

About this dossier

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Eradication: Final report for Salmonella 2019

For each approved annual or multi-annual programme Member States shall submit to the Commission by the 30 April each year an annual detailed technical and financial report covering the previous year. That report shall include the results achieved and a detailed account of eligible costs incurred (Art 14 of Regulation (EU) No 652/2014).

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Reporting period

From: 2019

To: 2019

Year of implementation: 2019

1. Technical implementation of the programme

1.1 Description and evaluation of the evolution of the epidemiological situation, the technical implementation of the activities foreseen under the programme and the cost-effectiveness of the programme.

Italian Control programme for reduction of Salmonella serotypes relevant for public health at primary production level in certain poultry populations: epidemiological evaluation of 2019 data:

According to EU Regulation (EC) No 2160/2003 Italy has implemented in 2019 a control programme (PNCS) approved by European Commission aimed at reducing the prevalence of Salmonella serovars, which are considered relevant for public health, in poultry at primary production level. Currently, prevalence targets have been defined for breeding flocks of Gallus gallus, laying hens, broilers and breeding and fattening turkeys and correspond to the maximum annual percentage of flocks remaining positive for relevant serovars (*S. Enteritidis* and *S. Typhimurium*, including its monophasic variant, except than for breeding flocks of Gallus gallus, where *S. Infantis*, *S. Virchow* and *S. Hadar* are considered to be relevant as well). In particular, prevalence target is equal to 1% or less for breeding flocks of Gallus gallus, broilers and breeding and fattening turkeys and to 2% or less for laying hens.

Sampling strategy, frequency, type of samples and methods to collect and analyze samples in the framework of PNCS are reported in details in the official document and are in compliance with European relevant legislation.

Analytical results resulting from each sampling session (both performed by CA and FBO) and other relevant information must be recorded in the dedicated informative system (SISalm).

In order to evaluate *Salmonella* spp. prevalence for each poultry population data from SISalm are analyzed together with data recorded in The National Data Archive (BDN- Banca Dati Nazionale) that provides the number of flocks included in the programme over the period of observation and results are transmitted to Ministry of Health through an informative system that is called SIR. All the aforementioned informative systems are maintained by Istituto Zooprofilattico Sperimentale Abruzzo e Molise.

Aim of this report is to provide an update on the epidemiological situation of *Salmonella* serovars isolated within the framework of PNCS based on data provided to the National Reference Laboratory for Salmonellosis by the Ministry of Health.

Epidemiological situation in breeding flocks of *Gallus gallus*

In 2019, 1923 breeding flocks of *Gallus gallus* were submitted to sampling, 1907 by FBO and 1018 by CA (this means that in few cases flocks were checked only by CA). In particular, out of the 1018 flocks sampled by CA, 1002 were adult while 16 in rearing phase; as regards the 1907 flocks sampled by FBO, 1247 were in laying phase and 660 in rearing phase.

Based on data collected by the informative systems, 69 breeding flocks (61 adult flocks and 8 in rearing phase) resulted to be positive for *Salmonella* spp. in 2019; 59 out of the 69 positive flocks were identified by FBO while 10 by CA.

5 adult flocks tested positive for *Salmonella* serovars with public health significance (2 *Salmonella* Enteritidis, 1 *S. Typhimurium*, 1 *S. Typhimurium* monophasic variant and 1 *S. Infantis*). 4 out of the 5 positive groups were identified by CA while 1 by FBO.

Giving an overview, we observed that more of the 70% of all breeding flocks that tested positive came from only three regions: Veneto, Emilia-Romagna and Lombardia. No positive flocks were detected in Abruzzo, Calabria, Campania, Liguria, Marche, Puglia, Sicilia, Sardegna and Umbria. We underline that the most part of the poultry production is located in the North-East part of Italy and more specifically in the three regions mentioned above.

S. Enteritidis has been detected in two breeding flocks in Veneto and *S. Infantis* in a single flock in Piemonte; *S. Typhimurium* (1) and *S. Typhimurium* monophasic variant (1) were both detected in Lombardia.

Thus the percentage of adult flocks positive for relevant serovars was way below 1% in 2019 (0,4%).

As regards serovars not relevant for public health, the three most frequent serovars were: *S. Kentucky* (18 flocks), *S. Veneziana* (14) and *S. Napoli* (6).

Epidemiological situation in breeding flocks of turkeys

In 2019, 493 breeding flocks of turkeys were submitted to sampling, 493 by FBO and 176 by CA (this means that 176 groups were checked both by FBO and CA); in particular, among the 176 tested flocks by CA, 165 were in laying phase and 11 in rearing phase. Among the 493 flocks sampled by the FBO, 315 were adult and 178 in rearing phase.

Out of the 493 flocks of breeding turkeys submitted to sampling, 30 tested positive for *Salmonella* spp.: 16 of them were in laying phase and 14 were in rearing phase. Out of the 30 positive flocks, 20 were identified by FBO and 10 by CA,

None of the tested flocks resulted to be positive for *Salmonella* serovars with public health significance.

Thus the percentage of adult flocks positive for relevant serovars was below 1% in 2019.

As regards serovars not relevant for public health, *S. Livingstone*, with 16 positive flocks out of 30 (53%), is the most frequent detected serovar by far.

Epidemiological situation in laying hens

As regards laying hens, 5000 flocks were submitted to sampling, 4735 by FBO and 1501 by CA (this means that in few cases flocks were checked only by CA). To be specific, out of the 4735 flocks sampled by FBO, 3545 were in laying phase and 1190 in rearing phase. Out of the 1501 flocks sampled by CA, 1414 were in laying phase and 87 in rearing phase.

324 of the tested flocks resulted positive for *Salmonella* spp. (165 were identified by FBO and 159 by CA) and 54 resulted to be positive for *Salmonella* serovars with public health significance (45 *S. Enteritidis*, 8 *S. Typhimurium* monophasic variant and 1 *S. Typhimurium*). Out of the 54 positive flocks, 42 were identified by CA and 12 by FBO.

50 out of the 54 positive flocks were detected in laying phase flocks (43 *S. Enteritidis*, 6 *S. Typhimurium* monophasic variant and the unique *S. Typhimurium*).

S. Enteritidis has been detected in hens from several Italian regions, with the highest frequency of detection in Lombardia and Veneto, with 19 and 10 positive flocks respectively. Two positive flocks were detected in Trentino Alto-Adige and one positive flock was identified in Campania, Emilia-Romagna, Friuli Venezia- Giulia, Lazio, Piemonte and Puglia, respectively.

S. Typhimurium was detected in Trentino Alto-Adige (1 flock); *S. Typhimurium* monophasic variant was detected most in flocks located in Lombardia (5 out of 8), the other 3 positive flocks for this serovar were located in Umbria, Lazio and , Sardegna, respectively.

With 45 positive flocks in 2019, *S. Enteritidis* is the second most detected serovar in this category. This higher occurrence compared to the previous years is mainly related to an outbreak of *S. Enteritidis* started at the end of 2018 that involved breeders *Gallus gallus* and subsequently spread to laying hens. Because of this evidence further checks were performed by CA that submitted to control all the flocks considered at risk as a consequence of epidemiological investigations. Thus the percentage of adult flocks positive for relevant serovars still remains below 2% in 2019 (1, 29%). As regards serovars not relevant for public health the most frequent serovar was *S. Kentucky* (2.4 % positive flocks over the checked flocks), similarly to the previous year (2,12%).+

Epidemiological situation in broiler

In 2019, 28.040 broiler flocks were submitted to sampling, 27.954 by FBO and 462 by CA (this means that some flocks were checked both by FBO and CA). Out of the 28.040 flocks submitted to sampling, 4255 tested positive for *Salmonella* spp., 4155 detected by FBO and 100 by CA: 12 flocks resulted to be positive for *Salmonella* serovars with public health significance, 8 detected by FBO and 4 by CA (5 *Salmonella* *Enteritidis*, 4 *S. Typhimurium* and 3 *S. Typhimurium* monophasic variant).

S. Enteritidis has been detected in broiler flocks in Toscana (2 positive flocks) and Lombardia (3 positive flocks); *S. Typhimurium* has been detected in Abruzzo (single positive flock) and Umbria (2 positive flocks) while all the three flocks that resulted positive to *S. Typhimurium* monophasic variant were located in Lombardia.

Thus the percentage of flocks positive for relevant serovars was below 1% in 2019 (0.04%).

As regards serovars not relevant for public health, the most frequent detected serovar was as the previous years *S. Infantis* with 2370 positive flocks, representing the 50% of all serovars detected, equally to 2018. The second serovar for frequency of detection was *S. Thompson*, way below with 407 positive flocks, followed by *S. Mbandaka* (247 positive flocks) and *S. Seftenberg* (207 positive flocks).

Epidemiological situation in fattening turkeys

In 2019, 5826 turkey flocks were submitted to sampling, 5814 by FBO and 148 by CA (this means that some flocks were checked both by FBO and CA); out of the 5826 flocks submitted to sampling, 771 tested positive for *Salmonella* spp., 744 detected by FBO and 27 by CA: 8 flocks, 3 detected by FBO and 5 by CA, resulted to be positive for *Salmonella* serovars with public health significance (5 *S. Typhimurium* monophasic variant and 3 *S. Typhimurium*).

S. Typhimurium monophasic variant has been detected in Lombardia (3 positive flocks) and Marche (2 positive flocks); *S. Typhimurium* in Lazio (2 positive flocks) and Lombardia (1 positive flock).

Thus the percentage of flocks positive for relevant serovars was below 1% in 2019 (0.14%).

As regards serovars not relevant for public health the most frequent serovar was *S. Infantis* (134 flocks, 2.3%), as for 2018 (135 positive flocks, 2.5%), followed by *S. Newport* (69 flocks) and *S. Saintpaul* (49 flocks).

1.2 Details on the level of achievement of the targets set in the approved programme and technical difficulties.

The approved national control plan was performed throughout the national territory and the targets specified in the programme are considered to be achieved.

In 2019 we have put in place the "dashboard" *Salmonella*, allows to have updated data. The dashboard is a useful tool for Veterinary Services, to monitor the progress of National Control Plan.

In the course of this year we have, also, improved some data extraction techniques from Informative Systems.

The technical difficulties are linked, always, to the complexity of the National Control Plan, that requires multiple data to be recorded in the national Informative Systems (BDN-SISALM-SIMAN-SIR), by the Competent Authorities and FBO.

The costs described in this document are related to the execution of laboratory tests- sanitary measures and compensation related to the positive flocks.

1.3 Epidemiological maps for infection and other relevant data on the disease/activities (information on serotypes involved,...) (Please attach files of data using the PDF attachment feature) Use the textbox below to provide clarifications for the maps you attach, if needed.

Annexes 1-5 describe the relevant and non relevant serotypes involved, divided by production category, and their distribution throughout the Italian territory.

2. Tables for *Salmonella* monitoring outcome of the year

VERY IMPORTANT: Please fill out the following tables with figures corresponding to measures performed during the implementing period (1/1 to 31/12).

	Number of adults flocks checked	Number of these flocks infected by a	Incidence
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		target serovar	
Breeding flocks of Gallus gallus	1,262	5	0.4 %
Laying hen flocks	3,791	49	1.29 %
Broiler flocks	28,036	12	0.04 %
Breeding flocks of turkeys	315	0	0 %
Fattening flocks of turkeys	5,826	8	0.14 %

Table A - BREEDING FLOCKS OF GALLUS GALLUS

No of flocks with more than 250 adult breeders of Gallus gallus	1,266
No of flocks covered by the programme - Rearing flocks	712
No of flocks covered by the programme - Adults	1,267
No of flocks checked by the Competent Authorities - Rearing flocks	16
No of flocks checked by the Competent Authorities - Adults	1,002
No of flocks checked by the FBO - Rearing flocks	660
No of flocks checked by the FBO - Adults	1,247
No of official visits to take samples - Routine (holding)	1,227
No of official visits to take samples - Routine (hatchery)	24
No of official visits to take samples - Confirmatory sampling	1
No of official visits to take samples - Efficacy of disinfection	3
Positive flocks (SE,ST,SH,SI,SV) - No of positive flocks - Rearing flocks	0
Positive flocks (SE,ST,SH,SI,SV) - No of positive flocks - Adults	5
Positive flocks (SE,ST,SH,SI,SV) - No of positive flocks depopulated - Rearing flocks	0
Positive flocks (SE,ST,SH,SI,SV) - No of positive flocks depopulated - Adults	5
Positive flocks (SE,ST,SH,SI,SV) - No of birds concerned - Rearing flocks	0
Positive flocks (SE,ST,SH,SI,SV) - No of birds concerned - Adults	36,197
Positive flocks (SE,ST,SH,SI,SV) - No of eggs - Heat treated	0
Positive flocks (SE,ST,SH,SI,SV) - No of eggs - Destroyed	59,829

Table B - FLOCKS OF LAYING HENS

No of holdings with more than 1,000 adult laying hens	1,221
No of flocks in these holdings - Rearing flocks	0
No of flocks in these holdings - Adults	3,565
No of holdings covered by the programme	2,197
No of flocks in these holdings - Rearing flocks	1,388
No of flocks in these holdings - Adults	3,990
Official checks - No of holdings with adult flocks checked	1,032
Official checks - No of adult flocks checked in these holdings	1,313
Official checks - No of pullet flocks checked in these holdings	86
FBO checks - No of holdings checked	1,480
FBO checks - No of adult flocks checked in these holdings	3,543
FBO checks - No of pullet flocks checked in these holdings	1,181
No of official visits to take samples - Routine	1,352
No of official visits to take samples - Confirmatory sampling	0
No of official visits to take samples - Specific samples	37
No of official visits to take samples - Competent authority samples	72
No of official visits to take samples - Efficacy of disinfection	28
Positive flocks (SE,ST) - No of positive flocks - Rearing flocks	5
Positive flocks (SE,ST) - No of positive flocks - Adults	49
Positive flocks (SE,ST) - No of positive flocks depopulated - Rearing flocks	5
Positive flocks (SE,ST) - No of positive flocks depopulated - Adults	44
Positive flocks (SE,ST) - No of birds concerned - Rearing flocks	218,161

Positive flocks (SE,ST) - No of birds concerned - Adults	333,317
Positive flocks (SE,ST) - No of eggs - Destroyed	517,279

Table C - BROILER FLOCKS

No of holdings with more than 5,000 broilers	2,567
No of flocks produced in these holdings	32,945
No of holdings covered by the programme	2,975
No of flocks produced in these holdings	33,677
No of flocks checked (official checks)	462
No of flocks checked (FBO checks)	27,950
No of official visits to take samples - Routine	301
No of official visits to take samples - Efficacy of disinfection	17
No of positive flocks (SE,ST)	12

Table D - BREEDING FLOCKS OF TURKEY

No of flocks with more than 250 adult breeding turkeys	321
No of flocks with elite, great grand parent, grand parents	0
No of flocks covered by the programme - Rearing flocks	207
No of flocks covered by the programme - Adults	321
No of flocks checked by the Competent Authorities - Rearing flocks	11
No of flocks checked by the Competent Authorities - Adults	165
No of flocks checked by the FBO - Rearing flocks	178
No of flocks checked by the FBO - Adults	315
No of official visits to take samples - Routine (holding)	165
No of official visits to take samples - Routine (hatchery)	0
No of official visits to take samples - Confirmatory sampling	0
No of official visits to take samples - Efficacy of disinfection	0
Positive flocks (SE,ST) - No of positive flocks - Rearing flocks	0
Positive flocks (SE,ST) - No of positive flocks - Adults	0
Positive flocks (SE,ST) - No of positive flocks depopulated - Rearing flocks	0
Positive flocks (SE,ST) - No of positive flocks depopulated - Adults	0
Positive flocks (SE,ST) - No of birds concerned - Rearing flocks	0
Positive flocks (SE,ST) - No of birds concerned - Adults	0
Positive flocks (SE,ST) - No of eggs - Heat treated	0
Positive flocks (SE,ST) - No of eggs - Destroyed	0

Table E - FLOCKS OF FATTENING TURKEYS

No of holdings with more than 500 fattening turkeys	750
No of flocks produced in these holdings	5,987
No of holdings covered by the programme	771
No of flocks produced in these holdings	5,996
No of flocks checked (official checks)	148
No of flocks checked (FBO checks)	5,814
No of official visits to take samples - Routine	109
No of official visits to take samples - Efficacy of disinfection	0
No of positive flocks (SE,ST)	8

Table F - LABORATORY TESTS

Laboratory tests on official samples	Nb of tests					
	Breeding flocks	Laying flocks	Broiler flocks	Breeding turkey flocks	Fattening turkey flocks	TOTAL

Microbiological tests	5,807	4,358	1,099	565	346	12,175
Serotyping tests	20	382	281	13	48	744
Disinfection efficacy tests	25	265	93	0	0	383
Antimicrobial detection tests	145	15	35	2	0	197

Table G - VACCINATION

	No of flocks in the vaccination programme	No of flocks vaccinated	No of birds vaccinated	No of doses administered
Breeders	0	0	0	0
Layers	0	0	0	0
Breeding turkeys	0	0	0	0
	0	0	0	0

COMMENT / ADDITIONAL CLARIFICATION

Breeding turkeys-
in the box n.3 Financial data-reimbursement Claim-there is not the box concerning the compensation of Breeding turkeys(there is not a problem for this year because we had not relevant serotypes and compensation).

BROILERS-
the total number of flocks produced in the holdings covered by the programme in 2019 are 33677, but the number of flocks subject to control in 2019 was 28206 (counting 1 flock per cycle for holdings with derogation, where FBO shall sample at least 1 flock/cycle).