordance with Council Decision 2009/470/EC

**PROPOSED
VETERINARY CONTROL PROGRAMME
FOR**

**SALMONELLA IN TURKEYS
PRESENTED FOR 2010***

**BY
THE NETHERLANDS**

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

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1. IDENTIFICATION OF THE PROGRAMME

Member state: The Netherlands

Disease: Infection of animals with zoonotic Salmonella spp

Year of implementation: 1-1-2010 until 31-12-2012

Reference of this document: revised version

Geographical Area: The Netherlands

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1. HISTORICAL DATA ON THE EPIDEMIOLOGICAL EVOLUTION OF ZOO NOTIC 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%. 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 4 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.

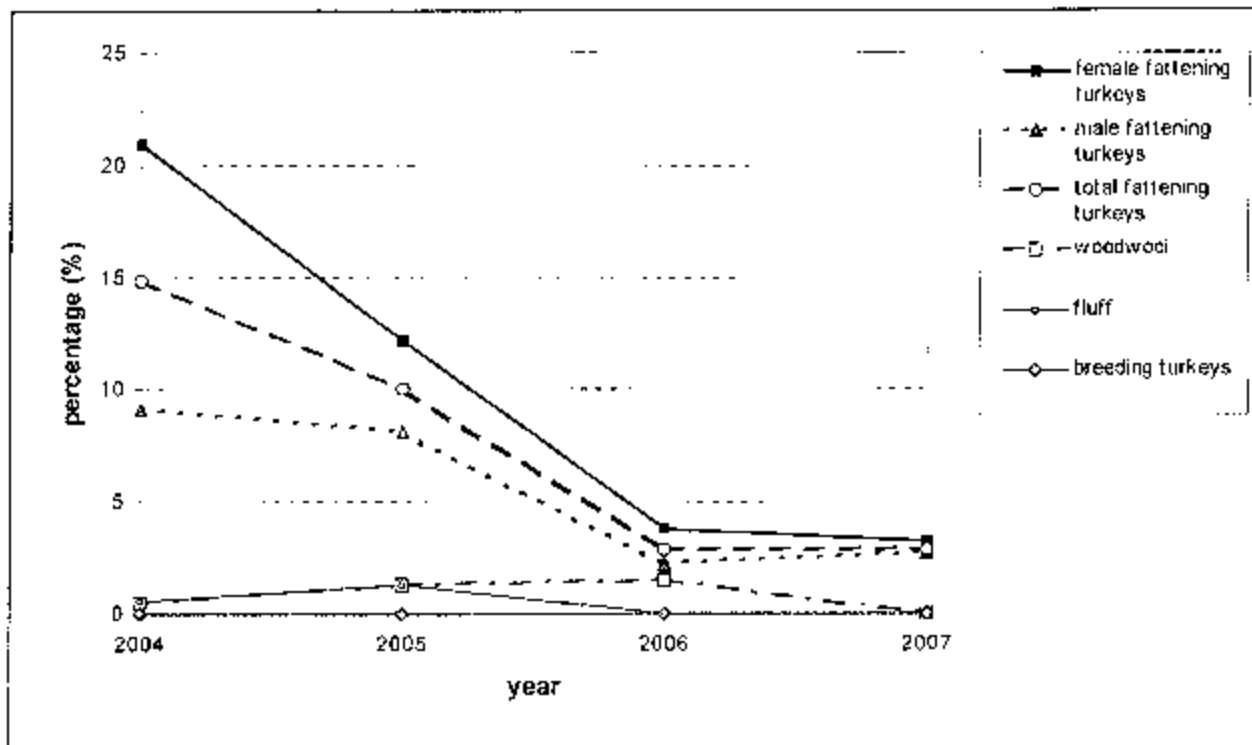


Figure 1: prevalence of *Salmonella* spp. in turkey production chain in the Netherlands from 2004-2007.

2. 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 MSR/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.

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 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;
- b) cleaning and disinfection of turkey house when empty.

Breeding turkeys

Measures to be taken in case of positive findings in breeding turkeys are:

- a) verification in case of suspicion SE and ST;
- b) when verification results in SE/ST, then eradication of the flock.
After eradication of the flock and after infection with any other Salmonella serotype:
- a) Thorough cleaning and disinfection of the housing when empty;
- b) swab test, executed by a by the PPE acknowledged company, of the house after cleaning and disinfection;
- c) new flock can be placed when the swab test was negative.

3.4 Monitoring in slaughterhouse

Not applicable.

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 turkeyfarm 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;

- i. 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:
 - a. After removing the turkeys the litter is removed and the turkey house is cleaned and disinfected;
 - b. 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 2010.

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
- 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) executes the implementation of the programme. The Ministry of Agriculture, Nature and Food Quality are coordinating this implementation. In Figure 2, all organizations involved are mentioned, including their relation to the programme.

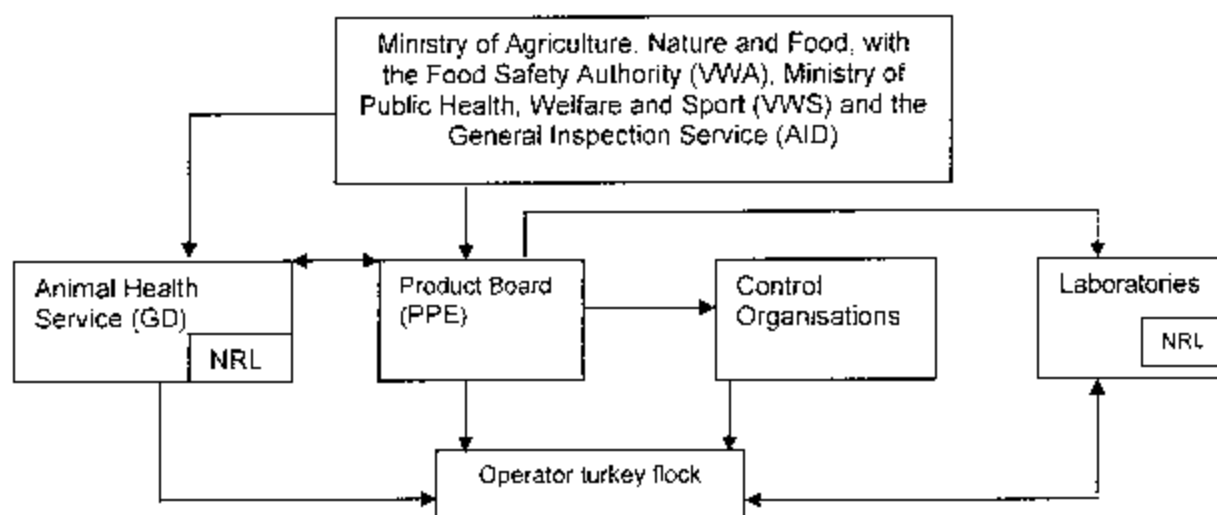


Figure 2: Organizational scheme of the institutes involved in the programme concerning the control of Salmonella in turkeys.

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.

When turkeys 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 turkeys.

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

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. The Ministry of Agriculture, Nature and Food Quality and Ministry of Public Health, Welfare and Sport have to approve these directives.

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.

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

Sampling and testing is carried out according to the provisions laid down in the Annex of Commission Regulation 584/2008.

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 phage typing 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.

Vaccination

Vaccination is not used in turkey fattening or breeding flocks. If vaccination will be used in the future, the provisions of CR 1177/2006 on the use of vaccines will be followed.

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 turkey flocks. In 2010 there will be.

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 killed 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 Kalkoehouderij (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:

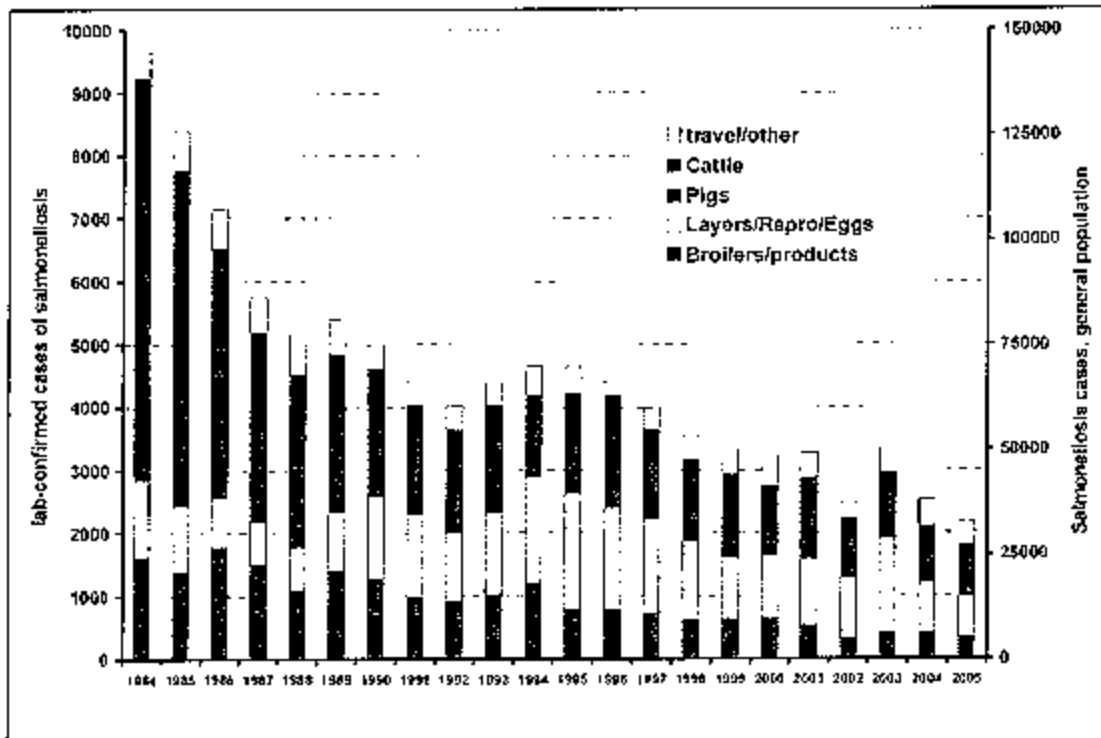


Figure 3: Occurrence of human cases of Salmonellosis

Detailed cost benefits data are not available.

6 DATA ON THE EPIDEMIOLOGICAL EVOLUTION DURING THE LAST FIVE YEARS

6.1 Evolution of the disease

6.1.1 Data on evolution of zoonotic salmonellosis

Year: 2002 - 2007
 Situation on date: April 2008
 Disease: Salmonella
 Animal species: Turkeys
 Region: NL

Table 1: Number of positive fattening turkey flocks 2002-2007

Year	Type of flock	Total number of flocks	Total number of animals (hens)	Total number of animals (cocks)	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked	Number of positive flocks		Number of flocks depopulated			Total number of animals slaughtered or destroyed	
								Sa Spp.	Other	Se / St	Other	Se / St	Other	
2002														
2003														
2004	fattening turkeys	264	1.685.042	1.543.368	264	3.228.410	264	27						
2005	fattening turkeys	252	1.577.199	1.598.023	252	3.175.222	252	19						
2006	fattening turkeys	227	1.452.160	1.470.435	227	2.922.595	227	12						
2007	fattening turkeys	210	1.340.351	1.437.055	210	2.777.406	210	8						

Table 2: Number of positive breeding turkey flocks 2002-2007

Year	Type of flock	Total number of flocks		Total number of animals (hens)		Total number of animals (cocks)		Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked	Number of positive flocks		Number of flocks depopulated		Total number of animals slaughtered or destroyed	
		of flocks	of animals (hens)	of animals (cocks)	of flocks	Se	St				Se / St	Other	Se / St	Other		
2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	breeding	4	18.300	1.456	4	19.756	4	19.756	4	-	-	-	-	-	-	-
2005	breeding	3	13.853	1.095	3	14.948	3	14.948	3	-	-	-	-	-	-	-
2006	breeding	2	8.908	828	2	9.736	2	9.736	2	-	-	-	-	-	-	-
2007	breeding	2	9.171	776	2	9.947	2	9.947	2	-	-	-	-	-	-	-

Table 3: Number of positive rearing breeding turkey flocks 2002-2007

Year	Type of flock	Total number of flocks		Total number of animals (hens)		Total number of animals (cocks)		Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked	Number of positive flocks		Number of flocks depopulated		Total number of animals slaughtered or destroyed	
		of flocks	of animals (hens)	of animals (cocks)	of flocks	Se	St				Se / St	Other	Se / St	Other		
2002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2003	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2004	rearing breeding	4	19.448	2.132	4	21.580	4	21.580	4	-	-	-	-	-	-	-
2005	rearing breeding	4	18.408	1.852	4	20.260	4	20.260	4	-	-	-	-	-	-	-
2006	rearing breeding	4	15.882	1.909	4	17.791	4	17.791	4	-	-	-	-	-	-	-
2007	rearing breeding	3	14.064	1.402	3	15.466	3	15.466	3	-	-	-	-	-	-	-

6.2 Stratified data on surveillance and laboratory tests

From 1-1-2010 on all flocks will be tested bacteriologically.

6.3 Data on infection

Not applicable.

6.4 Data on vaccination programmes

Not applicable.

There is no vaccination programme for turkeys in the Netherlands

7 TARGETS

7.1 Targets related to testing

7.1.1 Targets on diagnostic tests

Not applicable.

7.1.2 Targets on testing of flocks

Year: 2010
Situation on date: 2008
Animal Species: Turkeys
Disease: Salmonella
Region: NL

Table 4: Targets on testing of flocks

Type of flock		Fattening turkeys	Breeding flocks
Total number of flocks		210	2
Total number of animals		2.777.406	9.947
Total number of flocks under the programme		210	2
Expected number of flocks to be checked		210	2
Number of flocks expected to be positive	SE	0	0
	ST	3	1
	Other	10	0
Number of flocks expected to be depopulated	SE or ST	0	1
	Other	0	0
Total number of animals expected to be slaughtered or destroyed (number or kg)	SE or ST	0	1
	Other	0	0

7.2 Targets on vaccination

Not applicable.

There is no vaccination programme for turkeys in the Netherlands

8. DETAILED ANALYSIS OF THE COST OF THE PROGRAMME

Costs related to	Specification	Number of units	Unitary cost in Euro	Total amount in Euro	Community funding requested (yes/no)
1. Testing					
1.1 Costs of official analysis					
Breeding flocks	Number of bacteriological tests (cultivation) planned to be carried out in the framework of official sampling (8 analysis per flock)	16	18,39	294	Yes
Fattening turkeys	10% of flocks	21	18,39	386	Yes
			Subtotal A1	680	
1.2 Costs of sampling					
		29	104,00	3 016	No
1.3 Other costs					
Animal Feed Treatment					
	Breeding flocks	18 245	0,20	3 649	No
	Fattening turkeys	2 722 529	0,00	4 356	No
2. Vaccination or treatment					
		X	X	X	X
3. Slaughter and destruction					
		X	X	X	X
3.1. Compensation of animals					
		X	X	X	X
	1 breeding flock (see par 7.1.2)	17 266	50,00	863 300	Yes
			Subtotal A2	863 300	
3.2 Transport costs					
		X	X	X	X

Costs related to	Specification	Number of unite	Unitary cost in Euro	Total amount in Euro	Community funding requested (yes/no)
3.3 Destruction costs	X	X	X	X	X
3.4 Loss in case of slaughtering	X	X	X	X	X
3.5 Costs of treatment of products	X	X	X	X	X
	Hatchery (eggs)	258.990	1,03	266.760	Yes
			Subtotal A3	266.760	
4. Cleaning and disinfection.					
Fattening turkeys	Cleaning and disinfection after a positive flock	13	96,40	1253	Yes
			Subtotal A4	1253	
5. Salaries	X	X	X	X	X
6. Consumables and specific equipment	X	X	X	X	X
7. Other costs					
Fattening turkeys	hygienecheck	188	115,00	21.620	Yes
	Water analysis	188	40,00	7.520	Yes
	Cleaning and disinfection	2.722.529	0,033	89.843	Yes
	Salmonella analysis after cleaning and disinfection	8	18,39	147	Yes
			Subtotal A5	119.131	

TOTAL COSTS REQUESTED FOR REFUNDING IN 2010 FOR TURKEYS

Official analysis	subtotal A1	€	680
Compensation of animals	subtotal A2	€	863.300
Costs of treatment of products	Subtotal A3	€	266.760
Cleaning and disinfection	Subtotal A4	€	1.253
Other costs	Subtotal A5	€	119.131
	TOTAL	€	1.251.124

Annex to Veterinary Control Programme for Salmonella in Turkeys for 2010 by the Netherlands

The Netherlands confirms that the provisions of Commission Regulation (EC) No 584/2008 will be followed and implemented in 2010.

**PROPOSED
VETERINARY CONTROL PROGRAMME
FOR
SALMONELLA IN BREEDING FLOCKS
PRESENTED FOR 2010*
BY
THE NETHERLANDS**

* IN ACCORDANCE WITH REGULATION 2160/2003 AND 1003/2005

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1. INTRODUCTION OF THE PROGRAMME

Member state: The Netherlands

Disease: Infection of poultry breeding flocks with zoonotic Salmonella spp

Year of implementation: 1-1-2007 until 31-12-2010

Reference of this document: final version

Geographical Area: The Netherlands

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2. HISTORICAL DATA ON THE EPIDEMIOLOGICAL EVOLUTION OF ZONOTIC SALMONELLOSIS

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

2.1 Poultry meat 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 poultry meat production chain. The plan was introduced with the aim to decrease the number of *Salmonella* infections (in slaughtered broilers) to less than 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 1 the monitoring results are presented from the 1st quarter of 2000 until the 4th quarter of 2008. 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.

Percentage flocks infected with *Salmonella*
 (Period January 2000 - December 2008)

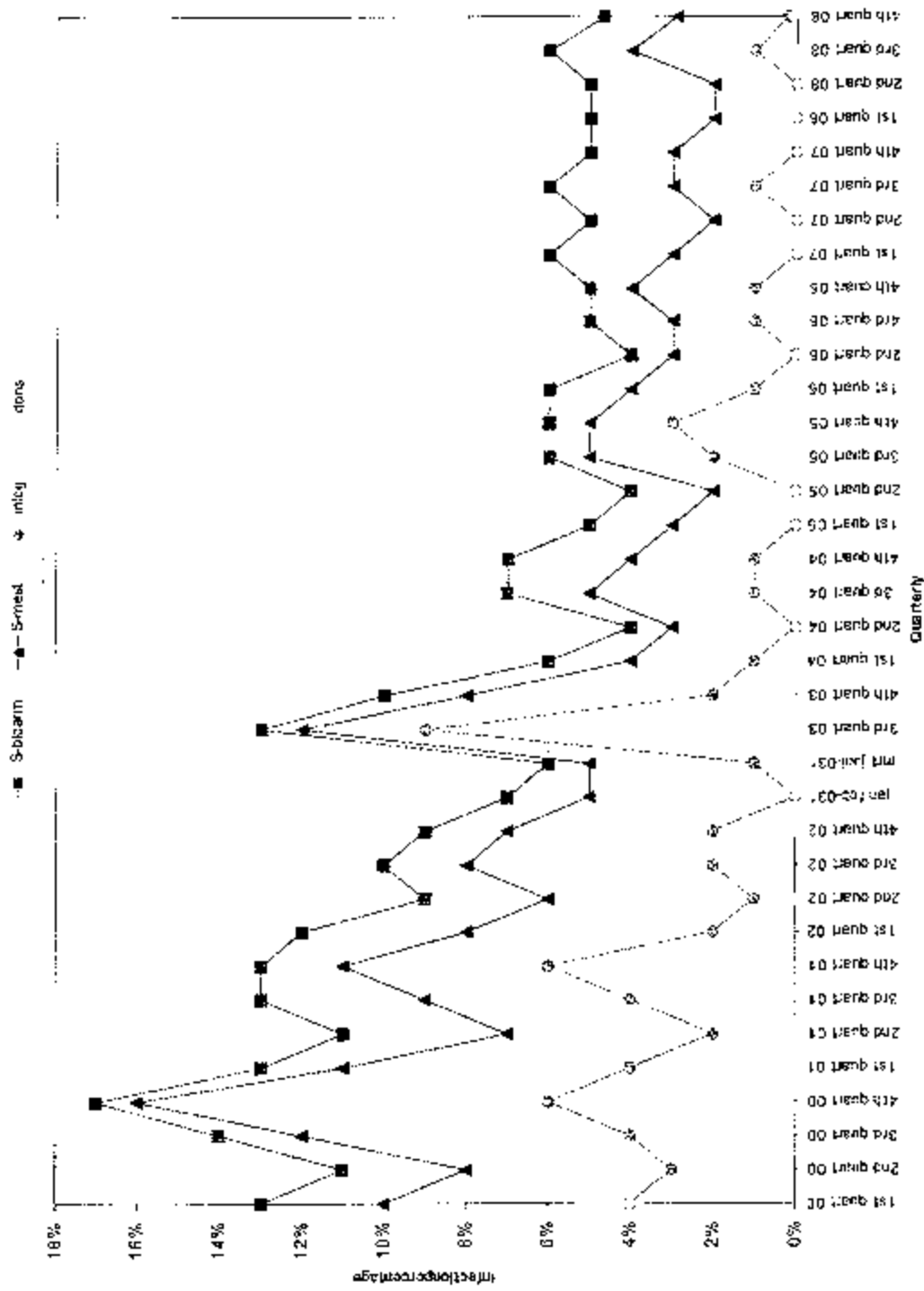


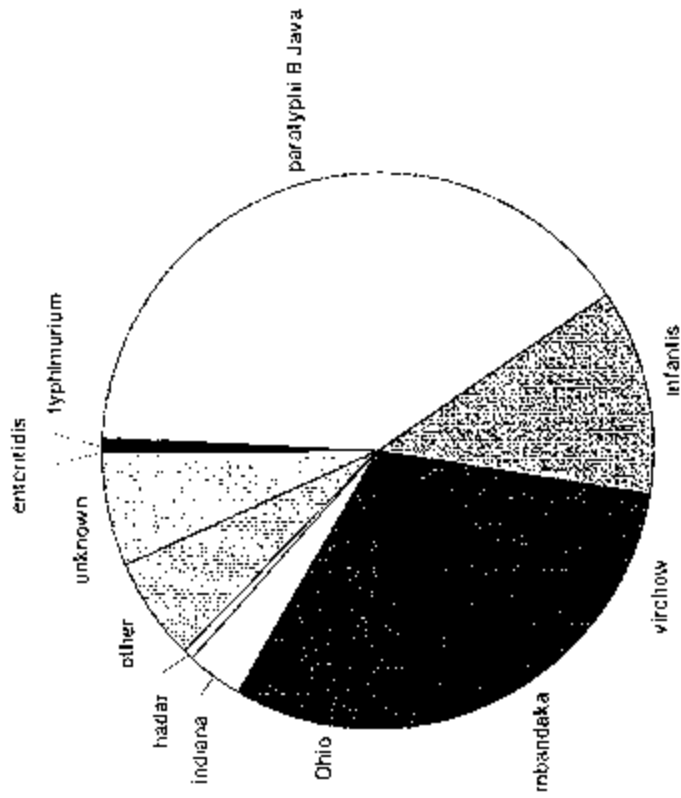
Figure 1: Percentages of *Salmonella* spp. positive samples taken from different links of the production chain per quarter (PPE, 2009).

Table 1: Percentages of Salmonella spp. positive samples taken from different links of the production chain per quarter (PPE, 2009).

Quart	S-intestine	S-faeces	Boxpaper	Fluff
4 th quart 2008	5%	3%	0%	0%
3 rd quart 2008	6%	4%	1%	0%
2 nd quart 2008	5%	2%	0%	0%
1 st 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 the 4th quarter 2008.



Serotyping of faecal sampling (bootswabs) Salmonella (4th quarter 2008)

Figure 2: Serotyping of faecal sampling Salmonella, 4th quarter 2007 (PVE 2009)

In the next figures the infection percentages in the slaughterhouses are shown.

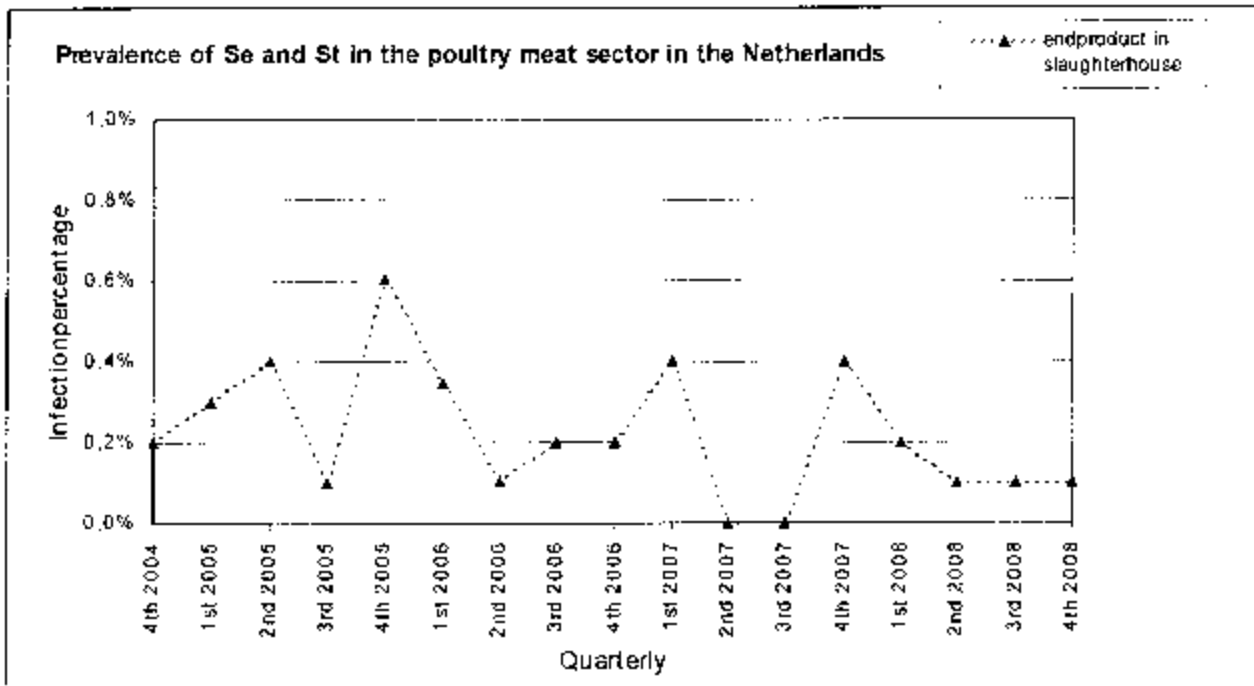
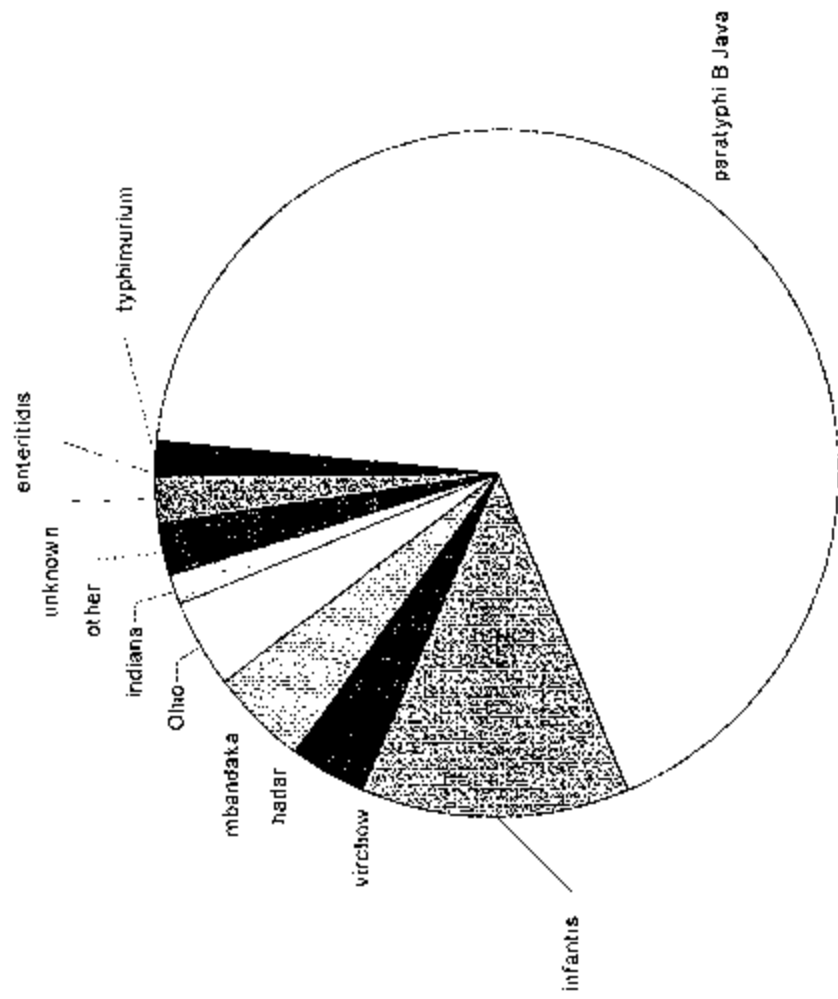


Figure 3: percentage end product infected with Salmonella spp. in the slaughterhouse (PVE, 2009)

Table 2: Percentage end product infected with Salmonella spp. in the slaughterhouse (PVE, 2009)

End product	Salmonella
4 th quart 2008	5%
3 rd quart 2008	7%
2 nd quart 2008	6%
1 st quart 2009	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%

End product	Salmonella
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%



**Serotyping endproduct sampling Salmonella
(4th quarter 2008)**

Figure 4: Serotyping endproduct infected with Salmonella 4th quarter 2007 (PVE, 2009)

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 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.

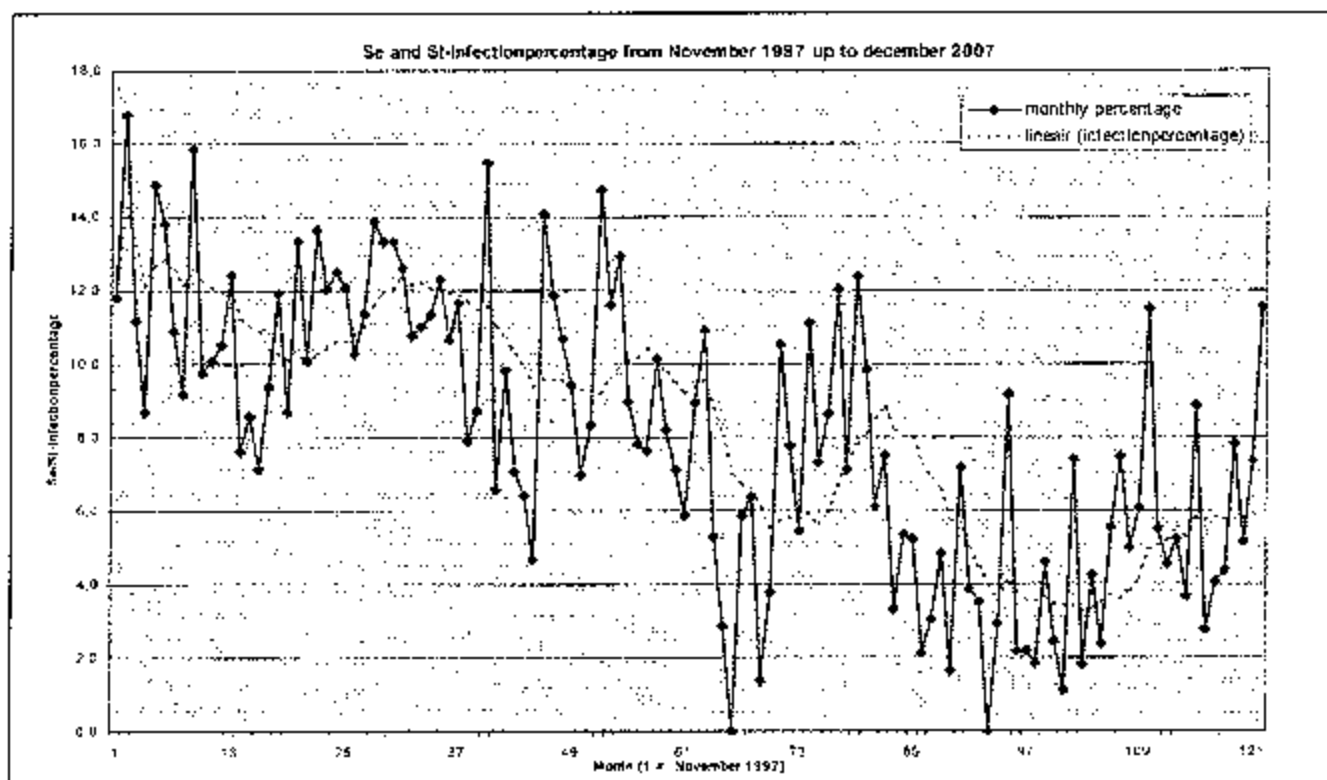


Figure 5: SE and ST infections in layers, based on serological results 1997 – 2007 (source PPE)

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

Se en St-infektionsprosent fra November 1997 up to December 2007 rearing layers

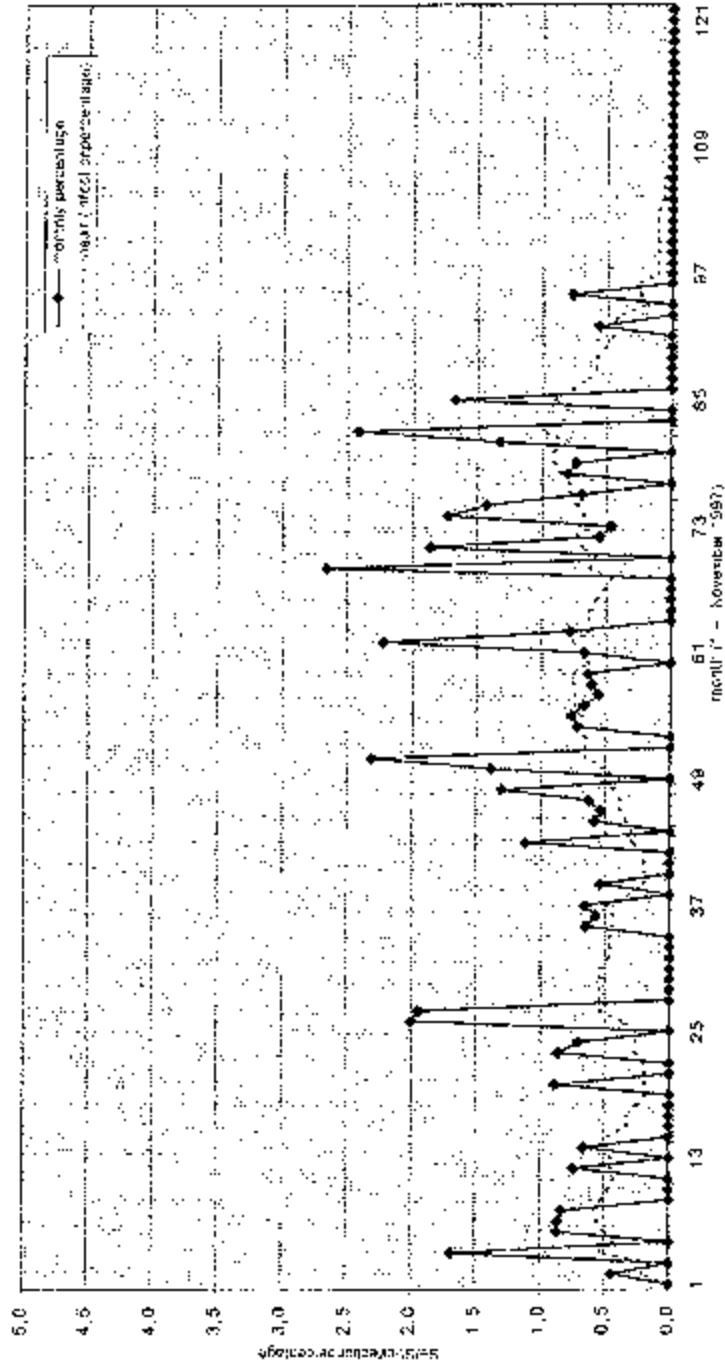


Figure 6: SE and ST infections in rearing layers, based on serological results 1997 – 2007 (source PPE)

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 31 December 2009. This target is laid down in EU Regulation 1003/2005.

3.2 Monitoring of the Veterinary Control Programme

Monitoring is in accordance with EU Regulations 2160/2003 and 1003/2005

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 4. The monitoring will take place at the holding. The operator managing the breeding flock is responsible for the monitoring. In accordance with EU Regulation 213/2009 the monitoring frequency can be reduced to once every 3 weeks if the EU target has been met during two consecutive years. The Netherlands has reached this target in 2007 and 2008 and is considering to reduce the monitoring frequency to once every three weeks

Table 4: 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 (2x30)	max. 14 days before transfer: faecal samples (6x25)
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 2 weeks: faecal samples (2x150) or five pair of boot swabs (two pools) ¹ every hatching entity is sampled once: fluff (5x5 g)
Hatchery		
Parent rearing	day of arrival: box paper (40 pieces) 4 weeks of age: cloacal samples (2x30) 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 2 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 (2x15 samples or two pair of plastic shoes), to be taken from 21 days onwards
Slaughterhouse	faecal samples (small intestine) (1x30)	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.

¹Sampling frequency can be reduced to once every 3 weeks in accordance with EU Regulation 312/2009

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.

In accordance with EU Regulation 213/2009 the official sampling can be reduced to twice during a production cycle.

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 5 for the meat production chain and in table 6 for the egg production chain. When detecting Salmonella in the meat production 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.

Table 5: Measures in the poultry meat sector in case of Salmonella infection

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

* Recent figures show an increase in the infection numbers of Salmonella infantis and Salmonella Virchow in the Netherlands. When necessary to reach the community target, culling will be compulsory for Salmonella Virchow, Salmonella Hadar and Salmonella infantis. These costs are taken into account in the cost estimate of the programme for 2010 that can be found in chapter 8.

Table 6: Measures in the laying sector in case of Salmonella infection.

Part of the production chain	Measures
Grand parent rearing/stock	<p>When SE/St are found: Verification in case of suspicion of Se/St. When verification results in Se/St, then eradication 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.</p>
Hatchery	<p>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.</p>
Parent rearing / stock	<p>When Se/St are found: Verification in case of suspicion of SE/St. When verification results in SE/St, then eradication 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.</p>
Hatchery	<p>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.</p>
Layers rearing	<p>Verification in case of Se/St suspicion. After verification eradication 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.</p>
Layers	<p>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.</p>

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

* Recent figures show an increase in the infection numbers of *Salmonella infantis* and *Salmonella Virchow* in the Netherlands. When necessary to reach the community target, culling will be compulsory for *Salmonella Virchow*, *Salmonella Hadar* and *Salmonella infantis*. These costs are taken into account in the cost estimate of the programme for 2010 that can be found in chapter 8.

4. MEASURES OF THE SUBMITTED PROGRAMME

4.1 Summary of measures under the programme

Duration of the programme:

1. Poultry meat production: programme runs since 1997, since 2002 adopted co financing for eradication of SE / ST infected breeding flocks. The programme has slightly been adjusted due to the requirements laid down in EU Regulations 2160/2003 and 1003/2005. The programme is ongoing, at least up to 31-12-2010.
2. Egg production: programme runs since 1997, since 2002 adopted co financing for eradication of SE / ST infected breeding flocks. The programme has slightly been adjusted due to the requirements laid down in EU Regulations 2160/2003 and 1003/2005. The programme is ongoing, at least up to 31-12-2010.

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 executes 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.

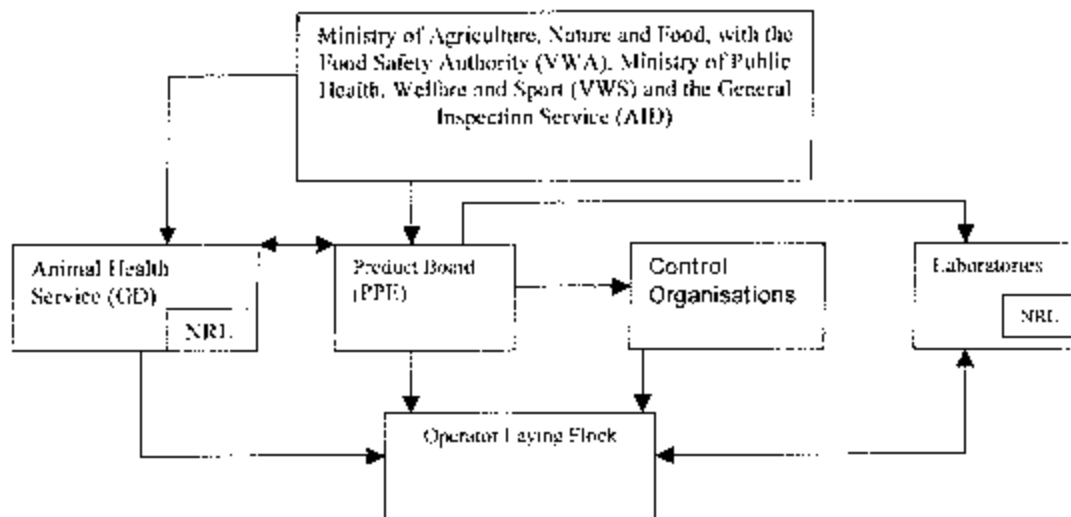


Figure 7: Organisational scheme of the institutes involved in the Action Plans concerning the control of Salmonella in poultry:

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, 1003/2005) 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 the 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 SE, ST, SH, SV and SI 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. 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 stated in Chapter 3.

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 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 adjusted 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 4.

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.

Vaccines for SE

In the Netherlands parts of the parent rearing flock (laying sector and poultry meat sector) are vaccinated. There is no central database with information on the number of vaccinated flocks. In the poultry meat sector *Salmonella* vaccines are used only for parent rearing flocks. Approximately 60% of the animals are vaccinated. In the layer production sector *Salmonella* vaccines are used for parent rearing flocks and rearing layer flocks. Approximately respectively 90% of the rearing parent flocks and 95% of the rearing layers are vaccinated.

The vaccines that are used are:

Parent rearing flocks: SG9R (Intervet), TAD Vac E en Vac T (Lohmann), Nobilis Salenvac T (Intervet)

Rearing layers: SG9R (Intervet), TAD Vac E (Lohmann) and Gallivac SE (Merial).

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 eradication of breeding flocks, vaccination of breeding flocks, sampling (standard, official and verification). 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 through 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)":

a)

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 mouldfree;
- 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 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 than 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 2008 in the Netherlands, is outlined in the graph below:

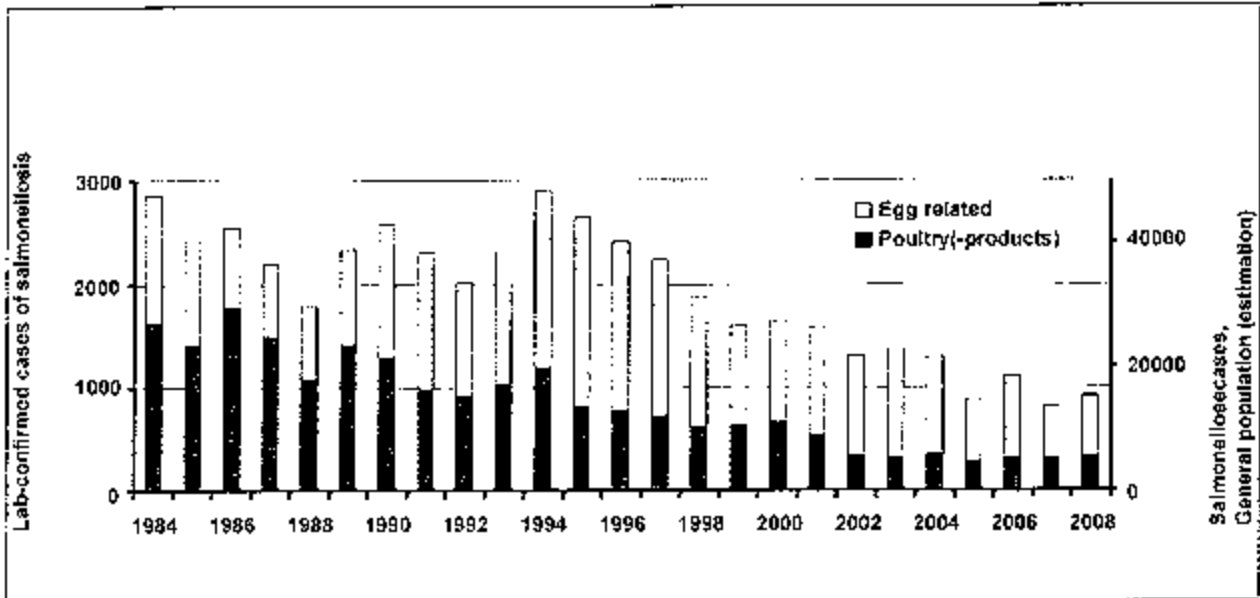


Figure 8: Occurrence of human cases of Salmonellosis and expected source.

Detailed cost benefits data are not available.

6. DATA ON THE EPIDEMIOLOGICAL EVOLUTION DURING THE LAST FIVE YEARS

6.1 Evolution of zoonotic salmonellosis

6.1.1 Data on evolution of zoonotic salmonellosis

Year: 2003
 Situation on date: December 2003
 Disease: Salmonella
 Animal species: Poultry
 Region: NL

Table 7: Number of positive flocks 2003

Type of flock	Total number of flocks	Total number of animals	Total number of flocks under the programme	Number of flocks checked			Number of positive flocks			Number of flocks depopulated	Total number of animals slaughtered or destroyed.	Quantity of eggs destroyed (number or kg.)	Quantity of eggs channelled to egg products (number or kg).		
				A1	A2	A3	A4	A3	A4					A3	A4
Grand parent	150	600.000	150				A1	A2	A3	A4	A3	A4	A3		
				150	0	0	2	0	0	0	4.699	0	0	0	
Parent poultry meat	425	4.400.00	425				9	0	0	9	55.114	0	446.719	0	689.050
				425											
Parent-laying	83	602.250	83				4	0	0	4	38.845	0	797.460	0	205.280
				83											

A1 = Salmonella Enteritidis, A2 = Salmonella Typhimurium, A3 = other serotypes, A4 = Salmonella Enteritidis of Salmonella Typhimurium.

Year: 2004
 Situation on date: December 2004
 Disease: Salmonella
 Animal species: Poultry
 Region: NL

Table 8: Number of positive flocks 2004

Type of flock	Total number of flocks	Total number of animals	Total number of flocks under the programme	Number of flocks checked	Number of positive flocks			Number of flocks depopulated	Total number of animals slaughtered or destroyed.	Quantity of eggs destroyed (number or kg.)		Quantity of eggs channelled to egg products (number or kg).	
					A1	A2	A3			A4	A3	A4	A3
Grand parent	150	600.000	150	150	0	0	0	0	0	0	0	0	0
Parent poultry meat	425	4.400.000	425	425	1	0	0	1	5.923	0	180.890	0	174.900
Parent-laying	83	602.250	83	83	1	1	0	2	15.225	0	18.540	0	0

A1 = Salmonella Enteritidis, A2 = Salmonella Typhimurium, A3 = other serotypes, A4 = Salmonella Enteritidis of Salmonella Typhimurium.

Year: 2005
 Situation on date: December 2005
 Disease: Salmonella
 Animal species: Poultry
 Region: NL

Table 9: Number of positive flocks 2005

Type of flock	Total number of flocks	Total number of animals	Total number of flocks under the programme	Number of flocks checked			Number of positive flocks			Number of flocks depopulated			Total number of animals slaughtered or destroyed			Quantity of eggs destroyed (number or kg.)	Quantity of eggs channelled to egg products (number or kg.)
				A1	A2	A3	A4	A3	A4	A3	A4	A3	A4	A3	A4		
Grand parent	150	600.000	150				0	0	0	0	0	0	0	0	0	0	0
Parent poultry meat	295	3.500.000	295				3	4	0	7	0	98.909	0	211.842	0	242.343	0
Parent-laying	65	650.000	65				0	0	0	0	0	0	0	0	0	0	0

A1 = Salmonella Enteritidis, A2 = Salmonella Typhimurium, A3 = other serotypes, A4 = Salmonella Enteritidis of Salmonella Typhimurium.

Year: 2006
 Situation on date: December 2006
 Disease: Salmonella
 Animal species: Poultry
 Region: NL

Table 10: Number of positive flocks 2006

Type of flock	Total number of flocks	Total number of animals	Total number of flocks under the programme	Number of flocks checked			Number of positive flocks			Number of flocks depopulated			Total number of animals slaughtered or destroyed			Quantity of eggs destroyed (number or kg.)			Quantity of eggs channelled to egg products (number or kg).		
				A1	A2	A3	A4	A3	A4	A3	A4	A3	A4	A3	A4	A3	A4	A3	A4	A3	
Grand parent	159	751.144	159	159	0	0	1	0	0	0	11.000	0	49.416	0	90.000	0	0	0	0	0	0
Parent poultry meat	347	3.347.178	347	347	0	0	4	1	0	4	36.904	0	0	0	78.765	0	0	0	0	0	0
Parent - laying	46	438.508	46	46	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

A1 = Salmonella Enteritidis, A2 = Salmonella Typhimurium, A3 = other serotypes, A4 = Salmonella Enteritidis of Salmonella Typhimurium.

Year: 2007

Situation on date: December 2007

Disease: Salmonella

Animal species: Poultry

Region: NL

Table 12: Number of positive flocks 2007

Type of flock	Total number of flocks	Total number of animals	Total number of flocks under the programme	Number of positive flocks					Number of flocks depopulated			Total number of animals slaughtered or destroyed			Quantity of eggs destroyed (number or kg)			Quantity of eggs channelled to egg products (number or kg)					
				A1	A2	A3	A4	A3	A4	A3	A4	A3	A4	A3	A4	A3	A4	A3					
Grand parent	130	700.172	130	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Parent poultry meat	601	4.768.938	601	4	0	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Parent laying	69	650.229	69	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

A1 = Salmonella Enteritidis, A2 = Salmonella Typhimurium, A3 = other serotypes, A4 = Salmonella Enteritidis of Salmonella Typhimurium.

Year: 2008
 Situation on date: December 2008
 Disease: Salmonella
 Animal species: Poultry
 Region: NL

Table 13: Number of positive flocks 2008

Type of flock	Total number of flocks	Total number of animals	Total number of flocks under the programme	Number of flocks checked	Number of positive flocks			Number of flocks depopulated	Total number of animals slaughtered or destroyed.	Quantity of eggs destroyed (number or kg.)	Quantity of eggs channelled to egg products (number or kg).
					A1	A2	A3				
Grand parent	148	720.000	148	720.000	0	0	0	0	0	0	0
Parent poultry meat	675	5.246.000	675	5.246.000	3	1	4	48.000	260.000	0	475.000
Parent laying	68	788.000	68	788.000	0	0	0	0	0	0	0

A1 = Salmonella Enteritidis, A2 = Salmonella Typhimurium, A3 = other serotypes, A4 = Salmonella Enteritidis of Salmonella Typhimurium.

6.2 Stratified data on surveillance and laboratory tests

Year: 2008
 Animal species: poultry, breeding flocks
 Region: The Netherlands

Description of the used serological tests: N/A
 Description of the used microbiological tests: MSRV method in faeces
 Description of the used other tests: N/A

Serological tests		Microbiological tests		Other tests	
Number of Samples tested	Number of samples positive	Number of Samples tested	Number of samples positive	Number of Samples tested	Number of samples positive
N/A	N/A	35.000 ¹	9	N/A	N/A

¹: only tests on breeding farms. In addition we carry out microbiological tests in hatcheries (approx 50.000 per year)

6.3 Data on infection

Not applicable.

6.4 Data on vaccination programmes

Year: 2008
 Animal species: poultry, breeding flocks
 Region: The Netherlands

Total number of herds	Total number of animals	Information on vaccination programme	
		Number of herds in programme	Number of animals vaccinated
891	6.753.000	410	3,4 million
			approx 7 million

PS:
 100% of parent layer flocks are vaccinated
 50% of parent poultry meat flocks are vaccinated
 grandparent flocks are not vaccinated

7. TARGETS

7.1 Targets related to testing

7.1.1 Targets on diagnostic tests

Year: 2010

Species: poultry, breeding flocks

Region	Type of test	Target population	Type of sample	objective	Number of planned tests
Netherlands	MSRV	Breeding flocks	faeces	monitoring	35.000 ¹

¹: only tests on breeding farms. In addition we carry out microbiological tests in hatcheries (approx 50.000 per year)

7.1.2 Targets on testing flocks

Year: 2010
 Situation on date: December 2008
 Animal species: Poultry
 Disease: Salmonella
 Region: NL

Table 12: Targets on testing of flocks

Type of flock	Total number of flocks	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	Number of flocks expected to be positive			Number of flocks expected to be depopulated			Total number of animals expected to be slaughtered or destroyed			Expected quantity of eggs destroyed (number)			Expected quantity of eggs channelled to egg products (number)				
						A1	A2	A3	A4	A3	A4	A3	A4	A3	A4	A3	A4	A3	A4	A3		
Grandparent, poultry meat	130	630.000	130	630.000	129	1	0	0	1	0	0	4.945	0	0	44.312	0	0	0	0	0	0	
Parent rearing, poultry meat	410	7.700.000	410	7.700.000	410	1	0	0	1	0	0	18.827	0	0	0	0	0	0	0	0	0	
Parent, poultry meat	675	5.200.000	675	5.200.000	675	3	1	2**	4	2	0	30.718	15.359	658.972	329.486	658.972	329.486	0	0	0	0	
Grandparent layers	18	85.000	18	85.000	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Parent rearing layers	56	857.000	56	857.000	56	1	0	0	1	0	0	15.636	0	0	0	0	0	0	0	0	0	
Parent, layers	68	787.000	68	787.000	68	1	0	1**	1	1	0	11.708	11.708	146.344	146.344	146.344	146.344	146.344	0	0	0	146.344

A1 = Salmonella Enteritidis, A2 = Salmonella Typhimurium, A3 = other serotypes, A4 = Salmonella Enteritidis of Salmonella Typhimurium.

** When culling of Salmonella Hadar, Salmonella Virchow or Salmonella infantis will be necessary these numbers are expected. The estimated costs are mentioned separately (see chapter 8)

7.2 Targets on vaccination

Year: 2010
 Animal species: poultry, breeding flocks
 Region: The Netherlands

Total number of herds	Total number of animals	Targets on vaccination programme		
		Number of herds in programme	Number of herds vaccinated	Number of animals vaccinated
891	6.753.000	410	410	3,4 million
				approx 7 million

PS:
 100% of parent layer flocks are vaccinated
 50% of parent poultry meat flocks are vaccinated
 grandparent flocks are not vaccinated

8. DETAILED ANALYSIS OF THE COSTS OF THE PROGRAMME

Table 13: Detailed analysis of the costs estimate of the programme for 2010

Costs related to	Specification	Number of units	Unitary cost in Euro	Total amount in Euro	Community funding requested (yes/no)
1. TESTING					
1.1. Cost of official analysis					
	Number of bacteriological tests (cultivation) planned to be carried out in the framework of official sampling (every flock 3 sampling, per sampling 2 tests)	5346	18,39	98.313	Yes
	Number of serotyping of relevant isolates tests planned to be carried out	200	33,80	6.760	Yes
			Subtotal A1	105.073	
1.2 Costs of official sampling		2673	104	277.992	No
1.3 Other costs					
Animal Feed Treatment					
		5.987.000	0,2	1.197.400	No
2. VACCINATION OR TREATMENT					
2.1 purchase of vaccine					
	Number of purchase of vaccine doses planned (see par 7.2)	7 million	0,07	490.000	Yes
			Subtotal A2	490.000	

Costs related to	Specification	Number of units	Unitary cost in Euro	Total amount in Euro	Community funding requested (yes/no)
3. SLAUGHTER AND DESTRUCTION					
3.1. Compensation of animals	Poultry meat (see table 7.1.2)				
<u>Grandparent:</u>	1 flock	4.845	30,65	148.499	Yes
<u>Parent rearing:</u>	1 flock	18.827	8,73	164.360	Yes
<u>Parent:</u>	6 flocks	46.632	10,79	503.159	Yes
			Subtotal A3	816.018	
	Layers (see table 7.1.2)				
<u>Parent rearing:</u>	1 flock	15.636	9,5	148.542	Yes
<u>Parent:</u>	2 flocks	23.176	11,75	272.318	Yes
			Subtotal A4	420.860	
3.2 Transport costs	X	X	X	X	No
3.3 Destruction costs					
	All animals under 3.1	109.116	1	109.116	Yes
			Subtotal A5	109.116	
3.4 Loss in case of slaughtering	X		X	X	No
3.5 Costs of treatment of products					
<u>Hatchery (eggs)</u>	Grandparent	121.125	1	121.125	Yes
	Parent	1.745.200	0,18	314.136	Yes
			Subtotal A6	435.261	
4. CLEANING AND DISINFECTON	X	X	X	X	X
5. SALARIES	X	X	X	X	X
6. CONSUMABLES AND SPECIFIC EQUIPMENT	X	X	X	X	X
7. OTHER COSTS	X	X	X	X	X

TOTAL COSTS REQUESTED FOR REFUNDING IN 2010 FOR BREEDING FLOCKS

Cost of official analysis	(Subtotal A1)	€ 105.073
Costs of vaccination:	(Subtotal A2)	€ 490.000
Compensation of eradicated animals	(Subtotal A3 + A4)	€ 1.236.878
Destruction costs:	(Subtotal A5)	€ 109.116
Cost of treatment of products:	(Subtotal A6)	€ 435.261
	TOTAL	€ 2.376.328

Annex to Veterinary Control Programme for Salmonella in breeding flocks for 2010 by the Netherlands

The Netherlands confirms that provisions in below-mentioned legislation will be followed and implemented in 2010:
the provisions of paragraph 1, 2 (frequency of sampling) 3 and 4 (results and reporting) (particularly provisions on confirmatory sampling) of the Annex of Commission Regulation (EC) No 1003/2005 and 213/2009.

**PROPOSED
VETERINARY CONTROL PROGRAMME
FOR
SALMONELLA IN LAYING HEN FLOCKS
PRESENTED FOR 2010*
BY
THE NETHERLANDS**

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

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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 31-01-2011

Reference of this document: Final version

Geographical Area: The Netherlands

Contact: J.N. (Hans) Schouwenburg
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Date sent to the Commission: 30-04-2009

2. HISTORICAL DATA ON THE EPIDEMIOLOGICAL EVOLUTION OF ZONOTIC SALMONELLOSIS

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

2.1 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 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.

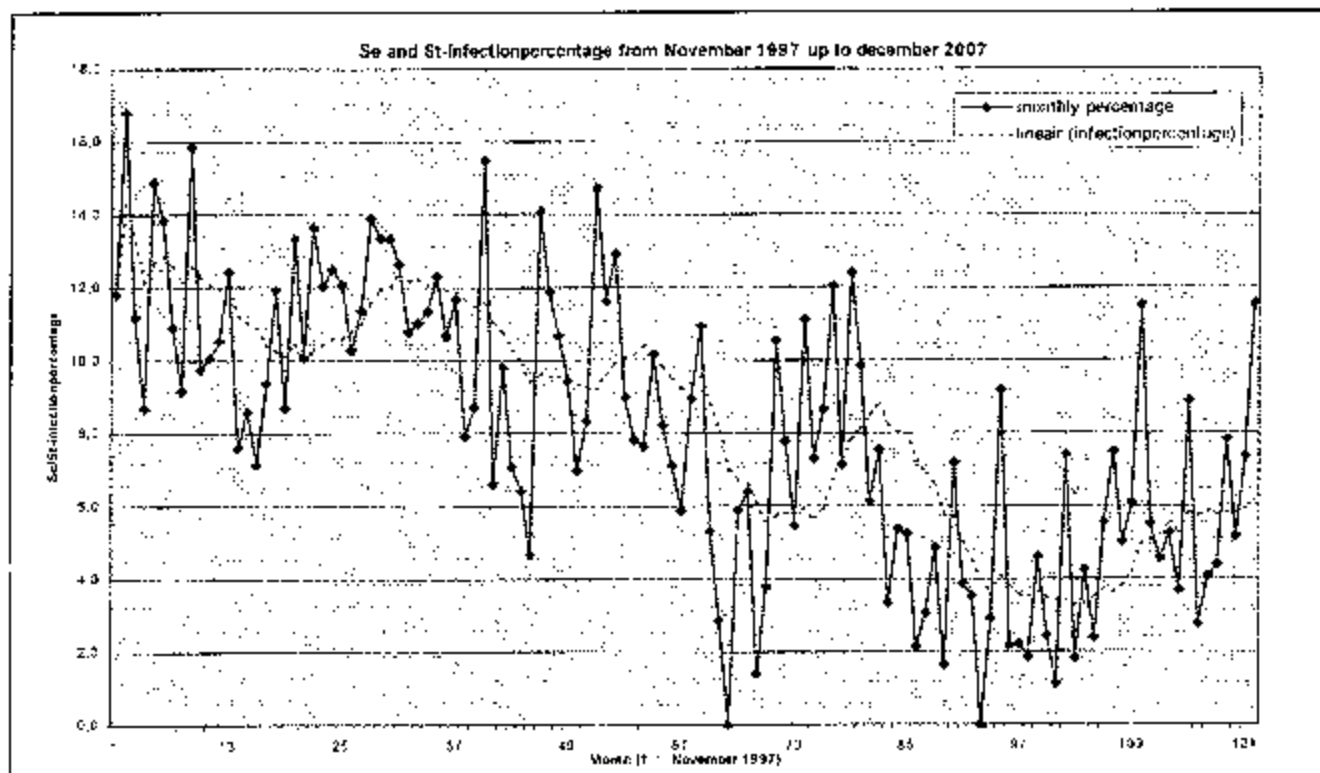


Figure 1: SE and ST infections in layers, based on serological results 1997 – 2007 (source PPE)

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

Year	Number of flocks	ST			
		SE infected	% SE infected	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

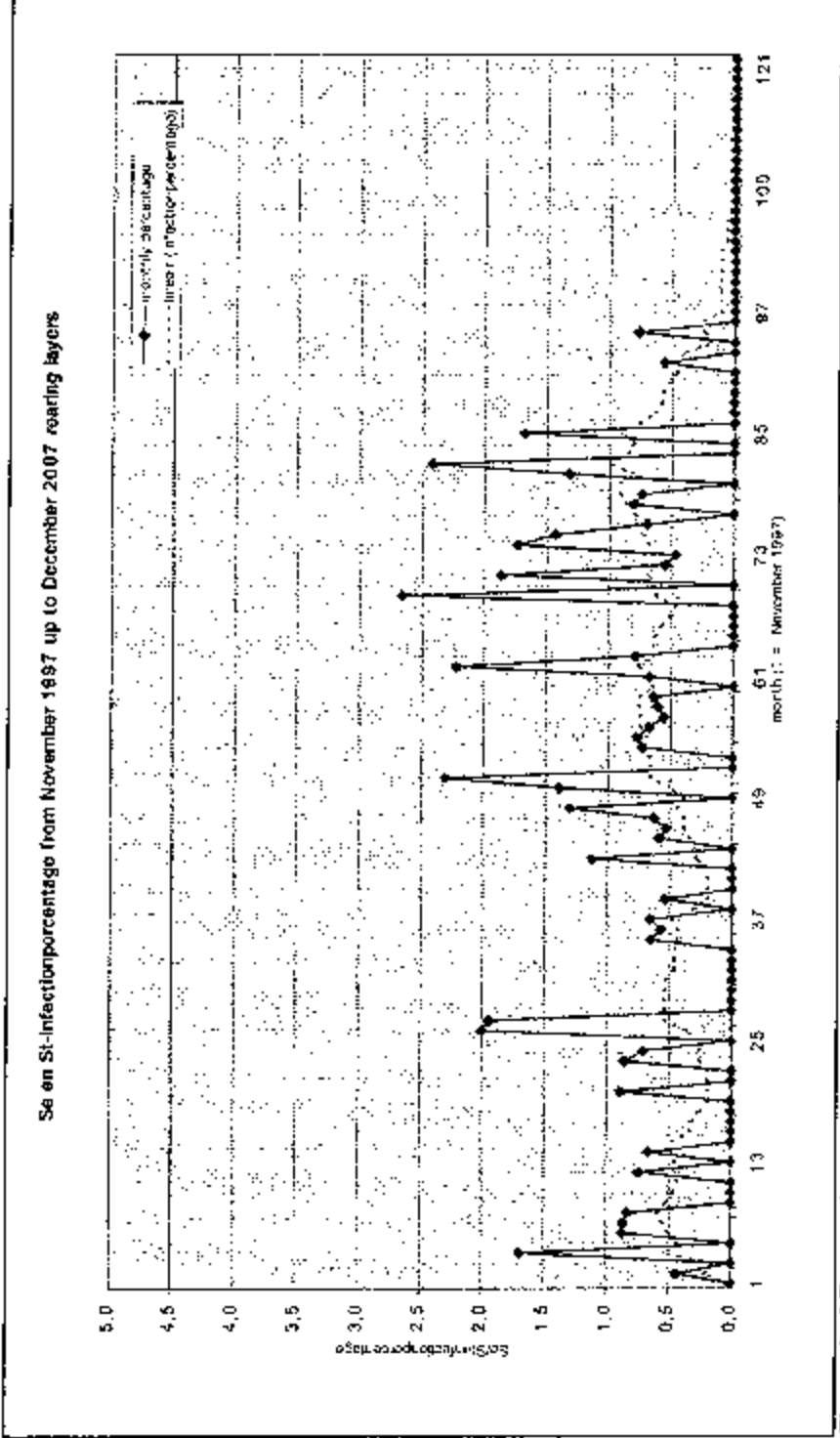


Figure 2: SE and ST infections in rearing layers, based on serological results 1997 – 2007 (source GD)

2.2 Poultry meat

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 poultry meat production chain. The plan was introduced with the aim to decrease the number of Salmonella infections (in slaughtered broilers) to less than 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 (2003/2160 EU), 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 2006. 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.

Percentage flocks infected with Salmonella
(Period January 2000 - December 2008)

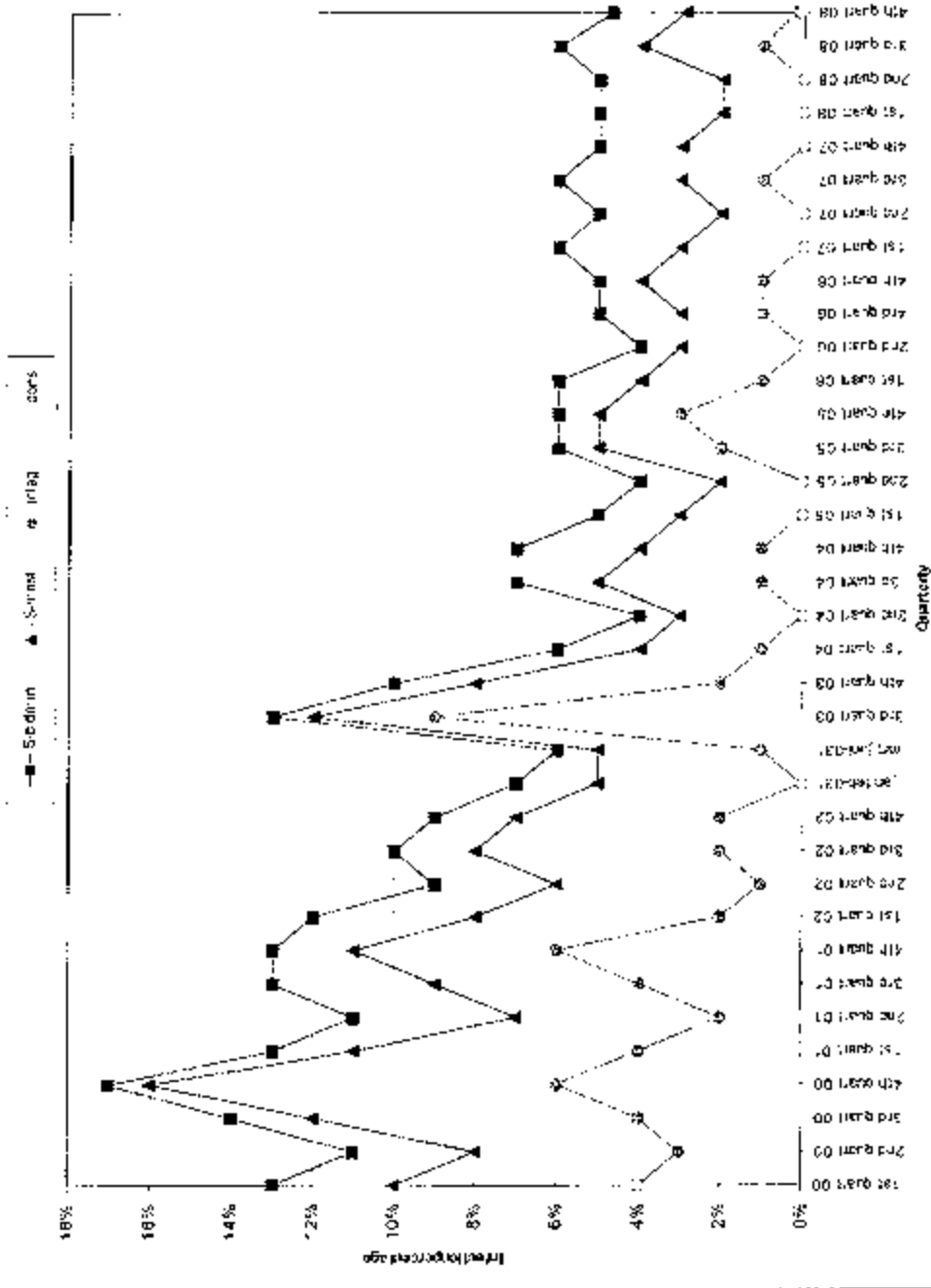


Figure 3: Percentages of Salmonella spp. positive samples taken from different links of the production chain per quarter (source PPE, 2009).

In the next figure the infection percentages in the slaughterhouses is shown.

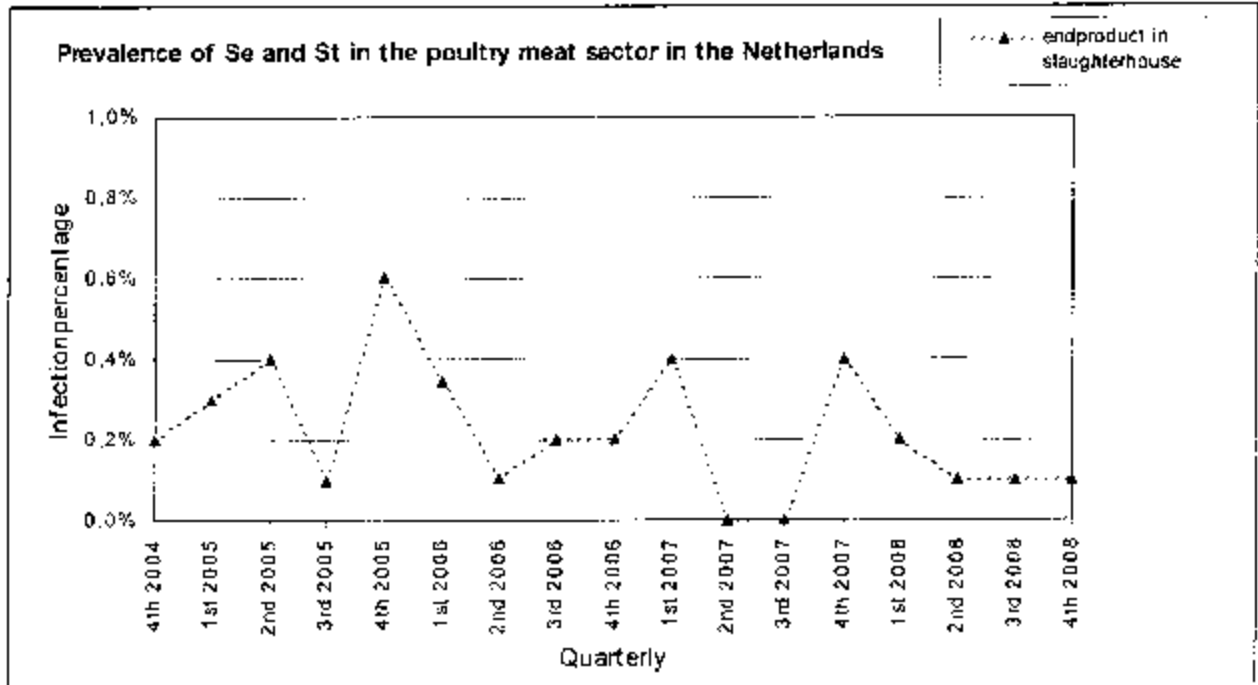


Figure 4: Prevalence of Se en St at end product in the poultry meat sector at the slaughterhouse in the Netherlands for the period 4th quarter 2004 till 4th quarter 2008

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 positive 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 the laying hen flocks. Starting-point is an infection percentage of 7.8 in 2006.

3.2 Monitoring of the Veterinary Control Programme

In Table 2 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 drawn out.

Table 2: 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).
Laying hens	Every 15 weeks (as of the age of 24 weeks +/- 2 weeks): samples of faecal material.

3.2.1 Laying flocks

A. Monitoring through the operator

The test frequency is laid down in the directives of the PPE. 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 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:

- 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.
- 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:

- In one flock per year per holding comprising at least 1.000 birds;
- At the age of 24 +/- 2 weeks in laying flocks housed in buildings where *Salmonella* was detected in the preceding flock;
- 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.
- In all other laying flocks on the holding in case SE or ST are detected in one laying flock on the holding;
- 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.

3.2.2 Rearing layers

In "Verordening Hygiëne Voorschriften Pluimveehouderij 2007" regulations of monitoring the incidence of SE / ST are stated. These regulations are ongoing. 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. The test results are analysed by Animal Health Service and reported to the PPE. When a positive sample is found, GD will carry out a verification test at the holding.

3.3 Measures to be taken in case of Salmonella positive findings

3.3.1 Laying hens

Measures to be taken in case of SE / ST positive findings in laying hen flocks are:

- a) verification in case of suspicion;
- After verification with a positive result:
- b) after professional cleaning and disinfection a swab test of the poultry house must be done, executed by a by the PPE acknowledged company;
 - c) 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 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 28 weeks of age, the flock can be eradicated

If a SE/ST-positive flock is over 28 weeks of age then the flock will stay in the programme and will be monitored according to the programme (every 15 weeks).

3.3.2 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".

3.4 Measures in Action Plan Salmonella in egg production 2001+

Components of current Action Plan Salmonella in egg production 2001+:

- a) hygiene measurements;
- b) cleaning and disinfection;
- c) sampling;
- d) exchange sampling results throughout the chain;
- e) measures taken in case of Salmonella infection.

3.5 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 1 January 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 executes the implementation of the programme. The Ministry of Agriculture, Nature and Food Quality is the central authority and supervising this implementation. In Figure 5, all organisations involved are mentioned, including their relation to the programme.

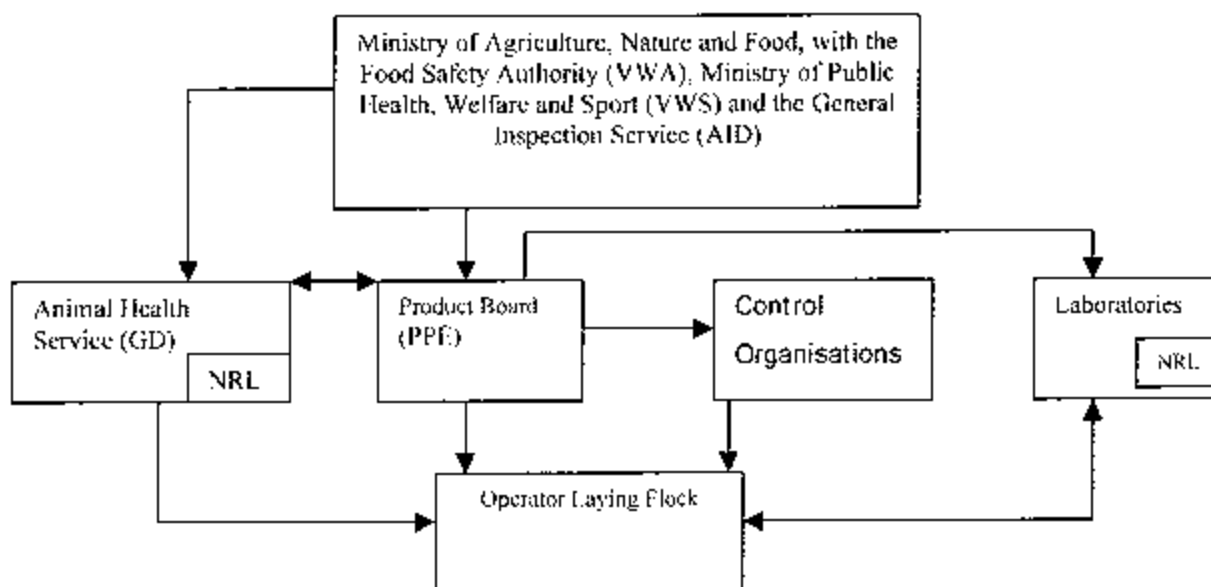


Figure 5: Organisational scheme of the institutes involved in the programme concerning the control of Salmonella in poultry

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 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 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.

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.

In the Netherlands parts of the parent rearing flock are vaccinated. On this moment there is no central database with information on the number of vaccinated flocks. In the layer production sector Salmonella vaccines are used for parent rearing flocks and rearing layer flocks. Estimated is that almost all the rearing parent flocks and over 90% of the rearing layers are vaccinated.

The vaccines that commonly used are:

Parent rearing flocks: SG9R (Intervet), TAD Vac E en Vac T (Lohmann), Nobilis Salenvac T (Intervet)

Rearing layers: SG9R (Intervet), TAD Vac E (Lohmann) and Gallivac SE (Meriat).

Antimicrobials

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

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".

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.

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).

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)":

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 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 health, is outlined in the graph below:

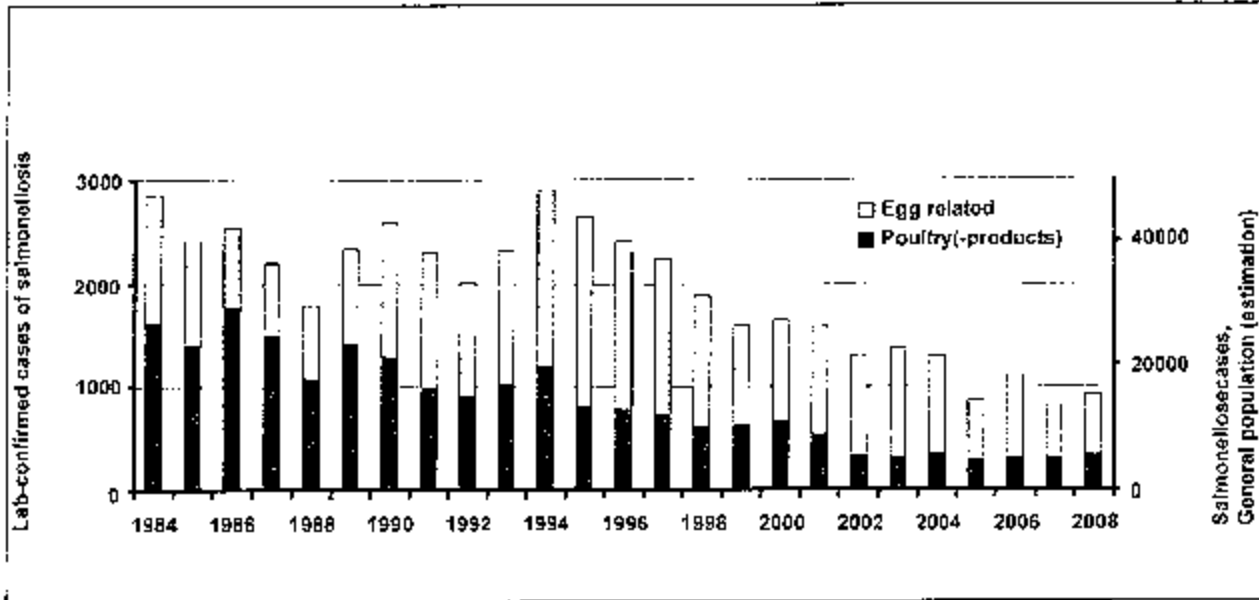


Figure 6: Occurrence of human cases of Salmonellosis

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: 2002 - 2007
 Situation on date: April 2008
 Disease: Salmonella
 Animal species: Poultry
 Region: NL

Table 3: Number of positive laying hen flocks and rearing layer flocks 2002-2007

Year	Type of flock	Total number of flocks	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked	Number of positive flocks		Number of flocks depopulated		Total number of animals slaughtered or destroyed	Quantity of eggs destroyed (number or kg)		Quantity of eggs channelled to egg products (numbers)	
							Se	St	Se / St	Other		Se / St	Other	Se / St	Other
2003	Laying hens	864	11.254.780	864	11.254.780	864	59	3	0	0	0	0	0	0	0
	Rearing layers	1.457	29.741.225	1.457	29.741.225	1.457	9	3	0	0	0	0	0	0	0
2004	Laying hens	1.500	21.170.533	1.500	21.170.533	1.500	101	3	0	0	0	0	0	0	0
	Rearing layers	1.648	33.995.087	1.648	33.995.087	1.648	8	5	0	0	0	0	0	0	0
2005	Laying hens	1.952	27.715.152	1.952	27.715.152	1.952	64	3	0	0	0	0	0	0	0
	Rearing layers	1.691	32.423.798	1.691	32.423.798	1.691	2	0	0	0	0	0	0	0	0

						Number of positive flocks	Number of flocks depopulated or slaughtered	Total number of animals slaughtered or destroyed	Quantity of eggs destroyed (number or kg)	Quantity of eggs channelled to egg products (numbers)
	layers									
2006	Laying hens	1.878	28.022.408	1.878	1.878	85	6	0	0	0
	Rearing layers	1.561	31.233.603	1.561	1.561	0	1	0	0	0
2007	Laying hens	1.870	30.100.000	1.870	1.870	109	0	0	0	0
	Rearing layers	1.386	28.100.000	1.386	1.386	0	0	0	0	0
2008	Laying hens	2346 ²	35.750.000	2346	2346	61	1	0	0	156 million
	Rearing layers	1116	31.200.000	1116	1116	0	0	0	0	0

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. In 2008 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

year: 2008
 animal species: laying hens
 Region: The Netherlands

Description of the used serological tests: ELISA in blood
 Description of the used microbiological tests: MSRV method in faeces
 Description of the used other tests: N/A

Serological tests		Microbiological tests		Other tests	
Number of Samples tested	Number of samples positive	Number of Samples tested	Number of positive	Number of Samples tested	Number of samples positive
1100	0	6000	62	N/A	N/A

6.3 Data on Infection

Year: 2003 -2008
 Animal species: Laying hens
 Region: The Netherlands

Table 4: Number of flocks and animals infected 2003 - 2007

Year	Number of flocks infected (Se + St)	Number of animals infected
2003	62	992.000
2004	104	1.664.000
2005	67	1.072.000
2006	91	1.456.000
2007	109	1.744.000
2008	62	992.000

¹ In 2008 the monitoring changed from serological to bacteriological testing.

6.4 Data on vaccination programmes

Year: 2008
 Animal species: laying hens
 Region: The Netherlands

Total number of herds	Total number of animals	Information on vaccination programme	
		Number of herds in programme	Number of animals vaccinated
2346	35,7 million	Approx 90%	24,3 million
			approx 67 million

PS:

The number of animals vaccinated in a year is lower than the total number of hens in production. This is because 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: 2010

animal species: laying hens

Region	Type of test	Target population	Type of sample	objective	Number of planned tests
Netherlands	ELISA	Rearing layers	blood	monitoring	1.100
Netherlands	MSRV	Laying hens	faeces	monitoring	6.000

7.1.2 Targets on testing of flocks

Year: 2010
 Situation on date: December 2008
 Animal species: Poultry
 Disease: Salmonella
 Region: NL

Table 5: Targets on testing of flocks

Type of flock	Total number of flocks	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	Number of flocks expected to be positive		Number of flocks expected to be depopulated		Total number of animals expected to be slaughtered or destroyed		Expected quantity of eggs to be destroyed (number)	Expected quantity of eggs channelled to egg products (number)
						Se	St	Se / St	Oth	er	Se / St		
Laying hens	2.346	35.750.000	2.346	35.750.000	2.346	80	5	8	0	128.000	0	0	215.000.000
Reatin g layers	1.116	31.100.000	1.116	31.100.000	1.116	1	1	2	0	54.000	0	0	0
Total	3.238	58.200.000	3.238	58.200.000	3.238	111	6	13	0	225.000	0	0	215.000.000

7.2 Targets

7.2.1 Targets on vaccination

Year: 2010
 Species: laying hen flocks
 Region: The Netherlands

Total number of herds eligible	Total number of animals	Targets on vaccination programme		
		Number of herds in programme	Number of herds vaccinated	Number of animals vaccinated
2346	35,7 million	Approx 1800	Approx. 1550	24,3 million
				Number of vaccindoses approx 67 million

8. DETAILED ANALYSIS OF THE COSTS ESTIMATE OF THE PROGRAMME

Table 6: Detailed analysis of the costs estimate of the programme for 2010

Costs related to	Specification	Number of units	Unitary cost in Euro	Total amount in Euro	Community funding requested (yes/no)
1. TESTING					
1.1. Cost of Official analysis	Number of bacteriological tests (cultivation) planned to be carried out in the framework of official sampling (one analysis per flock per year)	2.346	18,39	43.143	Yes
	Number of serotyping of relevant isolates tests planned to be carried out	200	33,80	6.760	Yes
1.2 Costs of official sampling			Subtotal A1	49.903	yes
1.3 Other costs					
Animal Feed Treatment		2346	106,75	250.436	No
2. VACCINATION OR TREATMENT					
	Number of purchase of vaccine doses planned (see par 7.2.1)	67 million	0,06	4.020.000	Yes
		35.750.000	0,0016	57.200	No

Costs related to	Specification	Number of units	Unitary cost in Euro	Total amount in Euro	Community funding requested (yes/no)
			Subtotal A2	4.020.000	
3. SLAUGHTER AND DESTRUCTION					
3.1. Compensation of animals.	See table 7.1.2				
	Rearing (2 flocks)	54000	4	216.000	Yes
	Layers (8 flocks)	128000	5	640.000	Yes
			Subtotal A3	856.000	
3.2 Transport costs.		X	X	X	No
3.3 Destruction costs					
	Number of animals culled (see 7.1.2)	182.000	1	182.000	Yes
			Subtotal A4	182.000	
3.4 Loss in case of slaughtering			X	X	No
3.5 Costs of treatment of products.		X	X	X	No
4. CLEANING AND DISINFECTON		X	X	X	No
5. SALARIES		X	X	X	No
6. CONSUMABLES AND SPECIFIC		X	X	X	No

Costs related to	Specification	Number of units	Unitary cost in Euro	Total amount in Euro	Community funding requested (yes/no)
EQUIPMENT					
7. OTHER COSTS					
Layers	Channelling of eggs of Se/St infected flocks	212.829.120	0,02	4.256.582	Yes
			Subtotal A5	4.256.582	

TOTAL COSTS REQUESTED FOR REFUNDING IN 2010 FOR LAYING HEN FLOCKS

Cost of Official analysis	(subtotal A1) €	49.903
Costs of vaccination	(subtotal A2) €	4.020.000
Compensation of eradicated animals	(subtotal A3) €	856.000
Destruction costs	(subtotal A4) €	182.000
Other costs	(subtotal A5) €	4.256.582
	TOTAL €	9.364.485

Annex to Veterinary Control Programme for Salmonella in laying hen flocks for 2010 by the Netherlands

The Netherlands confirms that provisions in below-mentioned legislation will be followed and implemented in 2010: the provisions of paragraph 1, 2 (frequency of sampling) 3 and 4 (results and reporting) (particularly provisions on official sampling) of the Annex of Commission Regulation (EC) No 1186/2006.

**PROPOSED
VETERINARY CONTROL PROGRAMME
FOR**

**SALMONELLA IN BROILERS
PRESENTED FOR 2010***

**BY
THE NETHERLANDS**

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

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1. IDENTIFICATION OF THE PROGRAMME

Member state: The Netherlands

Disease: Infection of animals with zoonotic *Salmonella* spp

Year of implementation: 1-1-2009 until 31-01-2011

Reference of this document: final version

Geographical Area: The Netherlands

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2. HISTORICAL DATA ON THE EPIDEMIOLOGICAL EVOLUTION OF ZOOTIC SALMONELLOSIS

The Netherlands has two programmes to control the prevalence of *Salmonella*, one for the poultry meat 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 poultry meat chain and the egg production chain.

Poultry meat

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 poultry meat production chain. The programme obligatory for all poultry meat 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 than 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 1 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 2008. Figure 1 represents only the faecal sampling at the broiler farm.

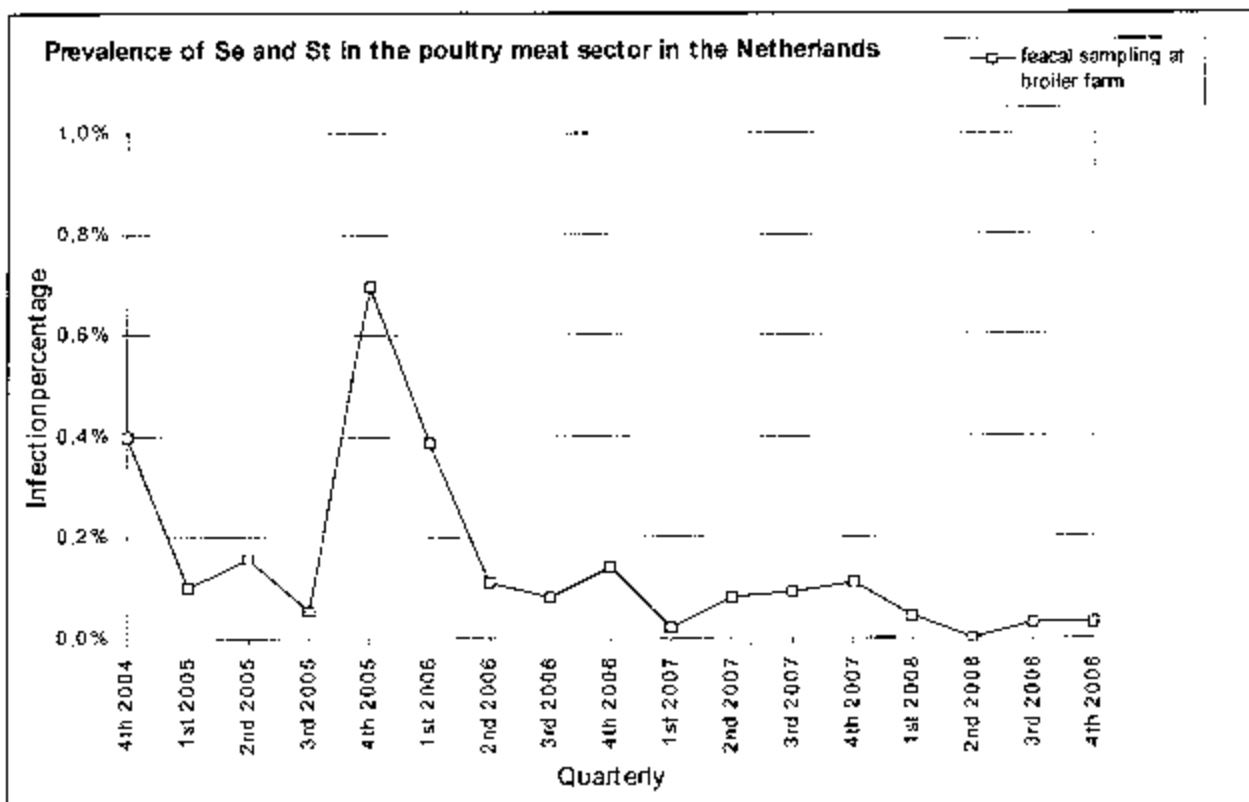


Figure 1: prevalence of Se en St in faecal samples in the poultry meat sector in the Netherlands for the period 4th quarter 2004 till 4th quarter 2008.

Figure 2 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 2008. Figure 2 represents only the end product sampling at the slaughterhouse.

Figure 1 and figure 2 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.

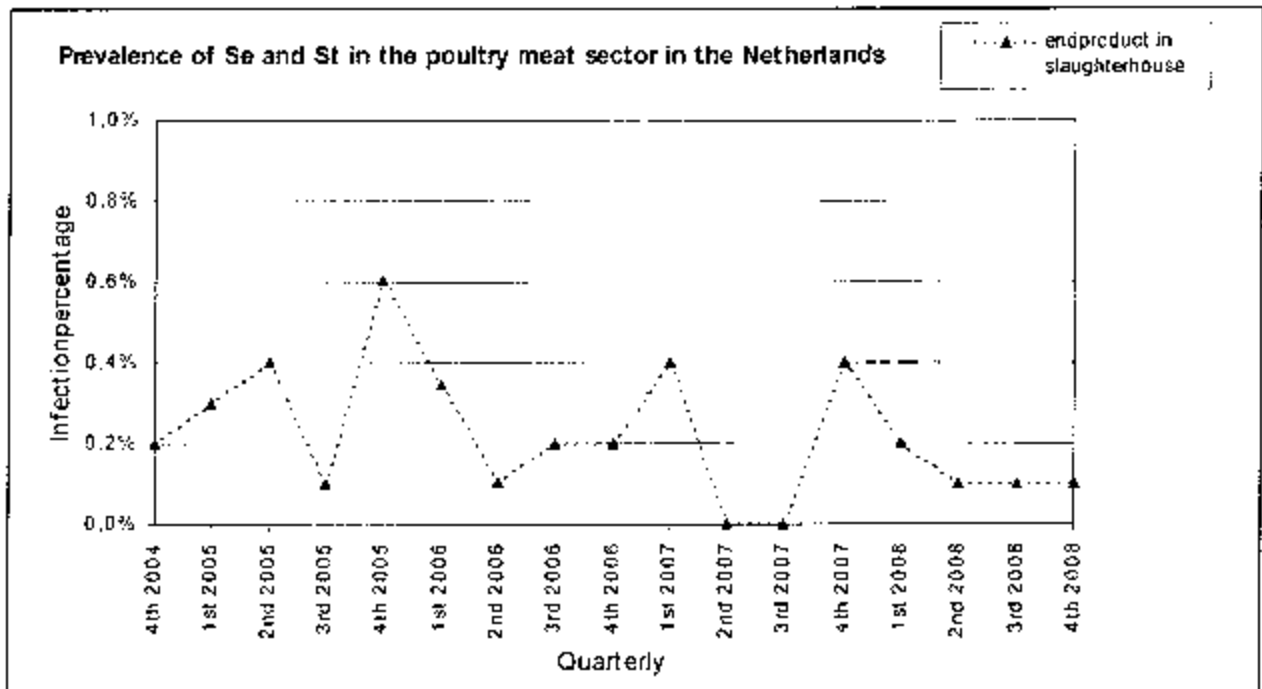


Figure 2: prevalence of Se en St at end product in the poultry meat sector in the Netherlands for the period 4th quarter 2004 till 4th quarter 2008

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 2008. 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 2008. 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 2008.

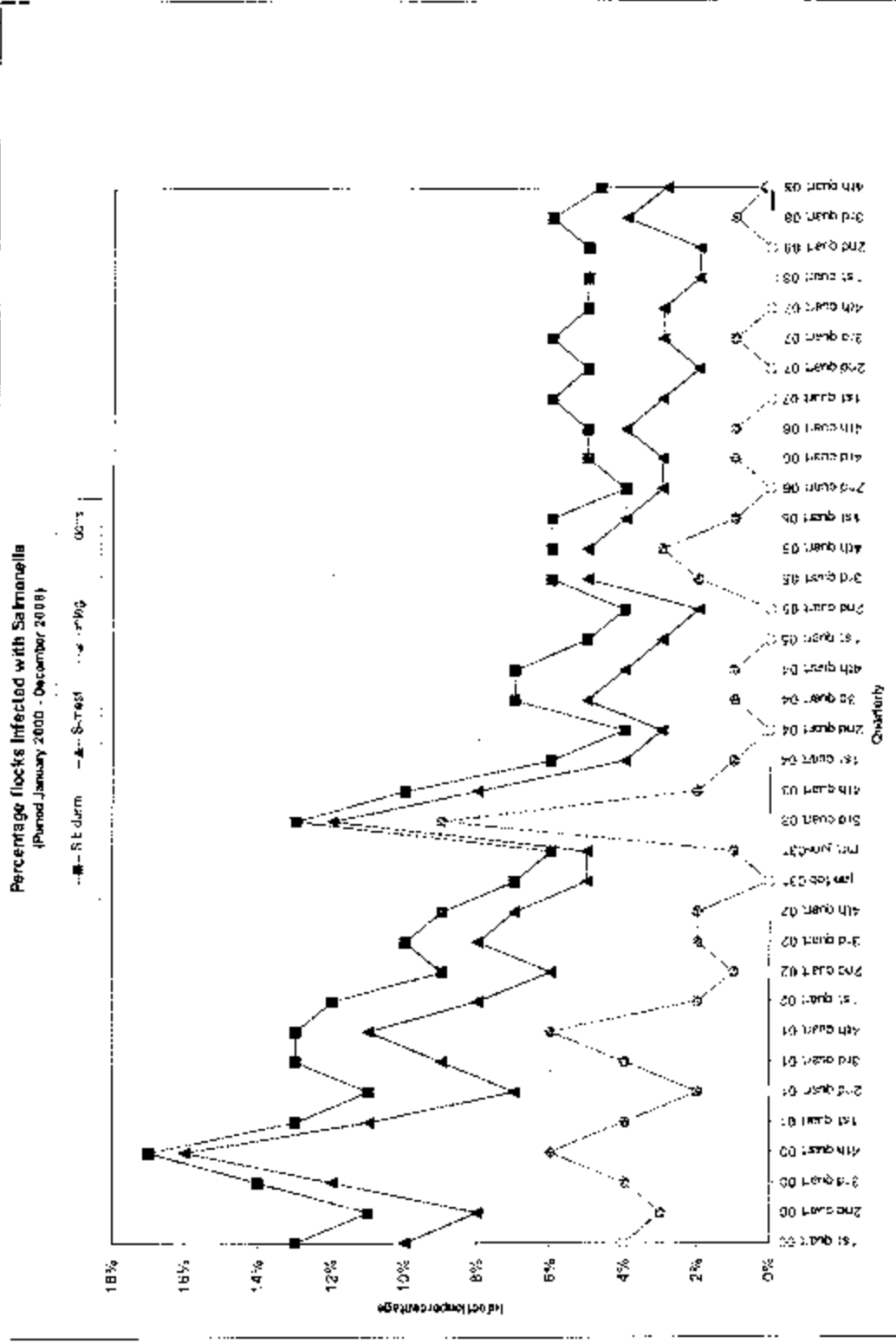
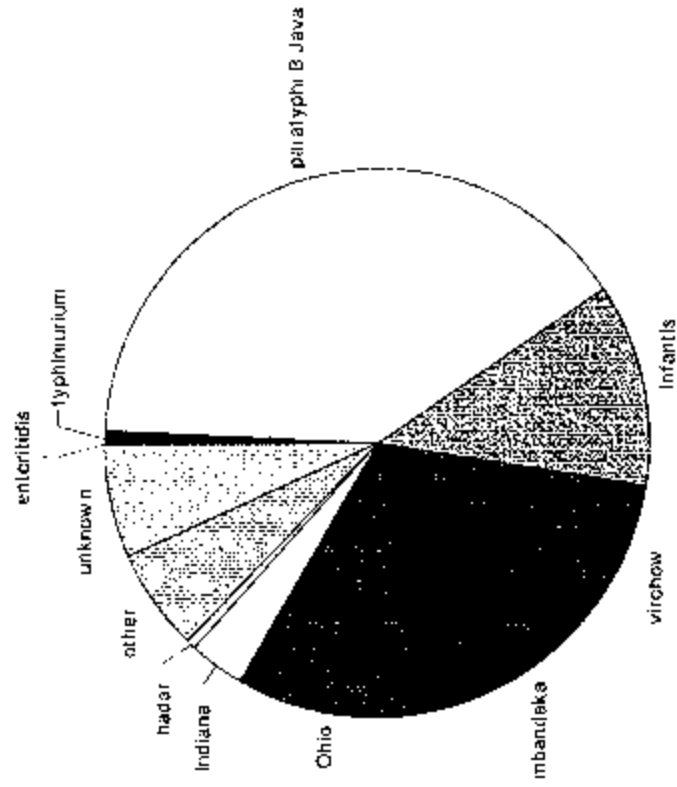


Figure 3: Percentages of Salmonella spp. positive samples taken from different links of the production chain per quarter (source PPE, 2009).

Table 1: Percentages of Salmonella spp. positive samples taken from different links of the production chain per quarter (PPE, 2009).

Quart	S-intestine	S-faeces	Boxpaper	Fluff
4 th quart 2008	5%	3%	0%	0%
3 rd quart 2008	6%	4%	1%	0%
2 nd quart 2008	5%	2%	0%	0%
1 st 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	8%	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.



Serotyping of faecal sampling (bootswabs) Salmonella (4th quarter 2008)

Figure 4: Serotyping of faecal sampling Salmonella, 4th quarter 2008 (PVE 2009)

Figure 5: percentage end product infected with Salmonella spp. in the slaughterhouse (source PPE, 2009)

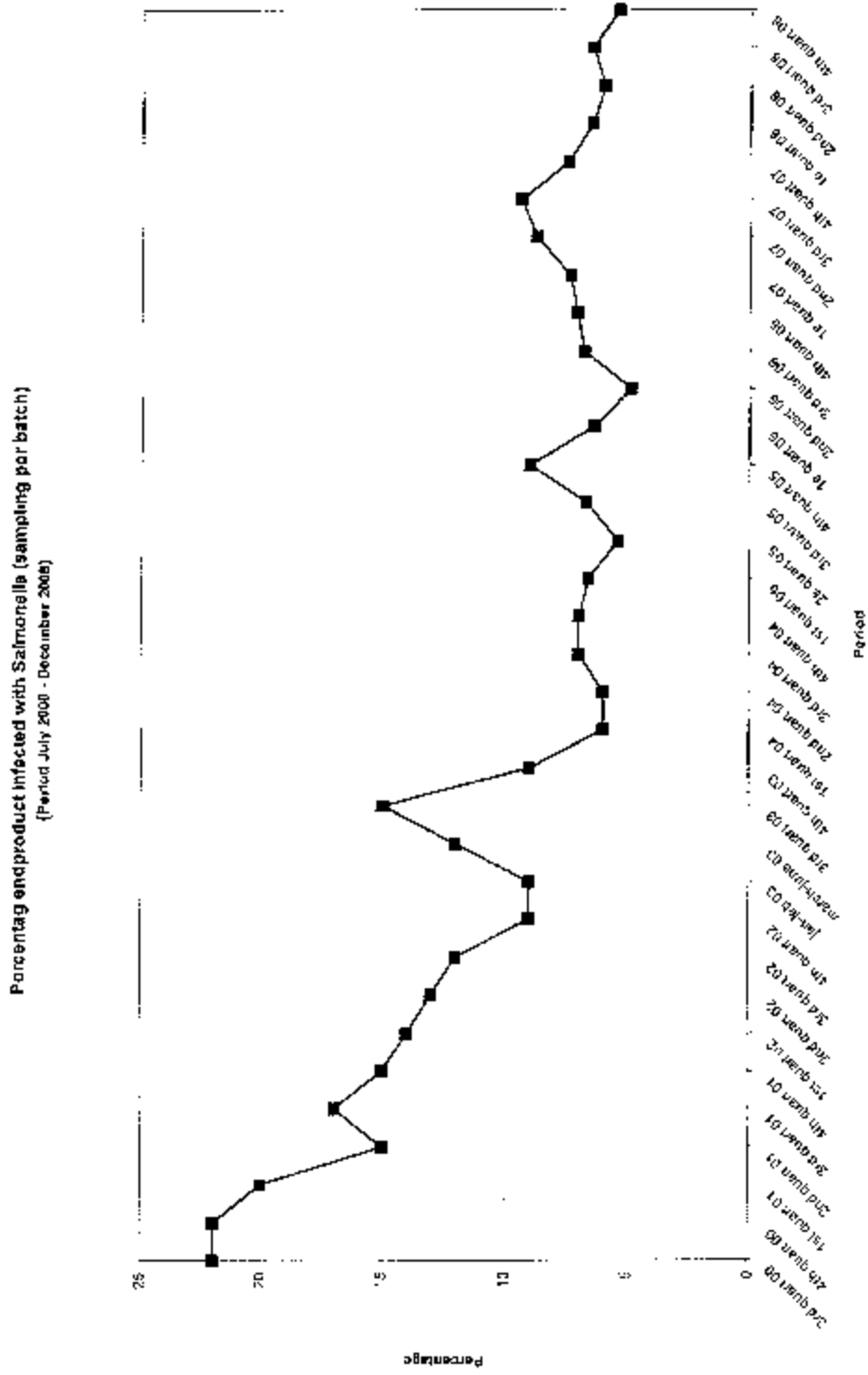
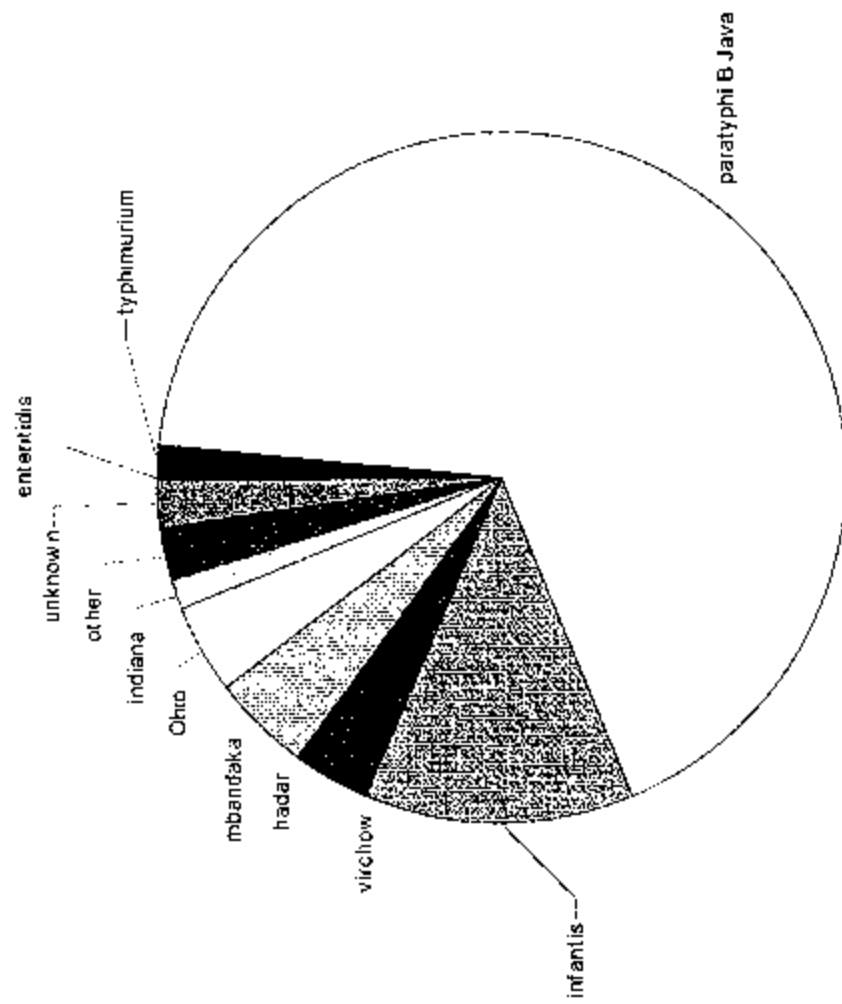


Table 2: Percentage end product infected with Salmonella spp. at the slaughterhouse (PVE, 2009)

End product	Salmonella
4 th quart 2008	5%
3 rd quart 2008	7%
2 nd quart 2008	6%
1 st quart 2009	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.



**Serotyping endproduct sampling Salmonella
(4th quarter 2008)**

Figure 6: Serotyping endproduct infected with Salmonella 4th quarter 2007 (PVE, 2009)

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+.

In Table 3 and 4 prevalence of Se and St are shown for rearing layers and laying flocks for the period 1997 – 2007 in the Netherlands.

Table 3: SE and ST infections in layers at rearing age (1997 – 2007).

Year	SE (%)	ST (%)
2007	0.0	0.0
	0.0	0.1
2006		
2005	0.1	0.0
2004	0.5	0.3
2003	0.6	0.2
2002	0.7	0.1
2001	0.4	0.2
2000	0.2	0.2
1999	0.3	0.1
1998	0.4	0.0
1997	0.3	0.0

Table 4: SE and ST infections in layers, based on serological results 1997 – 2007 (source GD)

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

*Start of programme November 1997

3. DESCRIPTION OF THE SUBMITTED PROGRAMME

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.

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.

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.

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 from each batch are taken from the skin (25 grams). At the cutting plant each day a sample is taken from file, drumstick or wing, which is analysed at Salmonella as well. Each positive sample has to be analysed to a serotype.

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.

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:

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 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.
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.

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 2009.

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 5, all organizations involved are mentioned, including their relation to the programme.

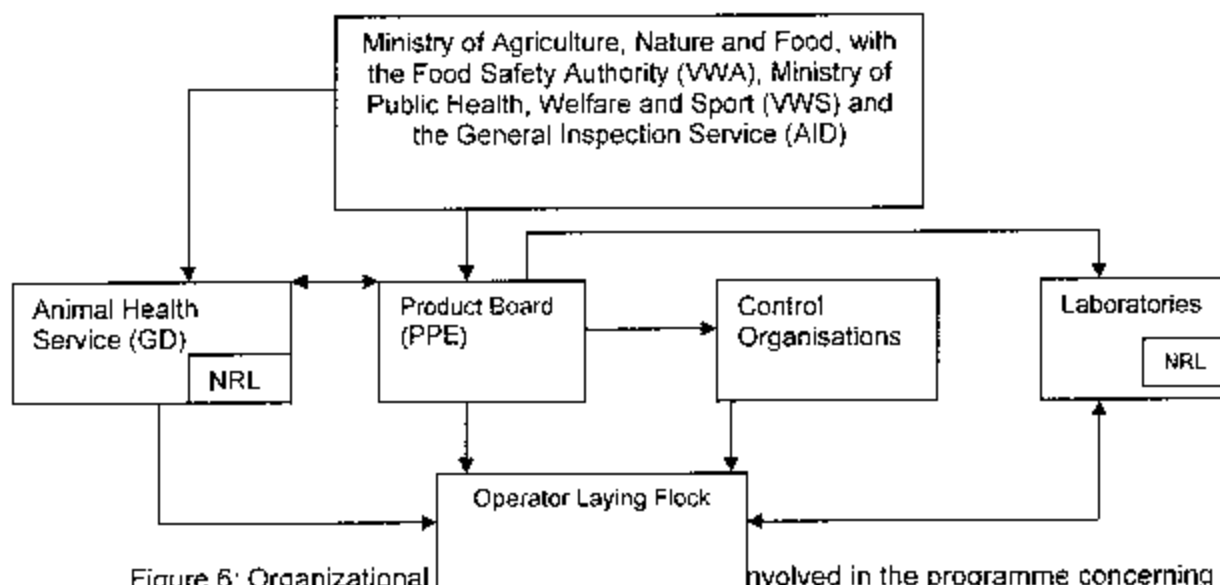


Figure 6: Organizational structure involved in the programme concerning the control of Salmonella in poultry

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 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.

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 send 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.

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.

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 accordance 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 2008 in the Netherlands, is outlined in the graph below:

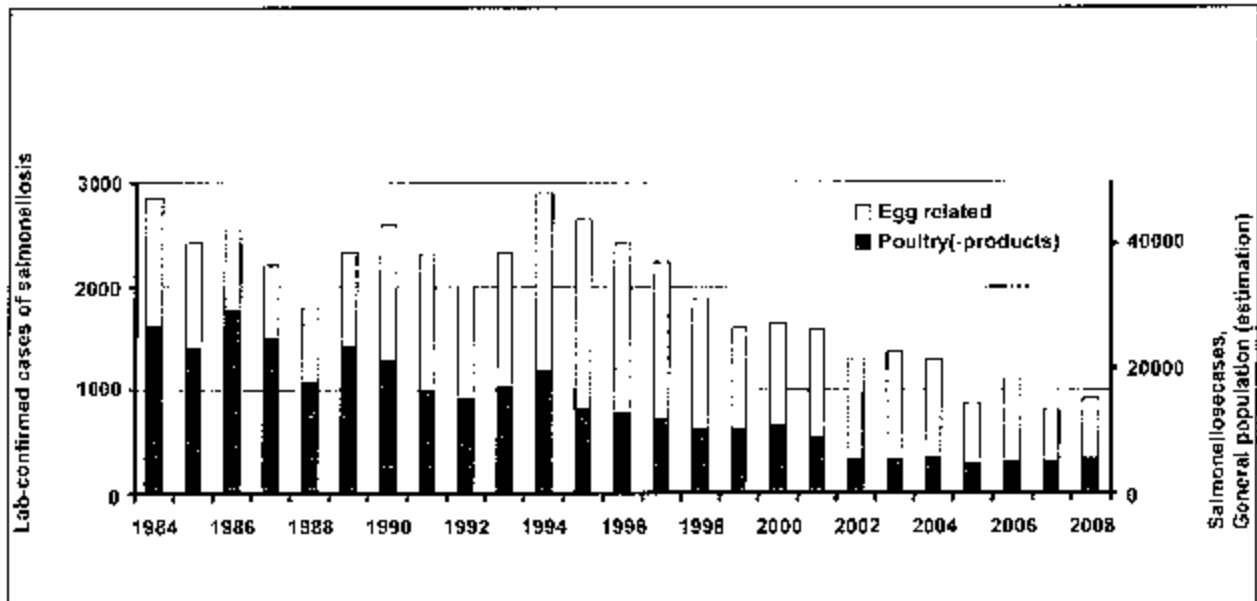


Figure 7: Occurrence of human cases of Salmonellosis in the Netherlands

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: 2003 - 2008
 Situation on date: April 2009
 Disease: Salmonella
 Animal species: Poultry
 Region: NL

Table 5: Number of positive flocks 2003-2008

Year	Type of flock	Total number of flocks	Total number of animals	Total number of flocks under the programme	Total number of animals under the programme	Number of flocks checked		Number of positive flocks		Number of flocks depopulated			Total number of animals slaughtered or destroyed	
								Se	St	Se / St	Other	Se / St	Other	
2003	-													
2004	-													
2005	broilers	7.195	350.752.093	7.195	350.752.093	7.195	50	39						
2006	broilers	6.486	335.619.964	6.486	335.619.964	6.486	24	18						
2007	broilers	6.705	350.582.589	6.705	350.582.589	6.705	5	21						
2008	broilers	6.530	356.702.503	6.530	356.702.503	6.530	1	5						

6.2 Stratified data on surveillance and laboratory tests

year: 2009 (first quarter)
 species: broilers
 Region: The Netherlands

Description of the used serological tests: N/A

Description of the used microbiological tests: MSRV method in faeces

Description of the used other tests: N/A

Serological tests		Microbiological tests		Other tests	
Number of Samples tested	Number of samples positive	Number of Samples tested	Number of positive	Number of Samples tested	Number of samples positive
N/A	N/A	1.600	56	N/A	N/A

6.3 Data on infection

Not applicable.

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: 2010

species: broilers

Region	Type of test	Target population	Type of sample	objective	Number of planned tests
Netherlands	MSRV	broilers	faeces	monitoring	6.500

7.1.2 Targets on testing of flocks

Year: 2009
 Situation on date: 2008
 Animal Species: Poultry
 Disease: Salmonella
 Region: NL

Table 6: Targets on testing of flocks

Type of flock	Broilers
Total number of flocks	6 530
Total number of animals	356 702 503
Total number of flocks under the programme	6 530
Expected number of flocks to be checked	6 530
Number of flocks expected to be positive*	1
	SE
	ST
	Other
Number of flocks expected to be depopulated	713
	SE or ST
	Other
Total number of animals expected to be slaughtered or destroyed (number or kg)	0
	SE or ST
	Other

*including

7.2 Targets on vaccination

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

8. DETAILED ANALYSIS OF THE COST OF THE PROGRAMME

Table 7: Detailed analysis of the costs estimate of the programme for 2010

Costs related to	Specification	Number of units	Unitary cost in Euro	Total amount in Euro	Community funding requested (yes/no)
1. TESTING					
1.1 Costs of official analysis					
	Number of bacteriological tests (cultivation) planned to be carried out in the framework of official sampling (10% of flocks/year)	653	18,39	12.009	Yes
	Number of serotyping of relevant isolates tests planned to be carried out	100	33,80	3.380	yes
1.2 Costs of sampling			Subtotal A1	15.389	yes
1.3 Other costs					
Animal Feed Treatment		653	104	67.912	No
2. VACCINATION OR TREATMENT					
		356.702.503	0,0016	570.724	No
3. SLAUGHTER AND DESTRUCTION					
3.1. Compensation of animals		X	X	X	No
3.2 Transport costs		X	X	X	No
3.3 Destruction costs		X	X	X	No
3.4 Loss in case of		X	X	X	No

Costs related to	Specification	Number of units	Unitary cost in Euro	Total amount in Euro	Community funding requested (yes/no)
slaughtering					
3.5. Costs of treatment of products	X	X	X	X	No
4. CLEANING AND DESINFECTON					
	Cleaning and disinfection of houses with infected flocks	21.402.150	0,033	706.271	Yes
			Subtotal A2	706.271	yes
5. SALARIES	X	X	X	X	X
6. CONSUMABLES AND SPECIFIC EQUIPMENT	X	X	X	X	X
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 the poultry house	350.582.589	0,033	11.569.225	Yes
	Salmonella test after cleaning and disinfection	1.046	18,39	19.236	Yes
			Subtotal A3	12.027.311	yes

TOTAL COSTS REQUESTED FOR REFUNDING IN 2010 FOR BROILER FLOCKS

Costs of official analysis	(subtotal A1) €	15.389
Cleaning and disinfection	(subtotal A2) €	706.271
Other costs	(subtotal A3) €	12.027.311
	Total €	12.748.971

Annex to Veterinary Control Programme for Salmonella in broilers for 2010 by the Netherlands

The Netherlands confirms that the provisions of Commission Regulation (EC) No 646/2007 will be followed and implemented in 2010.