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

Control programme of Salmonella in breeding, laying and broiler flocks

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

Romania

* in accordance with Commission Decision 90/424/EC
Technical programme for the control of Salmonella in breeding poultry in Romania
(cofinancing programme)
2009

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1. Identification of the programme

Member State: Romania
Disease: Zoonotic Salmonella in breeding poultry

Year of implementation: 2009
Reference of this document: National Sanitary Veterinary and Food Safety Authority
No. 2660/29.04.2008
Contact: Dr. Niculae LAZĂR,
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Date sent to the Commission: 30. 04. 2008
2. **Historical data on the epidemiological evolution of the disease:**

In Romania, at the end of 2007, estimated poultry population was **56 623 832**. In 417 poultry commercial holdings or poultry farms were kept 24 909 137 poultry and 31 714 695 kept in 3.2 millions backyards. The National Programme for surveillance, prevent and control of animal diseases and zoonoses sets out the monitoring arrangements for all flocks of domestic fowl.

In **2002** have been examined 52 088 (1 967 positive), bacteriological samples for zoonotic Salmonella, in **2003**, 111 424 (436 positive), in **2004** 75 877 (15 216 positive) and in **2005** have been examined 75 816 bacteriological samples for zoonotic Salmonella (5 664 positive results).

In **2006** have been examined 81 052 (471 positive).

In **2007** have been examined 82 352 (113 positive)

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**The incidence of various serotypes in poultry, in 2007**

<table>
<thead>
<tr>
<th>NO.</th>
<th>SEROTYPE</th>
<th>NO. OF STRAINS</th>
<th>TOTAL NO. OF STRAINS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>S. Concord</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>S. Djuga</td>
<td>13</td>
<td>113</td>
</tr>
<tr>
<td>3</td>
<td>S. Enteritidis</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>S. Give</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>S. Hadar</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>S. Infantis</td>
<td>0</td>
<td>113</td>
</tr>
<tr>
<td>7</td>
<td>S. Kortbus</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>S. Montevideo</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
3. Description of the submitted programme

Objectives

The Community target for the reduction of Salmonella enteritidis, Salmonella hadar, Salmonella infantis, Salmonella typhimurium, and Salmonella virchow in breeding flocks of Gallus gallus shall be 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. The main objective of our programme for the reduction of Salmonella enteritidis, Salmonella hadar, Salmonella infantis, Salmonella typhimurium and Salmonella virchow in breeding flocks of Gallus gallus shall be 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.

The area of implementation

The programme is implemented in Romania, covering all the national territory.

Target animal population
The National Salmonella Control Programme includes every type of breeding flock of the domestic fowl, Gallus gallus comprising at least 250 birds, in the broiler and table eggs sectors. The numbers of holdings, breeding flocks and birds in the broiler and table-eggs sector in 2007 are shown in table 2.

Table 2. Number of holdings, flocks comprising at least 250 birds and birds (breeding poultry) in the broiler and table egg sectors (2007)

<table>
<thead>
<tr>
<th></th>
<th>Holdings</th>
<th>Birds</th>
</tr>
</thead>
<tbody>
<tr>
<td>REARING STAGE</td>
<td>26</td>
<td>1,683,380</td>
</tr>
<tr>
<td>ADULT STAGE</td>
<td>8</td>
<td>604,666</td>
</tr>
<tr>
<td>BREEDING</td>
<td>34</td>
<td>2,288,046</td>
</tr>
<tr>
<td>POULTRY IN ALL</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

INCUBATION HEAVY BREEDS

<table>
<thead>
<tr>
<th>S.C. Avicolosa</th>
<th>Production Incubation</th>
<th>Incubation Hatching</th>
<th>Eggs</th>
<th>Stock</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>EGGS</td>
<td>EGGERS</td>
<td>%</td>
<td>PEEPS</td>
</tr>
<tr>
<td>PRODUSE</td>
<td>INCUBATE</td>
<td>UTILIZE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>---------</td>
<td>---------</td>
<td>---------</td>
<td>----</td>
<td>-------</td>
</tr>
<tr>
<td>A. Performing poultry establishments (classified according to the sex)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ADRIC &amp; RACAU</td>
<td>17000.00</td>
<td>12134.00</td>
<td>75.88</td>
<td>11591.00</td>
</tr>
<tr>
<td>TRANSAVIA</td>
<td>8540.00</td>
<td>7287.50</td>
<td>86.81</td>
<td>7193.70</td>
</tr>
<tr>
<td>BURAU</td>
<td>7715.80</td>
<td>5876.84</td>
<td>76.22</td>
<td>5810.20</td>
</tr>
<tr>
<td>JASII</td>
<td>5357.22</td>
<td>4253.51</td>
<td>80.97</td>
<td>4127.08</td>
</tr>
</tbody>
</table>
Sample-taking programmes

The National Salmonella Control Programme encompasses the following serovars of zoonotic Salmonella: Salmonella enteritidis, Salmonella typhimurium, Salmonella hadar, Salmonella infantis and Salmonella virchow.

The sampling-taking programme will be in accordance to Regulation 2160/2003 EC and Regulation 1003/2005 EC. We have also taken into account Regulation 1177/2006 EC and some amendments of Regulation 1168/2006 EC.
4. Measures of the submitted programme

4.1. Summary of measures under the programme

Duration of the programme: 3 years

First year: 2007
- Control
- Testing
- Slaughter of positive animals
- Killing of positive animals
- Vaccination
- Treatment
- Disposal of product
- Monitoring
- Other measures

Last year: 2009
- Eradication
- Testing
- Slaughter of positive animals
- Killing of positive animals
- Extended slaughter or killing
- Disposal of products
- Other measures

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

Central authority charged with supervising and coordinating the departments responsible for implementing the programme is N.S.V.F.S.A. – National Sanitary Veterinary and Food Safety Authority. Departments responsible for implementing the programme are the 42 county S.V.F.S.D. (Sanitary Veterinary and Food Safety Directions).

1. Ministry of Agriculture and Rural Development (M.A.R.D.):
-decides on the proposal of CVO on compensation of some costs and damages.

2. N.S.V.F.S.A.
- proposal of the plan of disease control.
- determination and evaluation of the control in Romania
- adoption of measures based on the disease situation in Romania
- submission of reports to the E.C.
- proposes to M.A.F.R.D. the budget for performance of the control plan.

3. S.V.F.S.D. (Sanitary Veterinary and Food Safety Directions).
- coordination of the programme at the county level
- official sampling is performed by the zonal official veterinarian

4. I.D.A.H. Institute of Diagnosis and Animal Health is the national reference laboratory concerning animal health and was also designated as NRL for Salmonella in live animals.


1. General duties

(a) To collaborate with the Community reference laboratory in their area of competence.
(b) To coordinate, as appropriate, the activities of laboratories responsible for the analysis of samples in accordance with, in particular, Articles 4, 5 and 7 of Directive 2003/99/EC.

(c) To coordinate the activities of laboratories responsible for the analysis of samples in accordance with Article 12(1) of Regulation (EC) No 2160/2003/EC.

(d) Where appropriate, to organise comparative tests between the laboratories referred to under (b) and (c) and to assure an appropriate follow-up of such comparative testing.

(e) To ensure the dissemination to the competent authority and to the laboratories referred to under (b) and (c), of the information that the Community reference laboratory supplies.

(f) To provide scientific and technical assistance to their national competent authority in their area of competence.

2. Specific functions and duties

(a) To participate, as appropriate in the monitoring schemes for salmonella and related anti-microbial resistance pursuant to Directive 2003/99/EC and in the analysis and testing of salmonella pursuant to Regulation (EC) No 2160/2003.

(b) To conduct, as appropriate, training courses for the benefit of staff from relevant laboratories.
(c) To inform, as appropriate, the Community reference laboratory on aspects related to salmonella vaccine strains and other specific control methods.

(d) To gather data and information on the activities developed and methods used in relevant laboratories and to inform the Community reference laboratory thereof.

(e) To keep abreast of developments in salmonella epidemiology.

5. S.V.F.S.L.

There are 41 county Sanitary Veterinary and Food Safety Laboratories, only 21 of them apply quality assurance systems that conform to the requirements of the current EN/ISO standard and are designated by NSVFS to perform bacteriological examinations in the framework of the programme under the supervision of IDAn-NRL for Salmonella.

6. H.I.P.S.V.H.

Hygiene Institute for Public Sanitary Veterinary Health is the national reference laboratory concerning the expertise for alimentary products of animal origin and also the national reference laboratory for Salmonella – public sanitary veterinary health.

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

The programme will be applied to the whole territory of Romania. The administrative boundaries are the boundaries of the country.
4.4. Measures implemented under the programme

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

Poultry holdings shall be registered and sanitary veterinary approved in order to be able to operate. The legal framework for carrying out commercial activity with poultry and poultry products consists of:

- Order of the President of the National Sanitary Veterinary and Food Safety Authority no 144/2006 for the approval of the Sanitary veterinary norm on animal health conditions governing intra-Community trade in, and imports from third countries of, poultry and hatching eggs transposing Council Directive 90/539/EEC on animal health conditions governing intra-Community trade in, and imports from third countries of poultry and hatching eggs.

- Order no 62/2007 of National Sanitary Veterinary and Food Safety Authority President with regard to the approval of the Sanitary Veterinary and Food Safety Norm regarding sanitary veterinary and food safety approval procedure of the activities carried out by legal persons.

In order to be sanitary veterinary approved, poultry holdings shall satisfy, in accordance with the legislation in force, the following conditions:

- appropriate facilities and operation;

- application of the “Program of surveillance, prevention and animal disease control, of the diseases transmissible from animals to humans, animal protection and environment protection” approved by Order of the National Sanitary Veterinary and Food Safety Authority President.

- at least one inspection visit per year by the official veterinarian;

- additional checks to verify the compliance of the establishment with the hygiene measures and the operation of the establishments.
Each poultry holding receives a distinct approval number, number that can be the same with the one given in compliance with the Council Regulation no. 2872/75/EEC.

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

Not applicable.

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


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

A breeding flock shall be considered positive for the purpose of verifying the achievement of the Community target, when presence of relevant salmonella (other than vaccine strains) was detected in one or more faecal samples (or if there is a secondary official confirmation in the Member State, in the relevant faecal samples or birds organ samples), taken at the holding. This shall not apply in exceptional cases of suspect breeding flocks where salmonella detection at the holding at the initiative of the operator was not confirmed by official sampling.

The cumulative results from sampling and testing in breeding flocks at holding level shall be accounted for, i.e. each breeding flock shall be counted only once irrespective of the number of sampling and testing operations. Positive breeding flocks shall be counted only once, irrespective of the number of sampling and testing operations.

According to Regulation 2180/2003/EC, holdings with breeding flocks infected with S. enteritidis, S. typhimurium, will be placed under official veterinary supervision and no bird may leave the house concerned unless the competent authority has authorized the slaughter and destruction under supervision or slaughter in a slaughterhouse designated by the competent authority. According to Order MAA no. 156/1999, the zonal official veterinarian establish appropriate measures, together with the local representative of the Ministry of Health and perform the epidemiological inquiry, perform the evaluation of status oh health of other flocks.

Other measures, in accordance to Regulation 2180/2003/EC include:

1. The measures laid down in points 3 to 5 must be taken whenever the analysis of samples carried out in accordance with part B indicates the presence of Salmonella enteritidis or Salmonella typhimurium in a breeding flock of Gallus gallus in the circumstances set out in point 2.
2. (a) If the competent authority has approved the method of analysis used for samples taken in accordance with part B, it may require that the measures laid down in points 3 to 5 be taken when such analysis detects the presence of Salmonella enteritidis or Salmonella typhimurium.

(b) Otherwise, the measures laid down in points 3 to 5 must be taken whenever the competent authority confirms a suspicion of the presence of Salmonella enteritidis or Salmonella typhimurium arising from the analysis of samples carried out in accordance with part B.

3. Non-incubated eggs from the flock must be destroyed. However, such eggs may be used for human consumption if they are treated in a manner that guarantees the elimination of Salmonella enteritidis and Salmonella typhimurium in accordance with Community legislation on food hygiene.

4. All birds, including day-old chicks, in the flock must be slaughtered or destroyed so as to reduce as much as possible the risk of spreading salmonella. Slaughtering must be carried out in accordance with Community legislation on food hygiene. Products derived from such birds may be placed on the market for human consumption in accordance with Community legislation on food hygiene and, once applicable, part E. If not destined for human consumption, such products must be used or disposed of in accordance with Regulation (EC) No 1774/2002 of the European Parliament and of the Council of 3 October 2002 laying down health rules concerning animal by-products not intended for human consumption(1).

5. Where eggs for hatching from flocks in which Salmonella enteritidis or Salmonella typhimurium is present are still present in a hatchery, they must be destroyed or treated in accordance with Regulation (EC) No 1774/2002.

Whenever the analysis of samples indicates the presence of other serovars of zoonotic Salmonella in a breeding flock of Gallus gallus, it is mandatory an increase of biosecurity measures.
Control of the use of feed antibiotics by official sampling

1. In cases where the competent authority has reasons to suspect false negative results at the sampling at the holding, an official confirmatory sampling may be performed, composed of faeces and birds (for the detection of salmonella in organs). The sampling may include a sample of birds taken at random from within each house of birds on the farm, normally up to five birds per house, unless the authority deems necessary to sample a higher number of birds. The examination shall consist in a test for research of anti-microbials or of bacterial growth inhibitory effect in samples (Hygiene Institute for Public Sanitary Veterinary Health, or their zonal laboratories). A test is considered failed if a positive is found in any of the birds. In case the presence of relevant salmonella is not detected but anti-microbials or bacterial growth inhibitory effect are, sampling of the flock for relevant salmonella and bacterial growth inhibitory effect shall be repeated until no bacterial growth inhibitory effect is detected, or the breeding flock is destroyed. In the latter case, the breeding flock shall be accounted for as an infected breeding flock for the purpose of the Community target.

2. According to National Programme for surveillance, prevent and control of animal diseases and zoonoses, 0.1% of poultry meat production is tested in Hygiene Institute for Public Sanitary Veterinary Health and their zonal laboratories for research of anti-microbials or of bacterial growth inhibitory effect. Positive results regarding birds belonging to commercial holdings of breeding poultry will be as soon as possible reported to S.V.F.S.O and NSVFS and the same procedure as described in point 1. will be applied.

Lifting of restrictions will be approved when:

a) in the restricted territory are not anymore ill or suspect animals;

b) measures of control and prevention including final disinfection under the supervision of the zonal official veterinarian has been completed.

Restocking after the lifting of restrictions must be with chicks or breeding hens satisfying the requirements of Regulation 2160/2003 EC, Regulation 1003/2005 EC
and Order NSVFSA 147/2006. An “all-in, all-out” policy must be followed in each commercial holding.

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

Not applicable.

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

According to: Order NSVFSA 147/2006, Regulation 2160/2003/EC, the following measures are to be adopted in order to prevent the dissemination of Salmonella enteritidis, Salmonella typhimurium, into commercial holdings. Animals from infected flocks belonging to commercial holdings are to be kept isolated and special conditions apply for removal of these animals. No bird may leave the house concerned unless the competent authority has authorized the slaughter and destruction under supervision or slaughter in a slaughterhouse designated by the competent authority. Non-incubated eggs produced by the birds in the house in question must be destroyed on the spot or after appropriate marking be taken under supervision to an approved egg-processing establishment to be heat treated in accordance with the requirements of Directive 89/437/EEC (2). All the birds in the house must be slaughtered in accordance with Annex I, Chapter VI, point 31 (c) of Directive 71/118/EEC, the official veterinarian of the slaughterhouse being informed of the decision to slaughter, in accordance with Annex I, Chapter VI, point 25 (a) of that Directive, or be slaughtered and destroyed so as to reduce as much as possible the risk of spreading salmonella.
4.4.7. **Measures and terms of legislation as regards the control (testing, vaccination, ...) of the disease.**

The legal basis is Regulation 2160/2003/EC and Regulation 1177/2006 EC. In accordance to Regulation 1177/2006 EC:

**Use of antimicrobials**

1. Antimicrobials shall not be used as a specific method to control salmonella in poultry.

2. By way of derogation from paragraph 1, and subject to the conditions specified in points (a), (b) and (c), and in paragraph 3 of this Article, antimicrobials authorised in accordance with Article 5 of Directive 2001/82/EC or Article 3 of Regulation 726/2004/EC may be used in the following exceptional circumstances:

   (a) poultry presenting salmonella infection with clinical signs in a way likely to cause undue suffering to the animals; the infected flocks treated with antimicrobials shall still be considered infected with salmonella; appropriate measures shall be taken in breeding flocks to reduce as much as possible the risk of spreading salmonella through the rest of the breeding pyramid;

   (b) salvaging of valuable genetic material in breeding flocks in order to establish new salmonella-free flocks, including "elite flocks", flocks from endangered breeds, and flocks kept for research purposes; chicks born from hatching eggs collected from poultry treated with antimicrobials shall be subject to fortnightly sampling during the rearing phase, with a scheme aiming to detect 1 % prevalence of relevant salmonella with a 95 % confidence limit;

   (c) authorisation given by the competent authority on a case-by-case basis for purposes other than salmonella control in a flock suspect of salmonella infection, in particular following the epidemiological investigation of a food-borne outbreak or the detection of salmonella at the hatchery or at the holding; however, Member States may decide to allow treatment without prior authorisation in emergency situations, subject to taking samples by an approved veterinarian as defined in point (g) of Article 2 of Regulation (EC) No 854/2004 [7] and reporting the treatment immediately to the competent authority; the flocks shall be considered as infected with salmonella if sampling did not take place in accordance with the provisions in this paragraph.
3. The use of antimicrobials shall be subject to supervision of and reporting to the competent authority. This use shall be based wherever possible on the results of bacteriological sampling and of susceptibility testing.

4. The provisions referred to in this Article shall not apply to substances, micro-organisms or preparations authorised for use as feed additives in accordance with Article 3 of Regulation (EC) No 1831/2003.

Use of vaccines

Vaccination programmes against Salmonella are reducing the shedding and contamination of eggs.

Live salmonella vaccines shall not be used in the framework of national control programmes where the manufacturer does not provide an appropriate method to distinguish bacteriologically wild-type strains of salmonella from vaccine strains.

Live salmonella vaccines shall not be used in the framework of national control programmes in laying hens during production unless the safety of the use has been demonstrated and they are authorised for such purpose in accordance with Directive 2001/82/EC.

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

- Governmental Decision 1415/2004 and Governmental Decision 1580/2005 regarding compensations given for animals slaughtered, killed or otherwise affected for the purpose to rapidly eradicate animal transmissible disease outbreaks.

Rendering and processing of animal wastes

5. General description of the costs and benefits:

Costs of the programme

This programme is in accordance with Council Decision 90/424/ EEC, Commission Decision 2004/450/EC and Council Decision 90/638/ EEC. The detailed financial costs for the programme of control of Salmonella in an narrower sense are laid down under point 8.

These financial resources are necessary among other things to:

- offer the necessary support, upon request from the veterinary services, for the measures of killing, slaughter, transport of animals from the outbreaks,
- offer the necessary support, for temporary or permanent closure of animal holdings, slaughter units, animal origin products processing units,
- set up of an efficient system of collection, transport and neutralization of dead animals and animal wastes,
- offer a system of compensation according to the requested necessity to compensate killed animals for disease control purposes.

Benefits of the programme

The overall aim of the National Salmonella Control Programme is to control the occurrence of Salmonella in the poultry sector on a very low level and thereby protect humans against infection with food-borne salmonellas. It has been known that poultry often harbour latent infections with Salmonella, which may pose a serious human health risk.

The anticipated benefits of this programme are the minimising of human health problems and a consequent reduction in suffering, mortality and health service costs.
6. **Data on the epidemiological evolution during the last two years**

6.1. **Evolution of the disease**

6.1.2. **Data on evolution of the disease**

**Year: 2006**

**Situation on date: 31 December 2006**

**Animal species:** Breeding Poultry, Gallus gallus

<table>
<thead>
<tr>
<th>Region ROMANIA</th>
<th>Type of flock (b)</th>
<th>Total number of flocks (a)</th>
<th>Total number of animals</th>
<th>Total number of flocks under the programme</th>
<th>Total number of animals under the programme</th>
<th>Number of positive flocks (a)</th>
<th>Number of flocks depopulated (b)</th>
<th>Number of flocks slaughtered or destroyed (c)</th>
<th>Total number of animals destroyed (b)</th>
<th>Quantity of eggs destroyed (a)</th>
<th>Quantity of eggs channelled to egg products (a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All regions</td>
<td>Rearing breeding flocks</td>
<td>133</td>
<td>1 550 000</td>
<td>193</td>
<td>1 550 000</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>12 100</td>
<td>15 200</td>
<td>0</td>
</tr>
<tr>
<td>All regions</td>
<td>Adult breeding flocks</td>
<td>227</td>
<td>1 151 700</td>
<td>227</td>
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<td>2</td>
<td>0</td>
<td>2</td>
<td>14 700</td>
<td>17 000</td>
<td>n.a.</td>
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<tr>
<td>Total</td>
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<td>420</td>
<td>2 701 700</td>
<td>420</td>
<td>2 701 700</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>26 800</td>
<td>32 200</td>
<td>0</td>
</tr>
</tbody>
</table>
**Year:** 2007  **Situation on date:** 31 December 2007

**Animal species:** Breeding Poultry, Gallus gallus

<table>
<thead>
<tr>
<th>Region</th>
<th>Type of flock(^\text{(b)})</th>
<th>Total number of flocks(^\text{(a)})</th>
<th>Total number of animals</th>
<th>Total number of flocks under the programme</th>
<th>Total number of animals under the programme</th>
<th>Number of flocks checked (2005)</th>
<th>Number of positive flocks(^\text{(c)})</th>
<th>Number of flocks depopulated(^\text{(d)})</th>
<th>Total number of animals slaughtered or destroyed(^\text{(e)})</th>
<th>Quantity of eggs channelled to egg products number(^\text{(f)})</th>
<th>Quantity of eggs channelled to egg products number(^\text{(g)})</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROMANIA</td>
<td>Rearing breeding flocks</td>
<td>193</td>
<td>1583380</td>
<td>190</td>
<td>1683380</td>
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<td>1</td>
<td>0</td>
<td>2</td>
<td>11700</td>
<td>13200</td>
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<tr>
<td>All regions</td>
<td>Adult breeding flocks</td>
<td>213</td>
<td>664686</td>
<td>215</td>
<td>664686</td>
<td>215</td>
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<td>16000</td>
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<tr>
<td>Total</td>
<td></td>
<td>405</td>
<td>2283046</td>
<td>405</td>
<td>2283046</td>
<td>405</td>
<td>3</td>
<td>0</td>
<td>4</td>
<td>25700</td>
<td>29200</td>
</tr>
</tbody>
</table>

\(^{(a)}\) For zoonotic salmonella indicate the serotypes covered by control programmes: (a1) for Salmonella Enteritidis, (a2) for Salmonella Typhimurium, (a3) for other serotypes specify as appropriate, (a4) for Salmonella Enteritidis or Salmonella Typhimurium.

\(^{(b)}\) For example, breeding flocks (rearing, adult flocks), production flocks, laying hen flocks, etc. Flocks equals herds or as appropriate.

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

\(^{(d)}\) Check means to perform a flock level test under the programme for the presence of Salmonella. In this column a flock should not be counted twice even if it has been checked more than once.
(e) If a flock has been checked, in accordance with footnote (d), more than once, a positive sample should be taken into account only once.

6.2. Stratified data on surveillance and laboratory tests
6.2.1. Stratified data on surveillance and laboratory tests

Years: 2007  
Disease\(^{(a)}\): Zoonotic Salmonella  
Animal species/category\(^{(b)}\): Gallus gallus (breeding poultry)

Description of the used serological tests:

Serological test Rapid whole blood agglutination test RASI (RHAR) is used for blood samples into commercial holdings. When positive results for RASI, further serological tests: Rapid serum agglutination test RSAR and Tube agglutination test RSAL are performed into county laboratories. These tests covers S. Enteritidis and S. Typhimurium.
Serotyping, according to Kaufmann-White scheme for the determination of the Salmonella serotype.

**Description of the used microbiological or virological tests:**

Buffered peptone water  
Rappaport Vassiliadis  
Selenite broth  
Modified brilliant green

**Description of the other used tests:** In some cases, various Salmonella isolates undergo further analysis by means of biochemical and biomolecular methods, but these methods are not routinely used.
<table>
<thead>
<tr>
<th>Region: Romania&lt;sup&gt;(a)&lt;/sup&gt;</th>
<th>Serological tests</th>
<th>Microbiological or virological tests</th>
<th>Other tests</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of samples tested</td>
<td>Number of positive samples</td>
<td>Number of samples tested</td>
</tr>
<tr>
<td>BREEDING POULTRY</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REARING STAGE</td>
<td>8104</td>
<td>16872</td>
<td>18</td>
</tr>
<tr>
<td>ADULT STAGE</td>
<td>10812</td>
<td>6547</td>
<td>13</td>
</tr>
<tr>
<td>TOTAL</td>
<td>19616</td>
<td>23469</td>
<td>31</td>
</tr>
</tbody>
</table>

(a) Disease and animal species if necessary.
(b) Breeders, laying hens, etc, when appropriate
(c) Region as defined in the approved eradication programme of the Member State.
(d) Number of samples tested, all coinfected.
(e) Number of positive samples, all coinfected

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

<table>
<thead>
<tr>
<th>Region: Romania&lt;sup&gt;(a)&lt;/sup&gt;</th>
<th>Number of herds (flocks) infected</th>
<th>Number of infected animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>BREEDING POULTRY</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REARING STAGE</td>
<td>2</td>
<td>11560</td>
</tr>
</tbody>
</table>

24
Year: 2007  
Disease: Zoonotic Salmonella  
Animal species: Gallus gallus (breeding)

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

The percentage (year 2007) of breeding flocks affected by zoonotic Salmonella in breeding flocks covered by the control programme:

For adult breeding flocks = 1.05%

For rearing breeding flocks = 1.39%

6.4. Data on the status of herds at the end of each year: Not applicable
6.5. Data on vaccination programmes

Year: 2007  
Disease\(^{(a)}\): Zoonotic Salmonella  
Animal species: Gallus gallus (breeding)

Description of the used vaccination scheme:

<table>
<thead>
<tr>
<th>Region</th>
<th>Total number of animals</th>
<th>Information on vaccination programme</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number of herds(^{(a)}) in vaccination programme</td>
</tr>
<tr>
<td>Nearing breeding poultry</td>
<td>1663580</td>
<td>190</td>
</tr>
<tr>
<td>Adult breeding poultry</td>
<td>604888</td>
<td>218</td>
</tr>
<tr>
<td>Total</td>
<td>2268468</td>
<td>405</td>
</tr>
</tbody>
</table>

\(^{(a)}\)Diseases and species if necessary
\(^{(b)}\) Region as defined in the approved eradication programme of the Member State
\(^{(c)}\) Herds equal flocks, or holdings as appropriate
\(^{(d)}\) Only for Bovine brucellosis, Ovine and caprine brucellosis (B. melitensis) and zoonotic Salmonella, and as defined in the programme.

7. Targets
7.1. Targets related to testing

7.1.1. Targets on diagnostic tests: to investigate the presence of Salmonella in breeding poultry faeces

7.1.1.1. Number and specification of tests

Disease(a): zoonotic Salmonella  Animal species: breeding poultry

<table>
<thead>
<tr>
<th>Region (b)</th>
<th>Type of the test (c)</th>
<th>Target population (d)</th>
<th>Type of sample (e)</th>
<th>Objective (f)</th>
<th>Number of planned tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>All regions</td>
<td>Bacteriological detection according ISO 6579(2002) modified</td>
<td>190 rearing b. flocks</td>
<td>Pooled faeces</td>
<td>Surveillance, confirmation</td>
<td>Rearing flocks: 190 x 6 times x 1 pooled sample = 1140 samples</td>
</tr>
<tr>
<td>All regions</td>
<td>Bacteriological detection according ISO 6579(2002) modified</td>
<td>215 adult b. flocks</td>
<td>Pooled faeces</td>
<td>Surveillance, confirmation</td>
<td>Adult flocks: 215 x 16 times x 3 pooled samples = 10320 samples</td>
</tr>
<tr>
<td>All regions</td>
<td>Bacteriological detection according to ISO 6579(2002) modified</td>
<td>215 adult b. flocks</td>
<td>Pooled faeces OFFICIAL SAMPLES</td>
<td>Surveillance, confirmation</td>
<td>215 x 3 times x 2 pooled samples =1,290 official samples</td>
</tr>
<tr>
<td>-------------</td>
<td>---------------------------------------------------------------</td>
<td>---------------------</td>
<td>-------------------------------</td>
<td>---------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>All regions</td>
<td>Serotyping according to Kaufmann-White scheme</td>
<td>Salmonella positive flocks</td>
<td>Salmonella isolates OFFICIAL SAMPLES</td>
<td>Determination of the serotype</td>
<td>800</td>
</tr>
</tbody>
</table>

**TOTAL NO. OF SAMPLES AT THE INITIATIVE OF THE OPERATOR/YEAR**

<table>
<thead>
<tr>
<th>TOTAL SAMPLES / YEAR</th>
<th>NO. OF OFFICIAL SAMPLES / YEAR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>11460</td>
</tr>
<tr>
<td></td>
<td>2,090</td>
</tr>
</tbody>
</table>

(a) Disease and species if necessary

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

(c) Description of the test

(d) Specification of the targeted species and the categories of targeted animals (e.g., sex, age, breeding, slaughter animal)

(e) Description of the sample (e.g., blood, serum, milk, ...)

(f) Description of the objective (e.g., qualification, surveillance, confirmation of suspected cases, monitoring of campaigns, seroconversion, control on deleted vaccines, testing of vaccine, control of vaccination)
7.2.1.2. Testing scheme(s)

All breeding flocks are to be tested according Commission regulations 2160/2003 E.C. and 1003/2005 E.C.

In **rearing breeding flocks**, sampling must cover the following phases of production:

- day-old chicks
- four-week-old birds
- two weeks before moving to laying unit.

The samples to be taken must comprise:

(a) in the case of day-old chicks, samples from the internal linings of the boxes in which the chicks were delivered to a holding and from the carcasses of chicks found to be dead on arrival; and

(b) in the case of pullets at four weeks of age or two weeks prior to entering the laying phase, pooled faeces samples made up of separate samples of fresh faeces each weighing not less than 1 g taken at random from a number of sites in the building in which the birds are kept, or, where the birds have free access to more than one building on a particular holding, from each group of buildings on the holding in which the birds are kept;

(c) the number of sites from which separate faeces samples are to be taken in order to make a pooled sample shall be as follows:

<table>
<thead>
<tr>
<th>NO OF BIRDS KEPT IN A BUILDING</th>
<th>NO OF FAECES SAMPLES TO BE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

30
<table>
<thead>
<tr>
<th>Number of Birds</th>
<th>Number of Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-24</td>
<td>Number equal to the number of birds up to a maximum of 20</td>
</tr>
<tr>
<td>25-29</td>
<td>20</td>
</tr>
<tr>
<td>30-39</td>
<td>25</td>
</tr>
<tr>
<td>40-49</td>
<td>30</td>
</tr>
<tr>
<td>50-59</td>
<td>35</td>
</tr>
<tr>
<td>60-89</td>
<td>40</td>
</tr>
<tr>
<td>90-199</td>
<td>50</td>
</tr>
<tr>
<td>200-499</td>
<td>55</td>
</tr>
<tr>
<td>500 or more</td>
<td>60</td>
</tr>
</tbody>
</table>

For 190 rearing flocks estimated for 2009, it means $190 \times 6 \times 1$ pooled sample = 1140 pooled sample = 1140 bacteriological tests.

In adult breeding flocks: all the sampling scheme will take place at the holding:

Routine sampling at the initiative of the operator will take place every 2 weeks:
Sampling shall primarily consist of faecal samples and shall aim to detect a 1% within flock prevalence, with 95% confidence limit. To that effect, the samples shall comprise one of the following:

1. Pooled faeces made up of separate samples of fresh faeces each weighing not less than 1 g taken at random from a number of sites in the building in which the birds are kept, or where the birds have free access to more than one building on a particular holding, from each group of buildings on the holding in which the birds are kept. Faeces may be pooled for analysis up to a minimum of two pools.

The number of sites from which separate faeces samples are to be taken in order to make a pooled sample shall be as follows:

<table>
<thead>
<tr>
<th>Number of birds kept in a building</th>
<th>Number of faeces samples to be taken in the building or group of buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td>250-349</td>
<td>200</td>
</tr>
<tr>
<td>350-449</td>
<td>220</td>
</tr>
<tr>
<td>450-799</td>
<td>250</td>
</tr>
<tr>
<td>800-999</td>
<td>260</td>
</tr>
<tr>
<td>1000 or more</td>
<td>300</td>
</tr>
</tbody>
</table>

2. In cage breeding flocks, sampling may consist of naturally mixed faeces from dropping belts, scrapers or deep pits, depending on the type of house. Two samples of at least 150 g shall be collected to be tested individually:

(i) droppings belts beneath each tier of cages which are run regularly and discharged into an auger or conveyor system;

(ii) droppings pit system in which deflectors beneath the cages are scraped into a deep pit beneath the house;
(iii) droppings pit system in a step cage house when cages are offset and faeces fall directly into the pit.

There are normally several stacks of cages within a house. Pooled faeces from each stack shall be represented in the overall pooled sample. Two pooled samples shall be taken from each flock as described below.

In systems where there are belts or scrapers, these shall be run on the day of the sampling before sampling is carried out.

In systems where there are deflectors beneath cages and scrapers, pooled faeces which has lodged on the scraper after it has been run, shall be collected.

In step-cage systems where there is no belt or scraper system it is necessary to collect pooled faeces from the deep pit.

Droppings belt systems: pooled faecal material from the discharge ends of the belts shall be collected.

**Official routine sampling**

If sampling at the initiative of the operator takes place at the holding, routine sampling shall be carried out on three occasions during the production cycle:

(a) within four weeks following moving to laying phase or laying unit;

(b) towards the end of the laying phase, not earlier than eight weeks before the end of the production cycle;

(c) during the production, at any time sufficiently distant from the samples referred to in points (a) and (b).

For 215 adult flocks estimated for 2009, it means 215 x 16 times x 3 pooled samples = **10320 pooled samples to be taken** at the initiative of the operator = **10320 bacteriological tests**. In the mean time, 215 x 3 times x 2 pooled samples = **1290 official samples to be taken = 1290 bacteriological tests**.
Suspect cases

In exceptional cases where the competent authority has reasons to suspect false negative results at the first official sampling at the holding, a secondary official confirmatory sampling may be performed, composed of faeces or birds (for the detection of salmonella in organs).

In exceptional cases where the competent authority has reasons to suspect false positive sampling performed at the initiative of the operator at the holding, follow-up official sampling may be performed.

Examination of the samples (faecal material samples)

(a) at the laboratory place each sample (or pooled sample as appropriate) into an equal weight of Buffered Peptone Water and mix gently;

(b) allow the sample to soften for 10-15 minutes then mix gently;

(c) immediately after mixing remove 50 g of the mixture and add to 200 ml of Buffered Peptone Water which has been pre-warmed to room temperature;

(d) continue culture of the sample by using the detection method below.

Detection method
The method recommended by the Community Reference Laboratory for Salmonella in Bilthoven, Netherlands, shall be used: the method is a modification of ISO 6579 (2002), where a semi solid medium (MSRV) is used as the single selective enrichment medium. The semi-solid medium should be incubated at 41.5 +/- 1 °C for 2 x (24 +/- 3) hours.

As regards faecal material samples, it is possible to pool incubated BPW enrichment broth for future culture. To do that, incubate both samples in BPW as normal. Take 1 ml of incubated broth from each sample and mix thoroughly then take 0.1 ml of the mixture and inoculate the MSRV plates in the usual way.

**Serotyping**

At least one isolate from each positive sample shall be typed, following the Kaufmann-White scheme. In accordance with Regulation 1168/2006 EC: salmonella strains detected in breeding flocks should be stored for future phagetyping and monitoring of antimicrobial resistance

**Monitoring of antimicrobial resistance**

For each Salmonella strain detected in breeding flocks, anti-microbial susceptibility testing must be performed, in accordance to Directive 2003/99/EC.

7.1.2. Targets on testing herds and animals (8)

7.1.2.1. Targets on the testing of herds (a): Not applicable.
7.1.2.2. Targets on the testing of animals: Not applicable.

7.1.3. Targets on testing of flocks\(^{(0)}\)

**Year:** 2009

**Situation on date:**

**Animal species:** Gallus gallus (breeding)

**Disease/infection\(^{(a)}\):** Zoonotic Salmonella

<table>
<thead>
<tr>
<th>Region</th>
<th>Type of flock(^{(b)})</th>
<th>Total number of flocks(^{(c)})</th>
<th>Total number of animals</th>
<th>Total n(^{o}) of flocks under the programme</th>
<th>Expected n(^{o}) of flocks to be checked (^{(a)})</th>
<th>Number of flocks expected to be positive (^{(a)})</th>
<th>Number of flocks expected to be depopulated</th>
<th>Total n(^{o}) of animals expected to be slaughtered or destroyed (^{(b)})</th>
<th>Expected quantity of eggs to be destroyed (^{(c)})</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^{(a)}\) See Notes at the end of the document.

\(^{(b)}\) Region-specific data may be provided.

\(^{(c)}\) The total number of flocks is the sum of all flocks under the programme.

\(^{(d)}\) The expected number of flocks to be checked and the number of flocks expected to be positive are based on the testing strategy of the programme.

\(^{(e)}\) The total number of animals expected to be slaughtered or destroyed includes both flocks and individual animals.

\(^{(f)}\) The expected quantity of eggs to be destroyed includes both flocks and individual eggs.

\(^{(g)}\) The expected quantity of eggs channelled to egg products includes both flocks and individual eggs.

\(^{(h)}\) The expected quantity of eggs channelled to egg products is calculated based on the expected number of eggs to be destroyed and the average number of eggs per flock.
<table>
<thead>
<tr>
<th></th>
<th>Rearing</th>
<th>1,500,000</th>
<th>200</th>
<th>1,500,000</th>
<th>200</th>
<th>(a1)</th>
<th>(a2)</th>
<th>(a3)</th>
<th>(a4)</th>
<th>(a3)</th>
<th>(a4)</th>
<th>a3</th>
<th>(a4)</th>
<th>(a1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adult</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>300</td>
<td>1,500,000</td>
<td>300</td>
<td>1,500,000</td>
<td>300</td>
<td>200</td>
<td>50</td>
<td>30</td>
<td>200</td>
<td>0</td>
<td>800000</td>
<td>0</td>
<td>300000</td>
<td>3000</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>500</td>
<td>3,000,000</td>
<td>500</td>
<td>3,000,000</td>
<td>500</td>
<td>300</td>
<td>100</td>
<td>60</td>
<td>400</td>
<td>0</td>
<td>1600000</td>
<td>0</td>
<td>300000</td>
<td>3000</td>
</tr>
</tbody>
</table>

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

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

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

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

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

7.2. Targets on qualification of herds and animals: Not applicable.

7.3. Targets on vaccination or treatment

7.3.1. Targets on vaccination or treatment

Vaccine(s) and vaccination scheme: Vaccination, which is not mandatory, but strongly recommended by NSVPSA, will be performed using inactivated vaccines (or live vaccines only in accordance with 1177/2006) consisting in two vaccination during the rearing period.

<table>
<thead>
<tr>
<th>Disease (a)</th>
<th>Zoonotic Salmonella</th>
<th>Animal species: Breeding poultry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region (b)</td>
<td>Total number of herds (c)</td>
<td>Total number of animals in</td>
</tr>
</tbody>
</table>

37
### Costs mentioned below are for a one-year period (1 of January 2007-31 of December 2008)

<table>
<thead>
<tr>
<th>Costs related to</th>
<th>Specification</th>
<th>Number of units</th>
<th>Unitary cost in €</th>
<th>Total amount in €</th>
<th>Community funding requested (yes/no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Testing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.1. Cost of the analysis</td>
<td>Test: Bacteriological detection</td>
<td>1800</td>
<td>20</td>
<td>36000</td>
<td>YES</td>
</tr>
</tbody>
</table>

(a) Disease and species if necessary

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

(c) Herds equal flocks or holdings as appropriate

(d) Only for Bovine brucellosis and Ovine, caprine brucellosis (B. melitensis) and zoonotic salmonella and as defined in the programme.

8. **Detailed analysis of the cost of the programme**

<table>
<thead>
<tr>
<th>No of herds in vaccination or treatment programme</th>
<th>No of herds expected to be vaccinated or treated</th>
<th>No of animals expected to be vaccinated or treated</th>
<th>No of doses of vaccine or treatment expected to be administered</th>
<th>No of adults expected to be vaccinated</th>
<th>No of young animals expected to be vaccinated</th>
</tr>
</thead>
<tbody>
<tr>
<td>300</td>
<td>2000000</td>
<td>300</td>
<td>2000000</td>
<td>4000000</td>
<td>2000000</td>
</tr>
</tbody>
</table>

Total 300 2000000 300 300 2000000 4000000 2000000
<table>
<thead>
<tr>
<th>Test:</th>
<th>Detection</th>
<th>7500</th>
<th>30</th>
<th>225000</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test: Serotyping</td>
<td>800</td>
<td>30</td>
<td></td>
<td>24000</td>
<td>YES</td>
</tr>
<tr>
<td>Disposable sterile containers for sampling of faeces</td>
<td>1800</td>
<td>0.3</td>
<td></td>
<td>540</td>
<td>YES</td>
</tr>
<tr>
<td>One use gloves-pairs</td>
<td>1800</td>
<td>0.1</td>
<td></td>
<td>180</td>
<td>YES</td>
</tr>
<tr>
<td>Overoarete</td>
<td>1800</td>
<td>1</td>
<td></td>
<td>1800</td>
<td>YES</td>
</tr>
</tbody>
</table>

2. Vaccination

2.1. Purchase of vaccine | 4.000.000 | 0.1 | 400.000 | YES |

2.2. Distribution costs

2.3. Administering costs

2.4. Control costs

3. Slaughter and destruction

3.1. Compensation of animals

<table>
<thead>
<tr>
<th>Breed</th>
<th>Hens</th>
<th>200.000</th>
<th>20</th>
<th>4.000.000</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rearing poultry</td>
<td>400.000</td>
<td>10</td>
<td>1.000.000</td>
<td>YES</td>
<td></td>
</tr>
</tbody>
</table>

3.2. Transport costs | 500 | 100 | 50,000 | YES |

3.3. Destruction costs | 500 | 400 | 200,000 | YES |

3.4. Loss in case of slaughtering
<table>
<thead>
<tr>
<th>Costs from treatment of products (milk, eggs, hatching eggs, etc)</th>
<th>Eggs destruction</th>
<th>1,500,000</th>
<th>0.2</th>
<th>300,000</th>
<th>YES</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. Cleaning and disinfection</td>
<td>Disinfectants</td>
<td>350</td>
<td>400</td>
<td>140,000</td>
<td>YES</td>
</tr>
<tr>
<td>5. Salaries (staff contracted for the programme only)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Consumables and specific equipment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Other costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td><strong>6,377,520€</strong></td>
<td></td>
<td><strong>YES</strong></td>
<td></td>
</tr>
</tbody>
</table>

Fixed costs should not be included. All amounts are VAT excluded.
Technical programme for the control of Salmonella in laying hens of Gallus gallus
in Romania
2009
(cofinancing programme)

Content:

1. Identification of the programme
2. Historical data on the epidemiological evolution of the disease
3. Description of the submitted programme
4. Measures of the submitted programme
5. General description of the costs and benefits
6. Data on the epidemiological evolution during the last five years
7. Targets
8. Detailed analysis of the cost of the programme
1. Identification of the programme

Member State: Romania

Disease: Zoonotic Salmonella in laying hens

Year of implementation: 2009

Reference of this document: National Sanitary Veterinary and Food Safety Authority
No. 2661/29.04.2008

Contact: Dr. Niculae LAZĂR,
Sanitary Veterinary General Director,
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fax: +4021 31249 67,
e-mail: lazar@ansv.ro

Date sent to the Commission: 30.04.2008
2. **Historical data on the epidemiological evolution of the disease:**

The National Programme for surveillance, prevention and control of animal diseases and zoonoses sets out the monitoring arrangements for all flocks of domestic fowl.

In 2002 have been examined 52088 bacteriological samples for zoonotic Salmonella (167 positive results), in 2003, 111424 (436 positive), and in 2004 75877 (15216 positive).

In 2005 have been examined 75816 bacteriological samples for zoonotic Salmonella (5664 positive results). In 2006 have been examined 81052 (471 positive results).

In 2007 have been examined 82352 (113 positive)

**The incidence of various serotypes in poultry, in 2007**

<table>
<thead>
<tr>
<th>NO.</th>
<th>SEROTYPE</th>
<th>NO. OF STRAINS</th>
<th>TOTAL NO. OF STRAINS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>S. Concord</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>S. Djuga</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>S. Enteritidis</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>S. Give</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>S. Hadar</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>S. Infantis</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>S. Kottbus</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>S. Montevideo</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>S. Reading</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>S. Saintpaul</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>S. Senftenberg</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>S. Tennessee</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>S. Typhimurium</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>S. Virchow</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>S. Westhampton</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
3. Description of the submitted programme

Objectives

The Community target referred to in Article 4(1) of Regulation (EC) No 2160/2003 for the reduction of Salmonella enteritidis and Salmonella typhimurium in adult laying hens of Gallus gallus (Community target), according to Art. 1 of Regulation 1168/2006 shall be as follows:

(a) An annual minimum percentage of reduction of positive flocks of adult laying hens equal to at least:

(i) 10% if the prevalence in the preceding year was less than 10%;
(ii) 20% if the prevalence in the preceding year was between 10 and 19%;
(iii) 30% if the prevalence in the preceding year was between 20 and 39%;
(iv) 40% if the prevalence in the preceding year was 40% or more;

or:

(b) a reduction of the maximum percentage to 2% or less;

The target for Romania in 2009 can not be set as we did not participate to the baseline study regarding laying hens. The main objective of our programme for the reduction of Salmonella enteritidis and Salmonella typhimurium in adult laying hens of Gallus gallus shall be a reduction of the maximum percentage of positive adult laying flocks according to Regulation (EC) No 2160/2003 and Regulation (EC) 1168/2006.


The area of implementation

The programme is to be implemented in Romania, covering all the national territory.

Target animal population

The National Salmonella Control Programme includes every type of laying flock of the domestic fowl, Gallus gallus comprising at least 350 birds, in the table eggs sector. The number of holdings, laying flocks and birds in the table-eggs sector in 2007 is shown in Table 1.

Table 1. Number of holdings, flocks (comprising at least 350 birds) and birds (laying flocks) in the table egg sector (2007)

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of holdings</th>
<th>Type of flock</th>
<th>Number of flocks</th>
<th>Number of birds</th>
<th>Number of zoonotic Salmonella positive flocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>All regions</td>
<td></td>
<td>Rearing flocks</td>
<td>580</td>
<td>2637020</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adult flocks</td>
<td>892</td>
<td>3557067</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>133</td>
<td></td>
<td>1472</td>
<td>6154087</td>
<td>11</td>
</tr>
</tbody>
</table>

NUT (2) code[^2^] | Total number of holdings[^1^]  
---|----------------------  
RO121-Alba  | 6  
RO421-Arad  | 2  
RO311-Arges  | 4  
RO211-Bacau  | 3  
RO111-Bihor  | 5  
RO112-Bistrita Nasaud  | 5  
RO212-Botosani  | 1  
RO221-Braila  | 3  

[^1^]: Total number of holdings for each region. 
[^2^]: NUT (2) codes represent the administrative regions in Romania.
<table>
<thead>
<tr>
<th>Code</th>
<th>County</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>RO122</td>
<td>Brasov</td>
<td>3</td>
</tr>
<tr>
<td>RO321</td>
<td>Bucuresti</td>
<td>0</td>
</tr>
<tr>
<td>RO222</td>
<td>Buzau</td>
<td>0</td>
</tr>
<tr>
<td>RO312</td>
<td>Calarasi</td>
<td>2</td>
</tr>
<tr>
<td>RO422</td>
<td>Caras Severin</td>
<td>1</td>
</tr>
<tr>
<td>RO113</td>
<td>Cluj</td>
<td>10</td>
</tr>
<tr>
<td>RO223</td>
<td>Constanta</td>
<td>2</td>
</tr>
<tr>
<td>RO123</td>
<td>Covasna</td>
<td>2</td>
</tr>
<tr>
<td>RO313</td>
<td>Dambovita</td>
<td>4</td>
</tr>
<tr>
<td>RO411</td>
<td>Dolj</td>
<td>0</td>
</tr>
<tr>
<td>RO224</td>
<td>Galati</td>
<td>9</td>
</tr>
<tr>
<td>RO314</td>
<td>Giurgiu</td>
<td>2</td>
</tr>
<tr>
<td>RO412</td>
<td>Gorj</td>
<td>1</td>
</tr>
<tr>
<td>RO124</td>
<td>Harghita</td>
<td>2</td>
</tr>
<tr>
<td>RO423</td>
<td>Hunedoara</td>
<td>4</td>
</tr>
<tr>
<td>RO315</td>
<td>Ialomita</td>
<td>3</td>
</tr>
<tr>
<td>RO213</td>
<td>Iasi</td>
<td>2</td>
</tr>
<tr>
<td>RO322</td>
<td>Ilfov</td>
<td>2</td>
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<tr>
<td>RO114</td>
<td>Maramures</td>
<td>13</td>
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<tr>
<td>RO413</td>
<td>Mehedinti</td>
<td>1</td>
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<tr>
<td>RO125</td>
<td>Mures</td>
<td>11</td>
</tr>
<tr>
<td>RO214</td>
<td>Neamt</td>
<td>4</td>
</tr>
<tr>
<td>RO414</td>
<td>Olt</td>
<td>4</td>
</tr>
<tr>
<td>Code</td>
<td>Quantity</td>
<td></td>
</tr>
<tr>
<td>--------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>RO316-Prahova</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>RO116-Salaj</td>
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<td></td>
</tr>
<tr>
<td>RO115-Satu Mare</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>RO126-Sibiu</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>RO215-Suceava</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>RO317-Teleorman</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>RO424-Timis</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>RO225-Tulcea</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>RO415-Valcea</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>RO216-Vaslui</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>RO226-Vrancea</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>153</strong></td>
<td></td>
</tr>
</tbody>
</table>

(a) NUT code of the county  
(b) total number of laying hens holdings

**Sample-taking programme**

The National Salmonella Control Programme encompasses the following serovars of zoonotic Salmonella: Salmonella enteritidis and Salmonella typhimurium.

The sampling-taking programme will be in accordance to Regulation 2160/2003 EC, Regulation 1168/2006 EC and Regulation 1177/2006 EC.

4. **Measures of the submitted programme**

4.1. **Summary of measures under the programme**

Duration of the programme: 3 years

First year: 2008          Last year: 2010
4.2. Designation of the central authority charged with supervising and coordinating the departments responsible for implementing the programme:

Central authority charged with supervising and coordinating the departments responsible for implementing the programme is N.S.V.F.S.A. – National Sanitary Veterinary and Food Safety Authority. Departments responsible for implementing the programme are the 42 county S.V.F.S.D. (Sanitary Veterinary and Food Safety Directions).

1. Ministry of Agriculture and Rural Development (M.A.R.D.):
   - decides on the proposal of CVO on compensation of some costs and damages.

2. N.S.V.F.S.A.
   - proposal of the plan of disease control.
   - determination and evaluation of the monitoring in Romania
   - adoption of measures based on the disease situation in Romania
   - submission of reports to the E.C.
   - proposes to M.A.R.D. the budget for performance of the control plan.

3. S.V.F.S.D. (Sanitary Veterinary and Food Safety Directions).
   - coordination of the programme at the county level
-sampling is performed by the zonal official veterinarian

4. I.D.A.H. Institute of Diagnosis and Animal Health is the national reference laboratory concerning animal health and was also designated as NRL for Salmonella in live animals. Responsibilities and tasks of the national reference laboratories for Salmonella (I.D.A.H. Institute of Diagnosis and Animal Health ), pursuant to Directive 2003/99/EC and Regulation (EC) No 2160/2003, according to Commission Decision 2004/564/EC:

1. General duties

(a) To collaborate with the CRL in their area of competence.

(b) To coordinate, as appropriate, the activities of laboratories responsible for the analysis of samples in accordance with, in particular, Articles 4, 5 and 7 of Directive 2003/99/EC.

(c) To coordinate the activities of laboratories responsible for the analysis of samples in accordance with Article 12(1) of Regulation (EC) No 2160/2003/EC.

(d) Where appropriate, to organise comparative tests between the laboratories referred to under (b) and (c) and to assure an appropriate follow-up of such comparative testing.

(e) To ensure the dissemination to the competent authority and to the laboratories referred to under (b) and (c), of the information that the Community reference laboratory supplies.

(f) To provide scientific and technical assistance to their national competent authority in their area of competence.

2. Specific functions and duties

(a) To participate, as appropriate in the monitoring schemes for salmonella and related anti-microbial resistance pursuant to Directive 2003/99/EC and in the analysis and testing of Salmonella pursuant to Regulation (EC) No 2160/2003.

(b) To conduct, as appropriate, training courses for the benefit of staff from relevant laboratories.

(c) To inform, as appropriate, the Community reference laboratory on aspects related to Salmonella vaccine strains and other specific control methods.
(d) To gather data and information on the activities developed and methods used in relevant laboratories and to inform the Community reference laboratory thereof.

(e) To keep abreast of developments in Salmonella epidemiology.

5. S.V.F.S.L.
There are 41 county official laboratories (Sanitary Veterinary and Food Safety Laboratories). Most of them will apply quality assurance systems that conform to the requirements of the current EN/ISO standard by December 2007:
laboratory examination in the frame of the programme under the supervision of NRL.

6. H.I.P.S.V.H.
Hygiene Institute for Public Sanitary Veterinary Health is the national reference laboratory concerning the expertise for alimentary products of animal origin and also the national reference laboratory for Salmonella in foodstuffs.

4.3. Description and delimitation of the geographical and administrative areas in which the programme is to be implemented:
The programme will be applied to the whole territory of Romania. The administrative boundaries are the boundaries of the country.

4.4. Measures implemented under the programme

4.4.1. Measures and terms of legislation as regards the registration of holdings:
Poultry holdings shall be registered and sanitary veterinary approved in order to be able to operate. The legal framework for carrying out commercial activity with poultry and poultry products consists of:

- Order of the President of the National Sanitary Veterinary and Food Safety Authority no 144/2006 for the approval of the Sanitary veterinary norm on animal health conditions governing intra-Community trade in, and imports from third countries of, poultry and hatching eggs transposing Council Directive 90/539/EEC on animal health conditions governing intra-Community trade in, and imports from third countries of poultry and hatching eggs.

- Order no 62/2007 of National Sanitary Veterinary and Food Safety Authority President with regard to the approval of the Sanitary Veterinary and Food Safety Norm regarding sanitary veterinary and food safety approval procedure of the activities carried out by legal persons.

In order to be sanitary veterinary approved, poultry holdings shall satisfy, in accordance with the legislation in force, the following conditions:

- appropriate facilities and operation;
- application of the "Program of surveillance, prevention and animal disease control, of the diseases transmissible from animals to humans, animal protection and environment protection" approved by Order of the National Sanitary Veterinary and Food Safety Authority President.

- at least one inspection visit per year by the official veterinarian;
- additional checks to verify the compliance of the establishment with the hygiene measures and the operation of the establishments.

Each poultry holding receives a distinct approval number, number that can be the same with the one given in compliance with the Council Regulation no. 2872/75/EEC.

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

Not applicable.

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

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

A laying flock shall be considered positive for the purpose of verifying the achievement of the Community target, when presence of Salmonella enteritidis and Salmonella typhimurium (other than vaccine strains) was detected in one or more samples in the laying flock. Positive laying flocks shall be counted only once, irrespective of the number of sampling and testing operations and only be reported in the first year of detection.

According to: Order MAA no. 156/1999, Regulation 2160/2003/EC and order NSVFSA 34/2006 (which transpose Directive 2003/99/EC), holdings with laying flocks infected with S. enteritidis and S. typhimurium will be placed under official veterinary supervision. According to Order MAA no. 156/1999, the zonal official veterinarian establish appropriate measures, together with the local representative of the Ministry of Health perform the epidemiological inquiry, perform the evaluation of status on health of other flocks.

Other measures, in accordance with Regulation 2160/2003/EC include:

1. With effect a date which will be established by the Commission, eggs must not be used for direct human consumption (as table eggs) unless they originate from a commercial flock of laying hens subject to a national programme established under Article 5 and not under official restriction.

2. Eggs originating from flocks with unknown health status, that are suspected of being infected or from infected flocks may be used for human consumption only if treated in a manner that guarantees the elimination of all salmonella serotypes with public health significance in accordance with Community legislation on food hygiene.
3. When birds from infected flocks are slaughtered or destroyed, steps must be taken to reduce the risk of spreading zoonoses as far as possible. Slaughtering must be carried out in accordance with Community legislation on food hygiene. Products derived from such birds may be placed on the market for human consumption in accordance with Community legislation on food hygiene and, once applicable, part E of Annex II of Regulation 2160/2003/EC: Specific requirement concerning fresh meat:

1. With effect from 84 months after entry into force of this Regulation, fresh poultry meat from animals listed in Annex I may not be placed on the market for human consumption unless it meets the following criterion:

"Salmonella: absence in 25 grams"

If not destined for human consumption, such products must be used or disposed of in accordance with Regulation (EC) No 1774/2002.

**Control of the use of feed antibiotics by official sampling**

1. In the case of sampling referred to in point 2.1(b),(c) and (d) of Regulation No 1168/2006, the competent authority shall satisfy itself by conduction further tests as appropriate that the results of examinations for Salmonella in birds are not affected by the use of antimicrobials in the flocks. An official confirmatory sampling may be performed, composed of faeces and birds (for the detection of Salmonella in organs). The sampling may include a sample of birds taken at random from within each house of birds on the farm, normally up to five birds per house, unless the authority deems necessary to sample a higher number of birds. The examination shall consist in a test for research of antimicrobials or of bacterial growth inhibitory effect in samples (Hygiene Institute for Public Sanitary Veterinary Health or their zonal laboratories). In case the presence of Salmonella enteritidis and Salmonella typhimurium is not detected but anti-microbials or bacterial growth inhibitory effect are, it shall be accounted for as an infected laying flock.
2. According to National Programme for surveillance, prevent and control of animal diseases and zoonoses, 0.1% of poultry meat production is tested in Hygiene Institute for Public Sanitary Veterinary Health and their zonal laboratories for research of antimicrobials or of bacterial growth inhibitory effect. Positive results regarding birds belonging to commercial holdings of laying hens will be as soon as possible reported to S.V.F.S.D. and NSVFSA and the same procedure as described in point 1. will be applied.

**Lifting of restrictions** will be approved (according to Order of MAA no. 156/1999, modified by Order no.68/2003 for the approval of the Sanitary Veterinary Norm regarding the notification of some transmissible animal diseases by the zonal official veterinarian) when:

a) In the restricted territory are not anymore ill or suspect animals;

b) measures of control and prevention including final disinfection, under the supervision of the zonal official veterinarian have been completed.

**Restocking**, after the lifting of restrictions must be with chicks or laying hens satisfying the requirements of Regulation 2160/2003 EC. An "all-in, all-out" policy must be followed in each commercial holding.

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

Not applicable.

4.4.6. *Control procedures and in particular rules on the movement of animals liable to be affected or contaminated by a given disease and the regular inspection of the holdings or areas concerned.*
According to Regulation 2160/2003/EC, animals from infected flocks belonging to commercial holdings are to be kept isolated and special conditions apply for removal of these animals.

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

The legal basis is Regulation 2160/2003/EC, Regulation 1168/2006 EC and Regulation 1177/2006 EC. In accordance with Regulation 1177/2006 EC:

Use of antimicrobials

1. Antimicrobials shall not be used as a specific method to control salmonella in poultry.

2. By way of derogation from paragraph 1, and subject to the conditions specified in points (a), (b) and (c), and in paragraph 3 of this Article, antimicrobials authorised in accordance with Article 5 of Directive 2001/82/EC or Article 3 of Regulation 726/2004/EC may be used in the following exceptional circumstances:

(a) poultry presenting salmonella infection with clinical signs in a way likely to cause undue suffering to the animals; the infected flocks treated with antimicrobials shall still be considered infected with salmonella; appropriate measures shall be taken in breeding flocks to reduce as much as possible the risk of spreading salmonella through the rest of the breeding pyramid;

(b) salvaging of valuable genetic material in breeding flocks in order to establish new salmonella-free flocks, including "elite flocks", flocks from endangered breeds and flocks kept for research purposes; chicks born from hatching eggs collected from poultry treated with antimicrobials shall be subject to fortnightly sampling during the rearing phase, with a scheme aiming to detect 1% prevalence of relevant salmonella with a 95% confidence limit;

(c) authorisation given by the competent authority on a case-by-case basis for purposes other than salmonella control in a flock suspect of salmonella infection, in particular following the epidemiological investigation of a food-borne outbreak or the detection of
salmonella at the hatchery or at the holding; however, Member States may decide to allow treatment without prior authorisation in emergency situations, subject to taking samples by an approved veterinarian as defined in point (g) of Article 2 of Regulation (EC) No 854/2004 [7] and reporting the treatment immediately to the competent authority; the flocks shall be considered as infected with salmonella if sampling did not take place in accordance with the provisions in this paragraph.

3. The use of antimicrobials shall be subject to supervision of and reporting to the competent authority. This use shall be based wherever possible on the results of bacteriological sampling and of susceptibility testing.

4. The provisions referred to in this Article shall not apply to substances, micro-organisms or preparations authorised for use as feed additives in accordance with Article 3 of Regulation (EC) No 1831/2003.

**Use of vaccines**

Vaccination programmes against Salmonella are reducing the shedding and contamination of eggs.

Live salmonella vaccines shall not be used in the framework of national control programmes where the manufacturer does not provide an appropriate method to distinguish bacteriologically wild-type strains of salmonella from vaccine strains.

Live salmonella vaccines shall not be used in the framework of national control programmes in laying hens during production unless the safety of the use has been demonstrated and they are authorised for such purpose in accordance with Directive 2001/82/EC.

Vaccination programmes against Salmonella enteritidis reducing the shedding and contamination of eggs, shall be applied at least during rearing to all laying hens at the latest from 1 January 2008 on in Member States as long as they did not demonstrated a prevalence below 10 % based on the results of the baseline study in accordance with Article 1 of Commission Decision 2004/665/EC or based on the monitoring to follow up the Community target, set in accordance with Article 4(1) of Regulation (EC) No 2160/2003.

The competent authority may provide derogation from this provision to a holding if
- it is satisfied with the preventive measures taken on the holding of rearing and on the holding of egg production, and
- the absence of Salmonella enteritidis was demonstrated on the holding of rearing and production during the 12 months preceding the arrival of the animals.

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

-Governmental Decision 1415/2004 regarding compensations given for animals slaughtered, killed or otherwise affected for the purpose to rapidly eradicate animal transmissible disease outbreaks

Rendering and processing of animal wastes

5. **General description of the costs and benefits:**

**Costs of the programme**

This programme is in accordance with Council Decision 90/424/ EEC, Commission Decision 2004/450/EC and Council Decision 90/638/ EEC. The detailed financial costs for the programme of control of Salmonella, in an narrower sense are laid down under point 8.

These financial resources are necessary among other things to:

- offer the necessary support, upon request from the veterinary services, for the measures of killing, slaughter of birds from the outbreaks.
- set up of an efficient system of collection, transport and neutralization of dead birds and animal wastes.
- offer a system of compensation according to the requested necessity to compensate killed or slaughtered birds for disease control purposes.

**Benefits of the programme**

The overall aim of the National Salmonella Control Programme is to control the occurrence of Salmonella in the poultry sector on a very low level and thereby protect humans against infection with food-borne salmonellas. It has been known that poultry often harbour latent infections with Salmonella, which may pose a serious human health risk.

The anticipated benefits of this programme are the minimising of human health problems and a consequent reduction in suffering, mortality and health service costs.
6. **Data on the epidemiological evolution during the last year**

6.1. **Evolution of the disease**

6.1.2. **Data on evolution of the disease**

- **Year:** 2007
- **Animal species:** Laying hens, Gallus gallus

**Situation on date:** 31 December 2007

**Disease/infection** (a) Zoonotic Salmonella

<table>
<thead>
<tr>
<th>Region ROMANIA</th>
<th>Type of flock (a)</th>
<th>Total number of flocks (a)</th>
<th>Total number of animals</th>
<th>Total number of flocks under the programme</th>
<th>Number of flocks checked</th>
<th>Number of positive flocks (a)</th>
<th>Number of flocks depopulated (a)</th>
<th>Total number of animals slaughtered or destroyed (a)</th>
<th>Quantity of eggs destroyed number (a)</th>
<th>Quantity of eggs channelled to egg products number (a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All regions</td>
<td>Laying flocks</td>
<td>153</td>
<td>6194697</td>
<td>153</td>
<td>153</td>
<td>11</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>31120</td>
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<tr>
<td>Total</td>
<td></td>
<td>153</td>
<td>6194697</td>
<td>153</td>
<td>153</td>
<td>11</td>
<td>0</td>
<td>2</td>
<td>3</td>
<td>31120</td>
</tr>
</tbody>
</table>

(n.a.* ) no data available.
For zoonotic salmonella indicate the serotypes covered by control programmes: (a1) for Salmonella Enteritidis, (a2) for Salmonella Typhimurium, (a3) for other serotypes—specify as appropriate, (a4) for Salmonella Enteritidis or Salmonella Typhimurium.

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

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

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

(e) If a flock has been checked, in accordance with footnote (d), more than once, a positive sample should be taken into account only once.
6.2. Stratified data on surveillance and laboratory tests

6.2.1. Stratified data on surveillance and laboratory tests

**Years:** 2007  
**Disease:** Zoonotic Salmonella  
**Animal species/category:** Laying hens, Gallus gallus

**Description of the used serological tests:**

Serological test **Rapid whole blood agglutination test** RASI (RIIAR) is used for blood samples into commercial holdings. When positive results for RASI, further serological tests: **Rapid serum agglutination test** RSAR and **Tube agglutination test** RSAL are performed into county laboratories. These tests cover S.Enteritidis and S.Typhimurium.

**Serotyping**, according to Kaufmann-White scheme for the determination of the Salmonella serotype.

**Description of the used microbiological or virological tests:**

**Buffered peptone water**

**Rappaport Vasiliadis**

**Selenite broth**
**Modified brilliant green**

**Description of the other used tests:** In some cases, various Salmonella isolates undergo further analysis by means of biochemical and biomolecular methods, but these methods are not routinely used.

<table>
<thead>
<tr>
<th>Region: Romania (c)</th>
<th>Serological tests</th>
<th>Microbiological or virological tests</th>
<th>Other tests</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of samples tested (d)</td>
<td>Number of positive samples (d)</td>
<td>Number of samples tested (d)</td>
</tr>
<tr>
<td>LAYING HENS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>REARING STAGE</td>
<td>12040</td>
<td></td>
<td>20468</td>
</tr>
<tr>
<td>ADULT STAGE</td>
<td>16550</td>
<td></td>
<td>8552</td>
</tr>
<tr>
<td>TOTAL</td>
<td>28600</td>
<td></td>
<td>29020</td>
</tr>
</tbody>
</table>

Breeders, laying hens, etc. when appropriate.

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

(d) Number of samples tested, all confounded.

(e) Number of positive samples, all confounded.
6.3. Data on infection (one table per year and per disease/species)

Year: 2007  \hspace{1cm} \text{Disease}\,(a): \text{Zoonotic Salmonella} \hspace{1cm} \text{Animal species: Laying hens, Gallus gallus}

<table>
<thead>
<tr>
<th>Region: Romania((b))</th>
<th>Number of herds(flocks) infected</th>
<th>Number of infected animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAYING HENS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>REARING STAGE</td>
<td>5</td>
<td>36080</td>
</tr>
<tr>
<td>ADULT STAGE</td>
<td>6</td>
<td>45090</td>
</tr>
<tr>
<td>TOTAL</td>
<td>11</td>
<td>81090</td>
</tr>
</tbody>
</table>

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

6.4. Data on the status of herds at the end of each year: Not applicable
6.5. Data on vaccination programmes

Year: 2007  
Disease\(^{(a)}\): Zoonotic Salmonella  
Animal species: Laying hens. Gallus gallus

Description of the used vaccination scheme:

During the last five years, vaccination was not mandatory, and was performed by some of the commercial holdings, in the rearing sector.

<table>
<thead>
<tr>
<th>Region: Romania(^{(a)})</th>
<th>Total number of animals</th>
<th>Information on vaccination programme</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number of herds in vaccination programme</td>
</tr>
<tr>
<td>REARING STAGE</td>
<td>3632020</td>
<td>60</td>
</tr>
<tr>
<td>ADULT STAGE</td>
<td>3557667</td>
<td>80</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6189687</td>
<td>140</td>
</tr>
</tbody>
</table>

\(^{(a)}\) Diseases and species if necessary

\(^{(b)}\) Region as defined in the approved eradication programme of the Member State

\(^{(c)}\) Herds equal flocks, or holdings as appropriate

\(^{(d)}\) Only for Bovine brucellosis, Ovine and caprine brucellosis (B. melitensis) and zoonotic Salmonella, and as defined in the programme.
7.1. Targets related to testing

7.1.1. Targets on diagnostic tests: to investigate the presence of Salmonella in laying hens faeces and dust

7.1.1.1. Number and specification of tests

<table>
<thead>
<tr>
<th>Disease(a): zoonotic Salmonella</th>
<th>Animal species: laying hens</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Region (b)</th>
<th>Type of the test (c)</th>
<th>Target population (d)</th>
<th>Type of sample (e)</th>
<th>Objective (f)</th>
<th>Number of planned tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>All regions</td>
<td>Bacteriological detection according ISO 6579(2002) modified</td>
<td>300 Rearing flocks</td>
<td>Pooled faeces</td>
<td>Surveillance, confirmation</td>
<td>600</td>
</tr>
<tr>
<td>All regions</td>
<td>Bacteriological detection according ISO 6579(2002) modified</td>
<td>1000 Adult laying flocks</td>
<td>Pooled faeces or bootswabs</td>
<td>Surveillance, confirmation</td>
<td>5000</td>
</tr>
<tr>
<td>All regions</td>
<td>Bacteriological detection according ISO 6579(2002) modified</td>
<td>Adult laying flocks 150 holdings</td>
<td>Pooled faeces (or bootswabs) and dust</td>
<td>Surveillance, confirmation</td>
<td>2250</td>
</tr>
<tr>
<td>All regions</td>
<td>Serotyping, according to Kaufmann-White scheme</td>
<td>Salmonella enteritidis, S. typhimurium-positive animals</td>
<td>Salmonella isolates</td>
<td>Determination of the serotype</td>
<td>375</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------------------------</td>
<td>--------------------------------------------------------</td>
<td>--------------------</td>
<td>-------------------------------</td>
<td>-----</td>
</tr>
<tr>
<td><strong>TOTAL SAMPLES / YEAR</strong></td>
<td><strong>NO. OF SAMPLES AT THE INITIATIVE OF THE OPERATOR / YEAR</strong></td>
<td><strong>NO. OF OFFICIAL SAMPLES / YEAR</strong></td>
<td></td>
<td></td>
<td>9225</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3500</td>
</tr>
</tbody>
</table>

(a) Disease and species if necessary
(b) Region as defined in the approved eradication programme of the Member State
(c) Description of the test
(d) Specification of the targeted species and the categories of targeted animals (e.g. sex, age, breeding, slaughter animal)
(e) Description of the sample (e.g. blood, serum, milk, …)
(f) Description of the objective (e.g. qualification, surveillance, confirmation of suspected cases, monitoring of campaigns, seroconversion, control on deleted vaccines, testing of vaccine, control of vaccination)
7.2.1.2. Testing scheme(s)

All laying flocks are to be tested according Commission regulations 2160/2003 E.C. and 1168/2006 E.C.

In rearing laying flocks, sampling (only at the initiative of the operator) must cover the following phases of production:
- day-old chicks
- two weeks before moving to laying phase or laying unit.

The samples to be taken must comprise:

(a) in the case of day-old chicks, samples from the internal linings of the boxes in which the chicks were delivered to a holding and from the carcases of chicks found to be dead on arrival;

(b) in the case of pullets at two weeks prior to entering the laying phase, pooled faeces samples made up of separate samples of fresh faeces each weighing not less than 1 g taken at random from a number of sites in the building in which the birds are kept, or, where the birds have free access to more than one building on a particular holding, from each group of buildings on the holding in which the birds are kept;

The number of sites from which separate faeces samples are to be taken in order to make a pooled sample shall be as follows:
<table>
<thead>
<tr>
<th>NO OF BIRDS KEPT IN A BUILDING</th>
<th>NO OF FAECES SAMPLES TO BE TAKEN IN THE BUILDING</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-24</td>
<td>Number equal to the number of birds up to a maximum of 20</td>
</tr>
<tr>
<td>25-29</td>
<td>20</td>
</tr>
<tr>
<td>30-39</td>
<td>25</td>
</tr>
<tr>
<td>40-49</td>
<td>30</td>
</tr>
<tr>
<td>50-59</td>
<td>35</td>
</tr>
<tr>
<td>60-89</td>
<td>40</td>
</tr>
<tr>
<td>90-199</td>
<td>50</td>
</tr>
<tr>
<td>200-499</td>
<td>55</td>
</tr>
<tr>
<td>500 or more</td>
<td>60</td>
</tr>
</tbody>
</table>

For 300 rearing laying flocks estimated for 2008, it means 300 flocks x 1 pooled sample x 2 times = 600 pooled samples = 600 bacteriological tests.
In adult laying flocks:

**Sampling at the initiative of the operator** will take place every 15 weeks; the first sampling shall take place at the age of 24 ± 2 weeks.

(a) In cage flocks, 2 x 150 grams of naturally pooled faeces shall be taken from all belts or scrapers in the house after running the manure removal system; however, in the case of step cage houses without scrapers or belts 2 x 150 grams of mixed fresh faeces must be collected from 60 different places beneath the cages in the droppings pits.

(b) In barn or free-range houses, two pairs of boot swabs or socks be taken, without changing overboots between boot swabs.

1000 x 3 testing x 2 samples = 6000 examens
Official sampling

Sampling by the competent authority shall take place at least:

(a) in one flock per year per holding comprising at least 1000 birds;

(b) at the age of 24 ± 2 weeks in laying flocks housed in buildings where salmonella was detected in the preceding flock;

(c) in any case of suspicion of Salmonella enteritidis or Salmonella typhimurium 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 [1];

(d) in all other laying flocks on the holding in case Salmonella enteritidis or Salmonella typhimurium are detected in one laying flock on the holding;

(e) in cases where the competent authority considers it appropriate.

A sampling carried out by the competent authority may replace one sampling at the initiative of the operator.

In the case of routine sampling by the competent authority:

1. (a) In cage flocks, $2 \times 150$ 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 $2 \times 150$ grams of mixed fresh faeces must be collected from 50 different places beneath the cages in the dropping pits.

(b) In barn or free-range houses, two pairs of boot swabs or socks be taken, without changing overboots between boot swabs
2. 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 socks shall be taken.

In the case of sampling referred to in point 2.1(b), (c) and (d), the competent authority shall satisfy itself by conduction 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 Salmonella enteritidis and Salmonella typhimurium is not detected but antimicrobials or bacterial growth inhibitory effect are it shall be accounted for as an infected laying flock for the purpose of the Community target referred to in Article 1(2) of Commission Regulation (EC) No 1168/2006. (See as well Control of the use of feed antibiotics by official sampling point 1.)

Official samples to be taken 300 holdings (1 flock/holding/year) x 3 samples (2 faeces and 1 dust) = 900  + 2400 samples in the case of sampling referred to in point 2.1(b), (c) and (d) x 3 samples (2 faeces and 1 dust) = 3300  Official bacteriological tests.

Examination of the samples
Samples shall be sent by express mail or courier to the designated laboratories. At the laboratory, samples shall be kept refrigerated until examination, which shall be carried out within 48 hours following receipt.

**Boot swab samples**

(a) The two pairs of boot swabs ("or socks") shall be carefully unpacked to avoid dislodging adherent faecal material, pooled and placed in 225 ml Buffered Peptone Water (BPW) which has been pre-warmed to room temperature;

(b) The sample shall be swirled to fully saturate it and culture shall be continued by using the detection method in 3.2.

**Other faecal material and dust samples**

(a) The faeces samples shall be pooled and thoroughly mixed and a 25 gram sub-sample shall be collected for culture.

(b) The 25 gram sub-sample shall be added to 225 ml of BPW which has been pre-warmed to room temperature.

(c) Culture of the sample shall be continued by using the detection method in 3.2.

If ISO standards on the preparation of faeces for the detection of salmonella are agreed on, they shall be applied and replace the above provisions on sampling preparation.

**Detection method**

The method recommended by the Community Reference Laboratory (CRL) for Salmonella in Bilthoven, the Netherlands, for detection shall be used. This method is described in the current version of draft Annex D of ISO 6579 (2002): "Detection of Salmonella spp. in animal faeces and in samples of the primary production stage". In this method, a semi-solid medium (modified semi-solid Rappaport-Vassiladis medium, MSRV) is used as the single selective enrichment medium.
Serotyping

At least one isolate from each positive sample shall be typed, following the Kaufmann-White scheme. In accordance with Regulation 1168/2006 EC: salmonella strains detected in laying flocks should be stored for future phagetyping and anti-microbial susceptibility testing.

Monitoring of antimicrobial resistance

For each Salmonella strain detected in laying flocks, anti-microbial susceptibility testing must be performed, in accordance with Directive 2003/99/EC.

7.1.2. Targets on testing herds and animals (8)

7.1.2.1. Targets on the testing of herds (a): Not applicable.

7.1.2.2. Targets on the testing of animals: Not applicable.

7.1.3. Targets on testing of flocks (9)

Year: 2007

Animal species: Gallus gallus, Laying

Situation on date: Disease/infection(a): Zoonotic Salmonella
<table>
<thead>
<tr>
<th>Region</th>
<th>Type of flock</th>
<th>Total number of flocks</th>
<th>Total number of animals</th>
<th>Total % of flocks under the programme</th>
<th>Total % of animals under the programme</th>
<th>Expected % of flocks to be checked</th>
<th>Number of flocks expected to be positive</th>
<th>Number of flocks expected to be depopulated</th>
<th>Total % of animals expected to be slaughtered or destroyed</th>
<th>Expected quantity of eggs channelled to egg products (number or kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All</td>
<td>Rearing</td>
<td>150</td>
<td>6758744</td>
<td>150</td>
<td>6758744</td>
<td>130</td>
<td>50 (a1) 50 (a2) 50 (a3)</td>
<td>20 (a4) 20 (a5)</td>
<td>860000 200000</td>
<td>15000000 (a3)</td>
</tr>
<tr>
<td>All</td>
<td>Adult laying</td>
<td>150</td>
<td>6758744</td>
<td>150</td>
<td>6758744</td>
<td>130</td>
<td>50 (a1) 50 (a2) 50 (a3)</td>
<td>30 (a4) 30 (a5)</td>
<td>860000 -</td>
<td>30000000 (a3)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>300</td>
<td>13517488</td>
<td>300</td>
<td>13517488</td>
<td>260</td>
<td>100 (a1) 100 (a2) 100 (a3)</td>
<td>50 (a4) 50 (a5)</td>
<td>1600000 2863623</td>
<td>0</td>
</tr>
</tbody>
</table>

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

(b) For example, breeder flocks (rearing/adult flocks), production flocks, laying hen flocks, etc. Flocks equals herds or as appropriate.

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

(d) Check means to perform a flock level test under the programme for the presence of Salmonella. In this column a flock should not be counted twice even if it has been checked more than once.
(e) If a flock has been checked, in accordance with footnote (d), more than once, a positive sample should be taken into account only once.

7.2. Targets on qualification of herds and animals: Not applicable.

7.3. Targets on vaccination or treatment

7.3.1. Targets on vaccination or treatment

Vaccines and vaccination scheme: Vaccination, which is mandatory in rearing according to Reg.1177/2006, will be performed using inactivated vaccines (or live vaccines only in accordance with Reg.1177/2006) consisting in two vaccination against Salmonella Enteritidis or both Salmonella Enteritidis and Salmonella Typhimurium during the rearing period.

### Disease (a): Zoonotic Salmonella

<table>
<thead>
<tr>
<th>Animal species: Laying flocks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Region</strong></td>
</tr>
<tr>
<td>--------------</td>
</tr>
<tr>
<td>(b)</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

- Total number of herds: 300
- Total number of animals: 4,000,000
- No of herds: 300
- No of animals: 4,000,000
- No of doses of vaccine or treatment: 8,000,000
- No of adults expected to be vaccinated: 4,000,000

### Notes:

(a) Disease and species as defined in the approved eradication programme of the Member State.

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

(c) Herds equal flocks or holdings as appropriate.

---

38
(d) Only for Bovine brucellosis and Ovine, caprine brucellosis (B. melitensis) and zoonotic salmonella and as defined in the programme.

### 8. Detailed analysis of the cost of the programme

Costs mentioned below are for a one-year period (1 of January 2008-31 of December 2008)

<table>
<thead>
<tr>
<th>Costs related to</th>
<th>Specification</th>
<th>Number of units</th>
<th>Unitary cost in €</th>
<th>Total amount in €</th>
<th>Community funding requested (yes/no)</th>
</tr>
</thead>
</table>

39
<table>
<thead>
<tr>
<th>1. Testing</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1. Cost of the analysis</td>
<td>Test: Bacteriological detection</td>
</tr>
<tr>
<td></td>
<td>Test: Serotyping</td>
</tr>
<tr>
<td>Samples at the initiative of the operator</td>
<td>Unofficial Test: Bacteriological detection</td>
</tr>
<tr>
<td>1.2. Cost of sampling</td>
<td>Disposable sterile containers for sampling</td>
</tr>
<tr>
<td></td>
<td>One use gloves pairs</td>
</tr>
<tr>
<td></td>
<td>Bootswabs</td>
</tr>
<tr>
<td>1.3. Other costs</td>
<td>Overcoats</td>
</tr>
<tr>
<td>2. Vaccination</td>
<td></td>
</tr>
<tr>
<td>2.1. Purchase of vaccine</td>
<td>8,000,000</td>
</tr>
<tr>
<td>2.2. Distribution costs</td>
<td></td>
</tr>
<tr>
<td>2.3. Administering costs</td>
<td></td>
</tr>
<tr>
<td>2.4. Control costs</td>
<td></td>
</tr>
<tr>
<td>3. Slaughter and destruction</td>
<td></td>
</tr>
<tr>
<td>3.1. Compensation of animals</td>
<td>Laying hens</td>
</tr>
<tr>
<td></td>
<td>Rearing</td>
</tr>
<tr>
<td>3.2. Transport costs</td>
<td>500</td>
</tr>
<tr>
<td>3.3. Destruction costs</td>
<td>500</td>
</tr>
<tr>
<td>3.4. Loss in case of slaughtering</td>
<td></td>
</tr>
<tr>
<td>3.5 Costs from treatment of products (milk, eggs, hatching eggs, etc)</td>
<td>Eggs destruction</td>
</tr>
<tr>
<td>4. Cleaning and disinfection</td>
<td></td>
</tr>
<tr>
<td>5. Salaries (staff contracted for the programme only)</td>
<td></td>
</tr>
<tr>
<td>6. Consumables and specific equipment</td>
<td>Disinfectants</td>
</tr>
<tr>
<td>7. Other costs</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
</tr>
</tbody>
</table>

Fixed costs should not be included. All amounts are VAT excluded.