



Single Market Programme (SMP Food)

**EU co-funded Zoonotic *Salmonella* programme for
year 2024**



EUROPEAN HEALTH AND DIGITAL EXECUTIVE
AGENCY (HADEA)
Department A Health and Food Unit A2 EU4Health/SMP

SUBMISSION FORM: DESCRIPTION OF THE ACTION (Annex 1 – Description of the action (part B))

Zoonotic *Salmonella* Programme **Control programme – Reduction of prevalence of *Salmonella* serotypes in** **Laying flocks of *Gallus gallus***

Countries seeking an EU financial contribution for the implementation of national programmes for eradication, control and/or surveillance of animal diseases and zoonosis shall submit this Form (*Annex 1 - Description of the action (part B)*) **completely filled in, by the 31 May** of the year preceding its implementation (*Part 2.1 of Annex I to the Single Market Programme Regulation*).

Applicant shall provide information on each question contained in the Form. The information filled in the Form, shall be clear, concise, consistent and complete.

For questions on the information requested in this Form, please contact: HADEA-VET-PROG@ec.europa.eu.

For more information or questions on the [eGRANTS](#) Portal Submission System, please access [GoFund](#) or contact the [IT Helpdesk](#).

APPLICANT (Name of EU / non-EU country)	
Disease	ZOONOTIC SALMONELLA
Animal population/Species	Laying flocks <i>Gallus gallus</i>
Implementation Year	2024

CONTACT PERSON on Zoonotic *Salmonella* programme :

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Job type within the CA	Head of Animal Health Division

Salmonella in Laying flocks *Gallus gallus* Programme - 2024

1. RELEVANCE

1.1 Background and general objectives (*in relation to the Call*)

By submitting this programme, the Member State (MS) attests that the relevant provisions of the EU legislation will be implemented during its entire period of approval, in particular:

- Regulation (EC) No 2160/2003 on the control of *Salmonella* and other specified food-borne zoonotic agents,
- Regulation (EU) No 517/2011 implementing Regulation (EC) No 2160/2003 of the European Parliament and of the Council as regards a Union target for the reduction of the prevalence of *Salmonella* serotypes in laying hens of *Gallus gallus*,
- Regulation (EC) No 1177/2006 implementing Regulation (EC) No 2160/2003 as regards requirements for the use of specific control methods in the framework of the national programmes for the control of *Salmonella* in poultry

Yes No

If no, please explain:

(maximum 200 words)

1.2 Needs and specific objectives

The **aim of the programme** is to implement all relevant measures in order to reduce the prevalence of *Salmonella enteritidis* (SE) and *Salmonella typhimurium* (ST) (including the serotypes with the antigenic formula I,4,[5],12:i:-) in adult laying hens of *Gallus gallus* ('Union target') as follows:

- An annual minimum percentage of reduction of positive flocks of adult laying hens equal to at least 10% where the prevalence in the preceding year was less than 10%
- An annual minimum percentage of reduction of positive flocks of adult laying hens equal to at least 20% where the prevalence in the preceding year was more than or equal to 10% and less than 20%
- A reduction of the maximum percentage equal to 2% or less of positive flocks of adult laying hens
- The Member States has less than 50 flocks of adult laying hens: the target is to have not more than one adult flock remaining positive.

The Union target shall be achieved every year based on the monitoring of the previous year.

Insert text

There are more than 50 flocks of adult laying hens in Portugal.

1.3 Complementarity with other actions — European added value

Explain how the project builds on the results of past activities carried out in the field.

Illustrate the European dimension of the activities: trans-national dimension of the project; impact/interest for a number of EU countries; possibility to use the results in other countries, potential to develop mutual trust/cross-border cooperation among EU countries, EU and non-EU countries, etc.

Which countries will benefit from the project (directly and indirectly)?

This programme contributes to the maintenance of a high level of health and safety of humans through early detection of Salmonella in birds and enforcing subsequent control measures.

The high frequency of testing and the excellent results obtained in the program in the years of implementation, allow Portugal to be a safe exporting country of day-old chicks and hatching eggs. In fact, in addition to the intra-community transit of these two products (Belgium, Spain, Italy, Switzerland), there is also a high volume of exports to third countries like Algeria, Azerbaijan, Tunisia, Türkiye, Uganda and Zambia.

Our consistent negative results ensure greater safety in offspring and therefore greater protection of Public Health not only in our country, which is a very popular tourist destination, but also in all destination countries.

(maximum 500 words)

1.4 Target population and Area of the implementation

The programme covers all flocks of adult laying hens of *Gallus gallus* but does not apply to flocks for private domestic use or leading to the direct supply, by the producer, of small quantities of table eggs to the final consumer or to local retail establishments directly supplying the eggs to the final consumer. For the latter case (direct supply), national rules are adopted ensuring *Salmonella* control in these flocks.

The programme covers also all rearing flocks of future laying hens.

Yes No

If no, please explain on which flocks:

(maximum 500 words)

Fill in **Table 1) in the Annex** to this Form.

This programme will be implemented on the whole territory of the Member State

Yes **No**

If no, please explain:

The program will be implemented on the whole territory of Portugal: Continent and the Autonomous Regions of Madeira and Azores (maps attached). The Competent Authority (CA) is the official veterinary services - DGAV (General Directorate of Food and Veterinary).

1.5 Notification of detection of target *Salmonella* serovars

A procedure is in place which guarantees that the detection of the presence of the relevant *Salmonella* serotypes during sampling at the initiative of the food business operator (FBO) is notified without delay to the competent authority by the laboratory performing the analyses. Timely notification of the detection of the presence of any of the relevant *Salmonella* serotypes remains the responsibility of the food business operator and the laboratory performing the analyses.

Yes **No**

If yes, please describe the procedure briefly.

The monitoring of the program is based on the establishment of an information circuit to allow de follow up of sampling and other measures carried out by the FBO and Regional Veterinary Services.

For the circuit of information established and summarized in flowcharts, several models of documents and procedures were created:

- Uniform request forms for analyses
- Standard submission forms (Excel)
- List of authorized laboratories
- Conditions of acceptance of samples by laboratories
- Procedure manuals for the sample collection

For the results to be valid within the PNCS, the FBO must:

- Perform the sampling according to the procedures stipulated
- Fill all fields of the requisition form for analysis and
- Deliver samples in authorized laboratories

Under the information circuit, the authorized laboratories:

- Check fill request form
- Check the conditions of the samples for their acceptance
- Enter the data information on the spreadsheets tables
- Transmit information to regional services

The request forms and the spreadsheets tables contain data on FBOs' own-check and official sampling, including identification of holdings and flocks, vaccination status of flocks, age of sampled birds and results of detection tests for Salmonella.

The data and results are supplied by the designated testing laboratories to the DSAVR. This information is transmitted, on a monthly basis by the DSAVRs to the central level DSPA, using the uniform spreadsheets.

These data are analyzed centrally and discussed during meetings of a specialized working group for SNCP, held on average 1-2 times per year.

In these meetings are presented and discussed the data for:

- * Existing flocks numbers
- * Number of flocks sampled (own-checks and official control)
- * Non compliance detected
- * Implementation percentages and
- * Percentage of positivity.

The implementation of FBOs' own-check sampling and the information about the controls made to the rearing flock is verified by the CA during official controls which includes official sampling. A specific form is used to document these controls.

Following isolation of Salmonella spp. (from an FBO or official sample), the laboratory immediately notifies DSAVR on the positive results and the isolate is forwarded to the Salmonella NRL for serotyping. The result of serotyping is send by NRL to DSPA that informs the DSAVR.

If no, please explain:

(maximum 500 words)

Fill in **Table 4** (as appropriate) in the **Annex** to this Form.

1.6. Epidemiological situation background

Describe the epidemiological disease situation background i.e. describe key obstacles and constraints hampering the control of *Salmonella* cases.

The results obtained by the implementation of the program, are summarized in Annex IV. It has been possible to maintain a low level of infection in laying hens flocks which are fundamental in the control of the disease.

2. QUALITY

2.1 Concept and methodology (Programme activities/measures)

The programme activities/measures shall be clear, suitable to address the needs and to achieve desired outcomes/ impact. They have to be adapted to the *Salmonella* in Layers *Gallus gallus* situation/risk and feasible in terms of the capacities for their implementation.

Clearly describe planning and implementation arrangements/methodology; ensure technical quality and logical links between the identified problems/needs and solutions/activities proposed to help improvement; mention timeline for the implementation of specific activities. Further instructions are provided below.

2.1.1 Biosecurity measures

FBOs have to implement measures to prevent the contamination of their flocks.

Yes No

If yes, please make a short description of the most relevant biosecurity measures applied in order to prevent *Salmonella* contamination of their flock and please quote the document describing them, if any. Also please specify if biosecurity is part of the salmonella programmes or if there is national legislation in place for the implementation of biosecurity.

Specify if there is a national guidance available for the biosecurity measures to be implemented and if this guidance is easily accessible by the FBO's.

If no, please describe.

Biosecurity is one of the fundamental parts of the programs. It is provided for in national legislation (decree-law nº 164/2015 of August 17)

Biosecurity is checked at each official control following positive results. There is a specific checklist for this verification that was sent in Annex to the programmes

Biosecurity measures to be implemented are explained in the Procedures Manual for Producer available on DGAV website.

To prevent the introduction of *Salmonella* in the holding the minimum biosecurity measures are(summary):

- Sealing of farm perimeter to prevent the entry of domestic and wild animals, people and non-essential vehicles.
- Access reserved only to the indispensable personnel and vehicles (transport of animals and food). These vehicles must be previously disinfected.
- Contact with birds from other farms or other animals should be avoided by owners and handlers.
- Full protective clothing, for exclusive use in the holding, should be wear.
- Integrity of protection devices against wild animals (windows networks, fan grills, etc) should be in place and monitored regularly.
- Supply of food and water in outdoor parks is prohibited.
- Food and bed materials should be stored in separate spaces, indoors and protected from wild birds and rodents.
- The collection of dead birds should be done twice a day with correct methods of transport and disposal
- Disinfection between production cycles of all places, equipment, utensils and transport vehicles should be carried out.

- Drinking water should be treated and in the case of this being carried out at the holding, periodic analysis of water and a register should be maintained.

The verification of biosecurity measures by the CA is done:

- as part of the registration process,
- for granting approval for intra-EU trade in accordance with Directive 2009/158/EC,
- when there are positive results of the targeted *Salmonella* serovars,
- in case of positive *Salmonella* test results detected in the slaughterhouse (during sampling in accordance with Regulation (EC) 2073/2005) and,
- under animal welfare controls.

Handling of eggs

At the producer's premises, and until sale to the consumer, eggs must be kept clean, dry, free of extraneous odour, effectively protected from shocks and out of direct sunshine.

Eggs are stored and transported until sale to the final consumer at room temperature, preferably constant, to assure optimal conservation of their hygiene properties.

Eggs must be delivered to the consumer within a maximum time limit of 21 days of laying.

Quality of packs: packs shall be shock-resistant, dry, clean and in good conditions, and be of materials which protect the eggs from extraneous odour and the risk of quality deterioration.

Structural and operating conditions of packing centers are checked by the authorities under the Program of approval and Control of Establishments (PACE) , to check all the legal rules applicable to the sector, and the compliance with selfcontrols. The noncompliance are punishable by DL 113/2006.

2.1.2 Minimum sampling requirements for food business operators (FBO)

Samples at the initiative of the FBO must be taken and analysed to test for the target *Salmonella* serovars respecting the following minimum sampling requirements:

- a. Rearing flocks: day-old chicks, four-week-old birds, two weeks before moving to laying phase or laying unit
- b. Adults breeding flocks: every 15 weeks during the laying period

Yes No

if no, please explain - Indicate also who takes the FBO samples, and, if additional FBO sampling, going beyond the minimum sampling requirements, is performed, please describe what is done

The FBO has the responsibility of own-check sampling under the SCP.

However, he may delegate sampling in the veterinarian responsible or technicians who perform other tasks on the farm (farm staff).

2.1.3 Samples are taken in accordance with provisions of point 2.2 of Annex to Regulation (EU) No 517/2011

Yes No

If no, please explain

Insert text

2.1.4 Specific requirements laid down in Annex II.D of Regulation (EC) No 2160/2003 will be complied with where relevant.

In particular:

- due to the presence of SE or ST (including monophasic ST 1,4,[5],12:i:-) in the flock, eggs cannot be used for human consumption unless heat treated;
- eggs from these flocks shall be marked and considered as class B eggs

Yes No

If no, please explain. *Indicate also if prompt depopulation of the infected flocks is compulsory*

As soon as there is a positive detection result, measures are immediately implemented in order to restrict the movements of birds and eggs of the flock. If the flock is positive to any of the targeted serotypes in the program, the FBO may choose to keep the birds and send the eggs to egg products or to carry out the depopulation of the flock.

In the case of positive results for Salmonella Enteritidis and/or Salmonella Typhimurium additional biosecurity measures are implemented, sanitary restriction of the flock and sanitary surveillance of the holding are imposed.

Destination of birds

In the presence of clinical signs, the slaughter of the flock will be carried out in an approved slaughterhouse and after the authorization of DSAVR, with elimination of birds as by-products in accordance with Regulation (EC) No 1069/2009 of the European Parliament and of the Council of 21 October laying down the sanitary rules concerning animal by-products not intended for human consumption.

In the absence of clinical signs, the slaughter of the flock will be carried out in an approved slaughterhouse and after the authorization of DSAVR.

As sanitary inspection criteria, the birds of the flock can be:

- Approved for human consumption: the approved products derived from such birds may be placed on the market for human consumption in accordance with Community legislation on food hygiene.
- Disapproval and elimination as by-products in accordance with Regulation (EC) no 1069/2009 of the European Parliament and of the Council of 21 October.

Destination of eggs

All the eggs from positive flocks must be, at option of the FBO:

- eliminated as by-products or
- forwarded to egg product units to be heat treated

2.1.5 EU microbiological criteria in fresh poultry meat in birds from flocks infected with *Salmonella enteritidis* or *Salmonella typhimurium*

If birds from flocks infected with SE or ST are slaughtered, please describe the measures that shall be implemented by the FBO and the CA to ensure that fresh poultry meat meet the relevant **EU microbiological criteria** (row 1.28 of Chapter 1 of Annex I to Regulation (EC) No 2073/2005): absence of SE/ST in 5 samples of 25g.

Measures implemented by the FBO (farm level)

Flocks infected with SE or ST can only be transported to the slaughterhouse with authorization of the DSAVR . The OV of the slaughterhouse chosen has to be informed in advance by both, the regional services and the FBO responsible for the slaughterhouse.

The FCI that accompanes the animals has to mention the result of the Salmonella testing.

In the holding, after the depopulation of an infected flock, FBO must perform the cleaning of the poultry house, including safe disposal of waste and beds. After disinfection, environmental samples are collected by FBO following the instructions of the CA. The restocking can only be made in case of negative results to Salmonella, and after authorization of DSAVR.

Measures implemented by the FBO (slaughterhouse level)

Flocks infected with SE or ST can only be transported to the slaughterhouse if DSAVR authorizes this.

The OV of the slaughterhouse chosen has to be informed in advance either by the regional services and by the FBO responsible for the slaughterhouse.

The FCI that accompanies the animals has to mention the result of the Salmonella testing.

The OV informs the FBO of the procedures that have to be adopted during the slaughter of the positive flock.

The FBO of the slaughterhouse has to comply with all the procedures imposed by the OV. This means that the infected flock has to be slaughtered after all the negative flocks to avoid cross contamination and that the speed line may have to be lowered to permit the careful evisceration and the watchful PMI of the animals.

The carcasses and offals with pathology compatible with infection caused by Salmonella will be subject to total condemnation, according to the OV criteria.

The positive flocks shall have priority for the purpose of sampling for the hygiene criteria analysis and the OV confirms that the FBO gives priority to the positive flock when sampling for hygiene criteria.

The OV introduces all the relevant information regarding this slaughter in the national database system.

Slaughterhouse operators are required to comply with the sampling provided for in Regulation (EC) 2073/2015 of the Commission of 15 November 2015, for application of the relevant microbiological criteria. Failure to comply is punishable under Article 24 of Decree-Law 164/2015 of August 17 and Article 6, paragraph a) of Decree-Law 113/2006 of 12 June.

If the results of this sampling are positive for Salmonella SE or ST, the FBO has to:

- withdraw the product that is already at retail level;
- process the product in order to eliminate the danger - if the product is a stage prior to retail.

The OV supervises the corrective measures implemented by the FBO.

Measures implemented by the CA (farm and slaughterhouse level)

The OV informs the FBO of the procedures that have to be adopted during the slaughter of the positive flock.

The PMI is done with even more care and for that the speed line may have to be lowered.

The carcasses and offals with pathology compatible with infection caused by Salmonella will be subject to total condemnation, according to the OV criteria.

The OV introduces the national database system all the relevant information regarding this slaughter.

The OV confirms that the FBO gives priority to the positive flock when sampling for hygiene criteria.

The OV supervises the corrective measures implemented by the FBO.

2.1.6 Laboratory accreditation

Laboratories in which samples (official and FBO samples) collected within this programme are analysed are accredited to ISO 17025 standard and the analytical methods for *Salmonella* detection is within the scope of their accreditation

Yes No

If no, please explain

All the laboratories testing FBO samples are accredited (ISO 17025) by IPAC (National Accreditation Body) and Salmonella detection is performed, according their Annex to Accreditation Certificates.

All the detection tests (both official and own-checks) are made according ISO EN 6579-2. No alternative methods are used.

The list of accredited laboratories is presented in annex V.

2.1.7 Analytical methods

The detection of Salmonella spp. is always done according to EN ISO 6579-1. Serotyping is performed following the Kaufman-White-Le Minor scheme.

Yes No

If no, please describe the alternative method(s) used.

For samples taken on behalf of the FBO alternative methods if validated in accordance with the most recent version of EN/ISO16140 may be used.

Yes No

If no, please explain. If time limits are exceeded, please indicate what is done.

All the laboratories testing FBO samples are accredited (ISO 17025) by IPAC (National Accreditation Body) and Salmonella detection is performed, according to their Annex to Accreditation Certificates.

All the detection tests (both official and own-checks) are made according to ISO EN 6579-2. No alternative methods are used.

The list of accredited laboratories is presented in annex V.

2.1.8 Transportation and storage of samples

Samples are transported and stored in accordance with point 3.1. of the Annex to Regulation (EU) No 517/2011. In particular, samples examination shall start in the laboratory within 4 days after sampling.

Yes No

If no, please explain the actions taken in case time limits are exceeded

All the laboratories testing FBO samples are accredited (ISO 17025) by IPAC (National Accreditation Body) and Salmonella detection is performed, according to their Annex to Accreditation Certificates.

All the detection tests (both official and own-checks) are made according to ISO EN 6579-2. No alternative methods are used.

If time limits are exceeded a new collection sample has to be made.

2.2 Programme participants (stakeholders)

Cooperation and division of roles and responsibilities

Indicate participants (stakeholders such as competent authorities, testing laboratories, authorised private veterinarians, other stakeholders as relevant) involved in the planning and implementation of the programme; what are their roles and responsibilities; who reports to whom; what are the reporting arrangements.

Indicate who is overall responsible for the programme and how the overall responsible coordinates with other stakeholders; how effective communication will be ensured.

Structure and organization of the Competent Authorities (from the central CA to the local CAs)

Please provide a short description and reference to a document presenting this description

DGAV

CENTRAL COORDINATION

General Directorate of Food and Veterinary (DGAV), namely its Epidemiology and Animal Health Unit, is the authority at central level that is responsible for the preparation, coordination and monitoring of the program.

REGIONAL COORDINATION

There are five Regional Food and Veterinary Service Directorates (DSAVR) and two Autonomous Regions that are local veterinary authority, control the execution of the measures of the program in their region, and also execute some of the programme actions, such as the issue of movement restriction and the sampling.

The Regional Food and Veterinary Service Directorate and two Autonomous Regions are identified by the following acronyms:

DSAVRN: Food and Veterinary Service Directorate of the Region Norte

DSAVRC: Food and Veterinary Service Directorate of the Region Centro

DSAVRLVT: Food and Veterinary Service Directorate of the Region Lisboa e Vale do Tejo

DSAVRALT: Food and Veterinary Service Directorate of the Region Alentejo

DSAVRALG: Food and Veterinary Service Directorate of the Region Algarve

RAA: Autonomous Region of Açores

RAM: Autonomous Region of Madeira

The structure of veterinary service can be seen at:

<https://www.dgav.pt/wp-content/uploads/2023/01/DGAV-Organizational-Chart.pdf>

Detection analyses within the scope of official control are only carried out at National Reference Laboratory- INIAV-NRL

All serotyping tests, both for the own checks and for the official control, are carried out at the INIAV

Detection tests of samples collected by the FBO are only valid if carried out in one of the laboratories authorized by the DGAV. The collections are the responsibility of the and authorised private veterinarians in charge of the farm.

2.3 Management; controls and verifications, quality assurance and monitoring and evaluation strategy

Describe the activities planned to ensure that the implementation of the programme activities is of high quality and completed in time (according to the plan/timeline). Explain planned controls and verifications, and monitoring of achievement of targets (activity indicators) - please describe for different programme activities.

Describe the evaluation of the progress indicators (quantitative and qualitative); the outreach of the expected results/outcome (include unit of measurement, baseline and target values). The indicators proposed to measure progress (progress indicators) should be relevant, realistic, and measurable.

The monitoring of the program is based on the establishment of an information circuit to allow de follow up of sampling and other measures carried out by the FBO and Regional Veterinary Services.

For the circuit of information established and summarized in flowcharts, several models of documents and procedures were created:

- Uniform request forms for analyses
- Standard submission forms (Excel)
- List of authorized laboratories
- Conditions of acceptance of samples by laboratories
- Procedure manuals for the sample collection

For the results to be valid within the PNCS, the FBO must:

- Perform the sampling according to the procedures stipulated
- Fill all fields of the requisition form for analysis and
- Deliver samples in authorized laboratories

Under the information circuit, the authorized laboratories:

- Check fill request form
- Check the conditions of the samples for their acceptance
- Enter the data information on the spreadsheets tables
- Transmit information to regional services

The request forms and the spreadsheets tables contain data on FBOs' own-check and official sampling, including identification of holdings and flocks, vaccination status of flocks, age of sampled birds and results of detection tests for Salmonella.

The data and results are supplied by the designated testing laboratories to the DSAVR. This information is transmitted, on a monthly basis by the DSAVRs to the central level DSPA, using the uniform spreadsheets.

These data are analyzed centrally and discussed during meetings of a specialized working group for SNCP, held on average 1-2 times per year.

In these meetings are presented and discussed the data for:

- * Existing flocks numbers
- * Number of flocks sampled (own-checks and official control)
- * Non compliance detected
- * Implementation percentages and
- * Percentage of positivity.

The implementation of FBOs' own-check sampling and the information about the controls made to the rearing flock is verified by the CA during official controls which includes official sampling. A specific form is used to document these controls.

Following isolation of *Salmonella* spp. (from an FBO or official sample), the laboratory immediately notifies DSAVR on the positive results and the isolate is forwarded to the *Salmonella* NRL for serotyping. The result of serotyping is send by NRL to DSPA that informs the DSAVR.

The progress indicators are the number of infected flocks identified per year – the target is to achieve the accomplishment of objectives defined in [Commission Regulation \(EU\) No 517/2011 of 25 May 2011](#) In 2022 there were 4 infected flocks. It is expected that by 2024, the number of infected flocks are 2.

2.3.1 Official controls at feed level

Please describe the **official controls at feed level** (including sampling)

DGAV is the National Competent Authority for the Portuguese Feed Official Control Plan (CAA) under Reg. (EU) 2017/625. According to this plan, planned, executed, monitored and evaluated by DGAV, samples are annually collected and inspection actions are conducted at the level of all chain feed operators, including primary producers, feed materials producers, compound feed manufacturers, feed intermediaries, and feed imports from third countries.

Sampling provides for the execution of several analytical determinations, including the presence of *Salmonella* spp. *Salmonella* is the only microbiological criteria legally established at national level for non-animal origin feed, according to article 5 (3) of D.L. No 105/2003. For this *Salmonella* is analyzed in 20% of samples of compound feed collected at feed mills (industrial or home-mixers), in plant origin feed materials randomly sampled at producers and import third countries level. For consignments of animal origin feed imported from third countries, and in all by-products national processing plants, *Salmonella* is controlled in all collected samples. All non-compliant results obtained for *Salmonella* spp. are subjected to serotyping for adoption of subsequent measures, which vary with the pathogenicity of the strain to humans or animals. Thus, besides the sanctioning measures provided by national and / or Community law in force, there will be additional controls in the feed establishments of origin for preventive and corrective measures, including traceability of products for, whenever applicable, withdrawal from the market with a view to their treatment or destruction, as well as knowledge of livestock holdings of destination for adequate surveillance of those nonconformity feed destined to poultry production.

During inspection actions, which have a frequency proportional to the risk characterization of the feed establishment, a documentary control is performed in order to check compliance with the legal requirements, including the implementation and effectiveness of HACCP systems and of quality control programs developed by operators, where the assessment of the possible microbiological risk assessment, and in particular the presence of Salmonella, is always taken into consideration.

2.3.2. Official controls at holding, flock and hatchery levels

a) Please describe the official checks concerning the **general hygiene provisions** (Annex I of Regulation (EC) No 852/2004) including checks on biosecurity measures, and consequences in case of unsatisfactory outcome.

Hygiene and biosecurity measures are regularly checked in the holdings under several official controls carried out, in particular for the attribution of the number of approval for intra-Community trade in accordance with Directive 2009/158/EC, when there are positive results of the targeted serotypes in SCP, in case of positive results for Salmonella detected at slaughterhouse (during sampling in accordance with Regulation (EC) No 2073/2005) and under animal welfare controls.

There is a checklist for verifying hygiene and biosecurity measures in the holdings.

Biosecurity measures to be implemented are explained in the Procedures Manual for Producer available on DGAV website.

To prevent the introduction of Salmonella in the holding the minimum biosecurity measures are (summary):

- Fencing of farm perimeter to prevent the entry of domestic and wild animals, people and non-essential vehicles.
- Reserved access only to the indispensable personnel and vehicles (transport of animals and food). These vehicles must be previously disinfected.
- Contact with birds from other farms or other animals should be avoided by owners and handlers.
- Full protective clothing, for exclusive use in the holding, should be worn.
- Integrity of protection devices against wild animals (windows networks, fan grills, etc) should be in place and monitored regularly.
- Supply of food and water in outdoor parks is prohibited.
- Food and bed materials should be stored in separate spaces, indoors and protected from wild birds and rodents.
- The collection of dead birds should be done twice a day with correct methods of transport and disposal.
- Disinfection between production cycles of all places, equipment, utensils and transport vehicles should be carried out.
- Drinking water should be treated and in the case of this being carried out at the holding, periodic analysis of water and a register should be maintained.

The verification of biosecurity measures by the CA is done:

- as part of the registration process,
- for granting approval for intra-EU trade in accordance with Directive 2009/158/EC,

- when there are positive results of the targeted *Salmonella* serovars,
- in case of positive *Salmonella* test results detected in the slaughterhouse (during sampling in accordance with Regulation (EC) 2073/2005) and,
- under animal welfare controls.

Biosecurity failures are communicated to the FBO and given a deadline for correction. The sanctions are described in Decree-Law No. 164/2015 of August 17

b) Routine official *sampling scheme*: EU minimum requirements are implemented i.e. official sampling are performed:

- in one flock per year per holding comprising at least 1,000 birds;
- at the age of 24 +/- 2 weeks in laying flocks housed in buildings where the relevant *Salmonella* was detected in the preceding flock;
- in any case of suspicion of *Salmonella* infection when investigating foodborne outbreaks in accordance with Article 8 of Directive 2003/99/EC or any cases where the competent authority considers it appropriate, using the sampling protocol laid down in point 4(b) of Part D to Annex II to Regulation (EC) No 2160/2003;
- in all other laying flocks on the holding in case *Salmonella* Enteritidis or *Salmonella typhimurium* is detected in one laying flock on the holding;
- in cases where the competent authority considers it appropriate.

Yes No

If no, please explain. Indicate also: 1) if additional official sampling going beyond EU minimum requirements is performed, 2) who is taking the official samples

Following positive results for one of the targeted serotypes, official controls are carried out on all flocks on the farm in accordance with what is described in point 2.1.d of annex to Reg. (EC) No 517/2011)

Additional official sampling is done in case of suspected positivity, positive results in slaughterhouse and when there are positive results in the holding.

e) Official confirmatory sampling (in addition to the confirmatory samples at the holding which are systematically performed if FBO or official samples are positive at the hatchery):

After positive official samples at the holding

- Always
- Sometimes (criteria apply)
- Never

After positive FBO samples at the holding

- Always
- Sometimes (criteria apply)
- Never

When official confirmatory sampling is performed, additional samples are taken for checking the presence of antimicrobials:

- Always

- Sometimes
- Never

Please insert any comments. Describe the criteria used to determine if confirmatory sampling is performed. Indicate also which samples (if any) are taken to check the presence of antimicrobials.

For the purposes of acceptance of the confirmatory sampling, DSAVR must assess, on the holding:

- the history of compliance of the own-checks,
- the history of positivity and
- the biosecurity measures.

Through this evaluation confirmatory sampling will only be accepted when the flock of layers is not at the origin of noticed infection for humans by the consumption of eggs or egg products and in holdings which:

- Under the national control program fully comply with the sampling of own-checks in all flocks and;
 - Have no positivity repetition on the same premises in the case of the same flock or the immediately preceding flock and,
 - Have a positive assessment on the application of biosecurity measures or
- * When the CA has reasons to suspect the occurrence of false positives.

These analyses are carried out, in accordance with the decision of the FBO, in a laboratory authorised by the CA for this purpose.

The entire procedure is monitored in person by a representative of the CA. The laboratory carrying out the detection tests will simultaneously carry out a preliminary search for the presence of antimicrobials.

Under the SNCP confirmatory sampling it may be requested by the FBO (or initiated by the CA) within 72 hours of notification of an initial positive result.

After this initial positive result for Salmonella, the flock is submitted to sanitary restrictive measures and cannot commercialize any eggs or animals. The restrictive measures are only lifted if a final negative result from the confirmatory sampling is obtained.

For the purposes of acceptance of the confirmatory sampling, DSAVR must assess, on the holding:

- the history of compliance of the own-checks,
- the history of positivity and
- the biosecurity measures.

Through this evaluation confirmatory sampling will only be accepted in holdings which:

- Under the national control program fully comply with the sampling of own-checks in all flocks and;
- Have no positivity repetition on the same premises in the case of the same flock or the immediately preceding flock and,
- Have a positive assessment on the application of biosecurity measures.
- When the CA has reasons to suspect the occurrence of false positives.

All the analyses carried out in confirmatory tests are always performed according to Protocol defined in annex II.D of Regulation 2160/2003. Samples are always taken by CA (DSAVR) and analyzed separately.

The samples and consists in:

- five pairs of boot swabs or 5 faeces samples, two samples of 250 ml powder containing at least 100 gr of powder and at least 2 birds for antimicrobial detection or
- 300 birds or
- 4000 eggs.

These analyses are carried out, in accordance with the decision of the FBO, in a laboratory authorised by the CA for this purpose.

The entire procedure is monitored in person by a representative of the CA. The laboratory carrying out the detection tests will simultaneously carry out a preliminary search for the presence of antimicrobials.

All restrictive measures are prolonged until the results of the confirmatory sampling become available.

d) Number of official confirmatory samples

1	2	3	4
For routine samples taken at the holding	N of flocks positive to SE/ST	Out of the flock in column 2, N of cases where official confirmatory samples ³ were taken	Out of the N of cases in column 3, N of cases where confirmatory samples were negative
FBO samples ¹	4	2	2
Official samples ²	0	0	0

⁽¹⁾ Reg 517/2011, point 2.2.1 of the Annex

⁽²⁾ Reg 517/2011, point 2.2.2 of the Annex

⁽³⁾ Reg 2160/2003, point II.D.4 of the Annex

*What happened to the flocks counted under 4 (re checked for the presence of Salmonella?
Checked for the presence of antimicrobials?)*

The flocks where confirmatory samples were negative are recheck for the presence of Salmonella according to the programme.

e) Antimicrobial control

Article 2 of Regulation (EC) No 1177/2006 (**antimicrobials** shall not be used as a specific method to control *Salmonella* in poultry): please describe the official controls implemented (documentary checks, sample taking) to check the correct implementation of this provision (at the holding and at the hatchery).

For samples please describe the samples taken, the analytical method used, the result of the tests.

The use of antimicrobials in flocks is documentary checked by CA in each official control.

Specific sampling:

Samples for antimicrobial tests will be taken:

- When a flock is suspected to be positive, when the confirmatory sampling is done;
- In any case when the CA considers it appropriate.

Type of sample:

The samples consist in 2-5 birds per flock

Analytical method used:

Rapid Method (FBO laboratories)

Reference methods (NRL – INIAV): Screening and confirmation by LC-MS/MS.

Consequence of a positive result in the detection of antimicrobials:

The flock is considered positive in scope of SCP.

2.3.3 Vaccination

- Voluntary
 Compulsory
 Forbidden

The use of *Salmonella* vaccines is in compliance with provisions of Article 3 of Regulation (EC) No 1177/2006.

Yes No

If no, please explain. If performed please describe the vaccination scheme (vaccines used, vaccines providers, target flocks, number of doses administered per bird, etc).

Vaccination is optional under the programme during the rearing phase and before the beginning of the laying phase, requiring the use of authorized vaccines. The list of authorized vaccines is at DGAV web portal. The choice of vaccine and the vaccination scheme is under the responsibility of the assistant veterinarian and is verified by CA during official controls. Although not routinely compulsory most flocks are vaccinated. The cost of vaccination is supported by the FBO.

Almost 99% of the flocks are vaccinated against *Salmonella*.

Under the programme, only the vaccination of restocking flocks is mandatory, after the slaughter of positive flocks to any of the serotypes included. However this vaccination is also supported by the producer.

Information on vaccine used is compulsory in the laboratory tests request form both for own checks and for official controls. In the case of own checks, this information is therefore provided to the detection laboratories that in case of positive results informs the NRL.

The types of vaccine approved and in use are inactivated and live vaccines. In the case of live vaccines, those approved are the ones that allowed the differentiation of field and vaccination strains. This differentiation as well as serotyping is carried out only by INIAV (NRL).

2.3.4 Efficacy of disinfection

Please describe the official procedure to test, after the depopulation of an infected flock, the **efficacy of the disinfection** of a poultry house (number of samples, number of tests, samples taken, etc...)

After the depopulation of an infected flock, FBO must perform the cleaning of the poultry house, including safe disposal of waste and beds. After clean, disinfection is carried out and followed by environmental samples collection by FBO under the instructions of the CA. The restocking can only be made in case of negative results to Salmonella, and after authorization of DSAVR.

After the depopulation of a positive flock and after cleaning and disinfection actions, the FBO is required to carry out environmental tests prior to repopulation

These tests must be carried out in accordance with the respective procedures manual (Annex) available on the DGAV website

To assess the effectiveness of cleaning and disinfection actions, at least 10 samples at various points in the poultry house must be taken.

It is recommended that samples be taken in the following locations:

- Floor, walls and ceiling,
- Doors,
- Windows/Fans (ventilation systems),
- Lighting devices,
- Cages,
- Water supply pipes,
- Food supply pipelines,
- Egg transport belts,
- Stool mats,

- Disinfection antechamber of each pavilion,
- Other places susceptible to dust accumulation.

Repopulation must be authorized by local veterinary services and is only carried out upon presentation of negative results for the targeted serotypes.

2.3.5 Monitoring of the target *Salmonella* serovars (*Salmonella enteritidis*, *Salmonella typhimurium*)

Give a short summary of the outcome of the **monitoring of the target *Salmonella* serovars** (SE, ST) implemented in accordance with Article 4 of Directive 2003/99/EC (evolution of the prevalence values based on the monitoring of animal populations or subpopulations or of the food chain)

In the baseline study conducted in 2004-2005 under paragraph 1 of article 1 of Decision 2004/665/EC the level of prevalence of *Salmonella* Typhimurium and *Salmonella* Enteritidis in the national holdings of laying hens sampled was 47,7%.

The NSCP in laying hens flocks was approved, for the first time, for 2008 (Commission decision n° 2007/782/EC of 30November).

The results obtained from 2008 to 2022, resulting from the implementation of the program, are summarized in Annex.

2.3.6 System for the registration of holdings and identification of flocks

Give a short description of the system for the registration of holdings and identification of flocks

The licensing system of livestock production (NREAP), including poultry production, is described by Decree-Law n° 81/2013 of 14th June. According with Decree-Law n° 142/2006 of 27th July, and subsequent amendments, poultry establishments are also registered in the National System for Animal Information and Registration (SNIRA). The national laws comply the obligations of «Animal Health Law».

All poultry production units have an individual holding mark with an alphanumeric code containing the letters PT and letters coding for the geographical area and number of holding. A"V" after a slash identifies a poultry holding

The farm registry contains data on the owner, on the holding, its location, the species under production, the type of production.

All registered poultry establishments are assigned an individual alphanumeric code which identifies each establishment within the national territory; this code is preceded by the letters PT and followed by a letter after a slash that identifies the animal type ("V" in case of poultry). This registry contains data pertaining the establishment's keeper, its location, the species and number of birds under production and the type of production. Within each establishment, each flock is assigned an identification code.

(texto que me foi dado pela Rosário Cidadão)

The identification of flocks is a responsibility of the FBO and in accordance with the provisions of paragraph 3 (a) of article 5 of Decree No. 164/2015, each flock must be identified with a unique code, up to slaughter, allowing its distinction from other flocks.

The control of flock identification is carried out by the Regional Services of CA, both during official controls and through the follow-up of own checks data sent to the laboratories with the samples.

At the Central Services of CA, this information is verified and organized being available for all national territory.

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At the Central Services of CA, this information is verified and organized being available for all national territory.

2.3.7 System for **compensation to owners** for the value of their birds slaughtered or culled and the eggs destroyed or heat treated

Describe the system for compensation to owners. Indicate how improper implementation of biosecurity measures can affect the payment of compensation

There is no compensation following positive results to the target serotypes under this program.

2.3.8 System to monitor the implementation of the programme

Please describe

The monitoring of the program is based on the establishment of an information circuit to allow the follow up of sampling and other measures carried out by the FBO and Regional Veterinary Services.

For the circuit of information established and summarized in flowcharts, several models of documents and procedures were created:

- Uniform request forms for analyses
- Standard submission forms (Excel)
- List of authorized laboratories
- Conditions of acceptance of samples by laboratories
- Procedure manuals for the sample collection

For the results to be valid within the PNCS, the FBO must:

- Perform the sampling according to the procedures stipulated
- Fill all fields of the requisition form for analysis and
- Deliver samples in authorized laboratories

Under the information circuit, the authorized laboratories:

- Check fill request form

- Check the conditions of the samples for their acceptance
- Enter the data information on the spreadsheets tables
- Transmit information to regional services

The request forms and the spreadsheets tables contain data on FBOs' own-check and official sampling, including identification of holdings and flocks, vaccination status of flocks, age of sampled birds and results of detection tests for Salmonella.

The data and results are supplied by the designated testing laboratories to the DSAVR. This information is transmitted, on a monthly basis by the DSAVRs to the central level DSPA, using the uniform spreadsheets.

These data are analyzed centrally and discussed during meetings of a specialized working group for SNCP, held on average 1-2 times per year.

In these meetings are presented and discussed the data for:

- * Existing flocks numbers
- * Number of flocks sampled (own-checks and official control)
- * Non compliance detected
- * Implementation percentages and
- * Percentage of positivity.

The implementation of FBOs' own-check sampling and the information about the controls made to the rearing flock is verified by the CA during official controls which includes official sampling. A specific form is used to document these controls.

Following isolation of Salmonella spp. (from an FBO or official sample), the laboratory immediately notifies DSAVR on the positive results and the isolate is forwarded to the Salmonella NRL for serotyping. The result of serotyping is send by NRL to DSPA that informs the DSAVR.

2.4 Risk management

Critical risks and risk management strategy

Describe critical risks, uncertainties or difficulties related to the implementation of the programme, and mitigation measures/strategy for addressing them.

Indicate for each risk (in the description) the impact and the likelihood that the risk will materialise (high, medium, low), even after taking into account the mitigating measures.

Note: *Uncertainties and unexpected events occur in all organizations, even if very well-run. The risk analysis will help you to predict issues that could delay or hinder project activities. A good risk management strategy is essential for good project management.*

Risk	Description	Proposed risk-mitigation measures
No		

1	Deadlines for contracting laboratory services – public procurement	Timely launch of contractual procedures to start analytics
2	No control by FBO	Penalty for the producer
3	Non-compliance by the laboratory with the analysis times	New sample collection

2.5 Milestones

Indicate control points along the programme implementation that help to chart progress.

Note: Deliverables (e.g. *intermediate or final report on the implementation of programme measures*) are not milestones.

Name	Due date (in month)	Means of verification
Verification of sampling events	monthly	Collection and analysis of laboratory results

3. IMPACT

3.1 Impact and ambition

Describe **expected impact** (benefit) of the programme (e.g. from the economical and animal health points of view)

Who are the target groups? How will the target groups benefit concretely from the project and what would change for them?

Define the short, medium and long-term effects of the project.

Possible examples: *reduction to 1% or less the maximum percentage of laying flocks of Gallus gallus remaining positive for the target Salmonella serovars: S. enteritidis (SE), S. typhimurium (ST)(including the antigenic formula 1,4,[5],12: i:-), S. hadar (SH), S. infantis (SI) and S. virchow (SV).*

This program will make possible the accomplishment of the Union targets:

- Reduction to 2% or less than the maximum percentage of adult laying hens flocks of Gallus gallus remaining positive for the target Salmonella serovars: S. enteritidis (SE), S. typhimurium (ST)(including the antigenic formula 1,4,[5],12: i:-).

The evaluation of cost / benefit must take into account several factors including the cost of disease corresponding to direct losses to production (cost of morbidity and cost of decreased production) and indirect losses (eg barriers to free trade). The benefits resulting from the reduction of salmonellosis in poultry is also associated with a lower likelihood of infection of consumers via their products and with the associated socio-economic benefits.

3.2 Communication, dissemination and visibility

Communication, dissemination and visibility of funding

Describe the communication and information dissemination activities which are planned in order to promote the activities/results and maximise the impact (to whom, which format, how many, etc.).

Describe how the visibility of EU funding will be ensured.

The results of the programs are disseminated in several meetings held throughout the year with the poultry production sector, in DGAV meetings and in forums related to poultry farming.

Coordination meetings are held to present the programme to local veterinary services which are responsible for sampling as well as to discuss the progress of the implementation of the programme.

Information about this programme is publicly available at DGAV web portal. There is a Salmonella dedicated page in this portal containing information about:

- a) Disease detection, diagnosis, and notification of suspicions.
- b) Epidemiological situation of avian Salmonellosis in Portugal,
- c) Information for poultry keepers regarding biosecurity and other relevant issues (compensations, movement restrictions and derogations).

Regular awareness sessions about Salmonella for poultry industry stakeholders, including epidemiological situation, prevention, and biosecurity as well as activities within the scope of the surveillance programme, are held either online or physically.

3.3 Sustainability and continuation

Sustainability, long-term impact and continuation

Describe the how will the project impact be ensured and sustained long term? Which parts of the project should be continued or maintained, and which resources will be necessary to continue?

Are there any possible synergies/complementarities with other (EU funded) activities that can build on the results of the implementation of this project?

An efficient surveillance programme is essential for early detection and timely implementation of control measures. Prevention and control rely on appropriate biosecurity measures, surveillance, and rapid action. Surveillance is the key for controlling this zoonosis.

Official controls have to be maintained to ensure correct implementation by the FBO namely to verify farm biosecurity measures

ANNEX

- I. Baseline population data**
- II. Targets for 2024**
- III. Legal basis for the implementation of the programme**
- IV. Maps (as relevant)**

I. Baseline population data

Table 1: Flocks subject to the programme

	Total number of flocks of layers in the MS	Number of flocks covered by the programme	Number of flocks where FBO sampling shall take place	Number of flocks where official sampling will take place
Rearing flocks	170		170	0
Adult flocks	500	500	500	143
Number of holdings with more than 1,000 laying hens				143
Number of flocks in these holdings				470
Comments:				

All cells shall be filled in with the best estimation available. The above data refer to MM/YYYY; **Source of the data:** “ ”

II. Targets for 2024

Table 2: Targets on laboratory tests on official samples from laying hens flocks of *Gallus gallus*

Type of test (description)	Number of planed tests
Bacteriological detection test	429
Serotyping	25
Antimicrobial detection test	4
Test for verification of the efficacy of disinfection	4

Table 3: Targets on official samples from laying hens flocks of *Gallus gallus*

Type of test (description)	Rearing flocks	Adult flocks
Total N of flocks (a)	170	500
N of flocks in the programme	170	500
N of flocks planned to be checked (b)	170	143
No of flock visits to take official samples (c)	0	143
N of official samples taken	0	429
Target serovars (d)	<input type="checkbox"/> SE+ ST + SH +SI + SV	<input type="checkbox"/> SE+ ST + SH +SI + SV
	<input checked="" type="checkbox"/> SE+ ST	<input checked="" type="checkbox"/> SE+ ST
	<input type="checkbox"/> others, please specify:	<input type="checkbox"/> others, please specify:
Possible N of flocks infected by target serovars	0	4
Possible N of flocks to be depopulated	0	4
Total N of birds to be slaughtered/culled	0	86000
Total N of eggs to be destroyed	0	0
Total N of eggs to be heat treated	0	4900000

(a) Including eligible and non-eligible flocks

(b) A checked flock is a flock where at least one official sampling visit will take place. A flock shall be counted only once even if it was visited several times.

(c) Each visit for the purpose of taking official samples shall be counted. Several visits on the same flock for taking official samples shall be counted separately.

(d) *Salmonella enteritidis* and *Salmonella typhimurium* = SE + ST; *Salmonella enteritidis*, *typhimurium*, *hadar*, *infantis*, *virchow* = SE+ ST + SH +SI + SV

Table 4: Targets on vaccination for laying hens flocks of *Gallus gallus*

Type of test (description)	Target on vaccination
Number of flocks in the <i>Salmonella</i> programme	170
Number of flocks expected to be vaccinated	170
Number of birds expected to be vaccinated	7918700
Number of doses expected to be administered	23 756 100

III. Legal basis for the implementation of the programme)

(TRACEABILITY, DISEASE NOTIFICATION AND MEASURES FOR EFFECTIVE CONTROL OF THE DISEASE)

EU countries

- Regulation (EC) No 2160/2003 of the European Parliament and of the Council of 17 November 2003 on the control of salmonella and other specified food-borne zoonotic agents <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02003R2160-20210421&qid=1652941252241>
- Commission Regulation (EU) No 517/2011 of 25 May 2011 implementing Regulation (EC) No 2160/2003 of the European Parliament and of the Council as regards a Union target for the reduction of the prevalence of certain Salmonella serotypes in laying hens of Gallus gallus and amending Regulation (EC) No 2160/2003 and Commission Regulation (EU) No 200/2010 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02011R0517-20190310&qid=1652941558459>
- Commission Regulation (EC) No 1177/2006 of 1 August 2006 implementing Regulation (EC) No 2160/2003 of the European Parliament and of the Council as regards requirements for the use of specific control methods in the framework of the national programmes for the control of salmonella in poultry <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32006R1177&qid=1652941414224>
- Directive 2003/99/EC of the European Parliament and of the Council of 17 November 2003 on the monitoring of zoonoses and zoonotic agents, amending Council Decision 90/424/EEC and repealing Council Directive 92/117/EEC <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02003L0099-20130701&qid=1652941345135>

IV. Maps (as relevant)

V. Maps – evolution of positive flocks

VI. List of diagnostic laboratories

VII. Checklist of biosecurity