

**Supplementary table 1.** Univariable logistic regression analysis results for *S. enterica*, STEC, and *S. enterica*/STEC models.

Dependent variable	Independent variables	Category	OR	95% CI		p-value
				Lower	Upper	
<i>S. enterica</i> (+)	BPS Positivity to STEC	Positive	0,000		7,27E+119	0,995
	BPS Positivity to <i>S. enterica</i> /STEC	Positive	4,65E+08	0,000		0,994
	BPS altitude	-	0,999	0,994	1,004	0,801
	BPS area (hectares)	-	0,409	0,001	1,613	0,666
	BPS productive objective	Forestry	0,000			0,999
		Mixed	0,000		1,56E+178	0,996
		Other	0,000			0,998
		Livestock	0,767	0,088	16,346	0,826
	BPS productive objective_2	2	0,000		2,53E+178	0,996
		3	0,000			0,998
	Economic activity of the household provider	Agricultural worker	1,79E+08	0,000		0,996
		Dependent employee	1,000	0,000	4,63E+218	1,000
		Household and care work	3,32E+08	0,000		0,996
		Self-employed	1,000	0,000	1,11E+209	1,000
	Economic activity of the household provider_2	2	3,51E+07	0,000		0,994
		3	1,22E+08	0,000		0,994
	Number of household members	-	0,964	0,535	1,271	0,866
	Level of importance of animals	2	5,70E+07	0,000		0,997
		3	3,05E+07	0,000		0,997
		4	1,000	0,000	1,58E+130	1,000

		5	6,33E+07	0,000		0,997
	Bird species raised in the BPS	Mixed	0,446	0,022	3,591	0,490
		No	0,000		8,70E+182	0,996
		Ducks	0,000		8,70E+182	0,996
	Raising pigs at the BPS	Si	2,479	0,119	20,732	0,444
	Other domestic species raised at the BPS	Goats	1,000	0,000		1,000
		Rabbits	1,000	0,000		1,000
		Guinea pigs	1,000	0,000		1,000
		Mixed	1,91E+07	0,000		0,995
		Does not apply	8,38E+06	0,000		0,996
		Sheeps	1,000	0,000	2,58E+218	1,000
		Cows	1,000	0,000	5,32E+179	1,000
	Pets kept at the BPS	No	3,55E+06	0,000		0,994
		Dogs	1,18E+06	0,000		0,994
		Dogs and Cats	5,99E+05	0,000		0,995
	Pets kept at the BPS_2	Yes	0,216	0,025	1,874	0,135
	Number of gallus gallus raised at BPS	-	1,006	1,001	1,012	0,023
	Number of waterfowl raised at the BPS	-	0,884	0,442	1,037	0,519
	Number of other birds raised at the BPS	-	0,002		1,13E+54	0,995
	Number of pigs raised at the BPS	-	0,975		1,190	0,894
	Number of equids raised at the BPS	-	1,099	0,912	1,249	0,166
	Number of ruminants raised at the BPS	-	1,000		1,019	0,990
	Number of other species raised at the BPS	-	0,000		9,98E+106	0,995

	Number of pets kept at the BPS	-	0,529	0,164	0,935	0,135
	Total number of BPS animals	-	1,005	1,001	1,010	0,013
	Sampling density	-	0,001	0,000	4,346	0,273
	Gini-Simpson Diversity Index	-	0,102	0,001	6,702	0,302
	Productive objective of BPS animals	Consumption and sales	3,88E+07	0,000		0,995
		Hobbies	1,000	0,000		1,000
		Sales	1,000	0,000		1,000
	Time of rearing of current animals	More than 5 years	1,000	0,000	1,47E+210	1,000
		Less than 1 year	3,52E+07	0,000		0,996
	Length of experience raising animals	Between 2 and 10 years	1,85E+07	0,000		0,996
		More than 20 years	7,86E+06	0,000		0,996
		Less than 2 years	1,000	0,000	3,13E+126	1,000
	Gender of the person in charge of animal handling	Male	1,562	0,060	40,458	0,755
		Female	1,887	0,175	41,343	0,609
	Confinement of BPS animals	Mixed	0,000		7,28E+146	0,995
		Permanent	1,333	0,152	28,491	0,811
	Variation in the number of animals during the year	No change	0,189	0,015	4,470	0,203
		Spring/Summer	0,065	0,002	1,801	0,066
	Origin of replacement animals	Purchase	0,000		7,99E+145	0,996
		Their own animals	0,357	0,042	3,068	0,312
	BPS animal feed	Cereals	0,000		2,97E+133	0,995
		Mixed	0,104	0,010	2,361	0,073
	Water source for BPS animals	Mixed	1,000	0,000	4,27E+105	1,000

	Drinking water	3,94E+06	0,000		0,995
	Well water	3,21E+06	0,000		0,996
Treatments applied to sick animals	Mixed	0,000		5,76E+122	0,995
	Nothing	0,328	0,015	3,534	0,369
	Natural medicines	0,950	0,043	10,512	0,967
Handling of dead animals	Consumption and sales	1,000	0,000		1,000
	Buries them	3,56E+07	0,000		0,996
	Leaves them far from home	1,000	0,000	1,68E+283	1,000
	Mixed	1,000	0,000		1,000
	Nothing	1,000	0,000	5,63E+148	1,000
	Burns them	1,07E+08	0,000		0,995
BPS receives veterinary attention	More than 1 per year	5,78E+06	0,000		0,994
	No	3,34E+06	0,000		0,994
BPS poultry and pigs have contact with each other	Does not apply	0,124	0,013	2,748	0,093
	Yes	0,000		2,69E+122	0,995
BPS has functional fences	Yes	1,939	0,241	39,763	0,571
There are watercourses within the BPS	Yes	0,776	0,091	6,625	0,803
There are watercourses or wetlands near the BPS	Yes	0,000		5,83E+144	0,996
There are neighboring BPSs that raise poultry and swine	Yes	0,688	0,081	5,869	0,712
There are commercial poultry and swine farms close to the BPS	Yes	0,000		2,56E+102	0,994
BPS birds have free access to watercourses	Yes	0,429	0,021	3,450	0,469
Backyard animals have contact with wild birds	Yes	0,065	0,003	0,533	0,020

	BPS animals have contact with neighboring animals	Yes	0,370	0,018	2,970	0,394
	Handling of new animals entering BPS	Does not quarantine	0,000		7,07E+119	0,995
		Quarantines	0,949	0,111	8,129	0,959
	People outside the household have contact with BPS animals	Yes	3,72E+07	0,000		0,995
	SAG has visited the BPS	Yes	1,274	0,062	10,385	0,837
	SAG has made a subsequent visit to the BPS	Yes	8,667	0,391	83,717	0,082
	The owner of the BPS is a user of INDAP or PRODESAL	Yes	0,917	0,045	7,421	0,941
	Someone in the family recently had diarrhea recently	Yes	0,000		2,02E+115	0,995
	Someone in the family had a fever recently	Yes	2,881	0,137	24,304	0,373
	Anyone in the family had vomiting recently	Yes	0,000		1,57E+134	0,995
	Someone in the family recently had poor appetite	Yes	0,000		5,83E+144	0,996
	Someone in the family had muscle pain recently	Yes	1,810	0,087	14,917	0,615
	Sick people have contact with the BPS animals	Yes	3,67E+06	0,000		0,994
	Pets remain confined indoors	Yes	0,000		9,16E+121	0,995
	Pets have access to animal wastes	Yes	0,266	0,031	5,627	0,269
	BPS animals have contact with animals from other BPS	Yes	0,378	0,044	3,239	0,339
	BPS animals have contact with neighbors' pets	Yes	2,000	0,234	17,113	0,495
STEC (+)	BPS Positivity to <i>S. enterica</i>	Positive	0,000		1,67E+53	0,990
	BPS Positivity to <i>S. enterica</i> /STEC	Positive	1,16E+10	0,000		0,993
	BPS altitude	-	1,000	0,998	1,002	0,782
	BPS area (hectares)	-	1,280	0,969	2,007	0,139
	BPS productive objective	Forestry	1,16E+08	0,000		0,992
		Mixed	1,57E+07	0,000		0,993

		Other	1,000	0,0 00	8,68E+ 30	1,000
		Livestock	3,63E +07	0,0 00		0,993
	BPS productive objective_2	2	0,542	0,1 98	1,418	0,217
		3	0,000		1,61E+ 22	0,989
	Economic activity of the household provider	Agricultural worker	1,602	0,5 57	4,688	0,379
		Dependent employee	0,392	0,0 20	2,396	0,395
		Household and care work	0,000		9,33E+ 34	0,991
		Self-employed	0,734	0,1 04	3,318	0,714
	Economic activity of the household provider 2	2	1,102	0,4 22	3,012	0,845
		3	0,000		9,33E+ 34	0,991
	Number of household members	-	0,902	0,6 86	1,096	0,393
	Level of importance of animals	2	2,429	0,2 11	55,539	0,487
		3	1,962	0,2 29	41,480	0,573
		4	2,975	0,4 76	57,848	0,325
		5	5,409	0,8 46	106,22 2	0,131
	Bird species raised in the BPS	Mixed	0,770	0,2 69	2,058	0,609
		No	5,500	0,2 08	145,65 9	0,239
		Ducks	0,000		1,22E+ 109	0,993
	Raising pigs at the BPS	Si	1,324	0,2 84	4,602	0,684
	Other domestic species raised at the BPS	Goats	1,000	0,0 00	2,14E+ 151	1,000
		Rabbits	1,000	0,0 00	9,05E+ 47	1,000
		Guinea pigs	1,000	0,0 00	3,87E+ 134	1,000

	Mixed	7,71E+07	0,000		0,992
	Does not apply	8,03E+06	0,000		0,993
	Sheeps	5,78E+07	0,000		0,992
	Cows	1,000	0,000	1,87E+39	1,000
Pets kept at the BPS	No	0,391	0,034	9,299	0,473
	Dogs	0,469	0,048	10,503	0,545
	Dogs and Cats	0,541	0,062	11,485	0,609
Pets kept at the BPS_2	Yes	1,358	0,412	6,159	0,647
Number of gallus gallus raised at BPS	-	1,002	0,997	1,006	0,392
Number of waterfowl raised at the BPS	-	0,980	0,894	1,027	0,562
Number of other birds raised at the BPS	-	1,044	1,000	1,131	0,159
Number of pigs raised at the BPS	-	1,051	0,917	1,170	0,375
Number of equids raised at the BPS	-	1,104	0,998	1,238	0,057
Number of ruminants raised at the BPS	-	1,048	1,016	1,088	0,007
Number of other species raised at the BPS	-	1,125	1,015	1,331	0,124
Number of pets kept at the BPS	-	0,978	0,876	1,070	0,657
Total number of BPS animals	-	1,003	1,000	1,007	0,092
Sampling density	-	0,544	0,027	4,716	0,635
Gini-Simpson Diversity Index	-	2,677	0,369	21,800	0,339
Productive objective of BPS animals	Consumption and sales	2,596	0,802	11,660	0,148
	Hobbies	0,000		2,91E+36	0,993
	Sales	5,25E+08	0,000		0,996
Time of rearing of current animals	More than 5 years	0,000		3,05E+35	0,992

		Less than 1 year	1,956	0,602	8,809	0,311
	Length of experience raising animals	Between 2 and 10 years	0,455	0,066	3,812	0,422
		More than 20 years	1,029	0,237	7,172	0,972
		Less than 2 years	0,625	0,026	7,732	0,720
	Gender of the person in charge of animal handling	Male	2,098	0,515	9,102	0,298
		Female	2,937	0,928	11,224	0,082
	Confinement of BPS animals	Mixed	0,476	0,124	2,341	0,307
		Permanent	0,667	0,136	3,738	0,621
	Variation in the number of animals during the year	No change	0,729	0,097	15,039	0,787
		Spring/Summer	0,909	0,131	18,226	0,933
	Origin of replacement animals	Purchase	0,000		6,24E+108	0,993
		Their own animals	0,494	0,185	1,371	0,162
	BPS animal feed	Cereals	0,267	0,009	7,738	0,385
		Mixed	0,720	0,099	14,516	0,775
	Water source for BPS animals	Mixed	1,333	0,104	17,648	0,819
		Drinking water	0,275	0,047	2,147	0,162
		Well water	0,313	0,046	2,669	0,240
	Treatments applied to sick animals	Mixed	0,884	0,173	3,655	0,870
		Nothing	0,635	0,200	2,011	0,432
		Natural medicines	0,786	0,155	3,214	0,748
	Handling of dead animals	Consumption and sales	0,000		2,92E+108	0,993
		Buries them	2,066	0,612	9,488	0,284



		Leaves them far from home	1,500	0,068	14,318	0,744
		Mixed	0,000		5,87E+205	0,995
		Nothing	0,643	0,030	5,563	0,713
		Burns them	1,125	0,052	10,277	0,923
	BPS receives veterinary attention	More than 1 per year	2,13E+07	0,000		0,989
		No	5,88E+06	0,000		0,990
	BPS poultry and pigs have contact with each other	Does not apply	7,22E+06	0,000		0,992
		Yes	1,70E+07	0,000		0,992
	BPS has functional fences	Yes	0,587	0,224	1,536	0,272
	There are watercourses within the BPS	Yes	0,949	0,366	2,515	0,914
	There are watercourses or wetlands near the BPS	Yes	1,733	0,365	6,255	0,433
	There are neighboring BPSs that raise poultry and swine	Yes	1,750	0,653	5,228	0,284
	There are commercial poultry and swine farms close to the BPS	Yes	2,824	0,567	11,279	0,159
	BPS birds have free access to watercourses	Yes	0,859	0,316	2,231	0,758
	Backyard animals have contact with wild birds	Yes	4,800	0,922	88,362	0,136
	BPS animals have contact with neighboring animals	Yes	1,164	0,446	3,037	0,754
	Handling of new animals entering BPS	Does not quarantine	0,329	0,017	1,972	0,310
		Quarantines	1,375	0,513	3,825	0,529
	People outside the household have contact with BPS animals	Yes	1,053	0,389	3,168	0,922
	SAG has visited the BPS	Yes	4,050	1,462	11,113	0,006
	SAG has made a subsequent visit to the BPS	Yes	6,824	1,182	39,581	0,025
	The owner of the BPS is a user of INDAP or PRODESAL	Yes	2,659	0,982	7,089	0,050

	Someone in the family recently had diarrhea recently	Yes	0,842	0,044	5,123	0,876
	Someone in the family had a fever recently	Yes	0,906	0,135	3,656	0,902
	Anyone in the family had vomiting recently	Yes	0,000		1,72E+60	0,992
	Someone in the family recently had poor appetite	Yes	0,991	0,146	4,044	0,991
	Someone in the family had muscle pain recently	Yes	2,000	0,590	5,959	0,231
	Sick people have contact with the BPS animals	Yes	1,369	0,232	26,142	0,773
	Pets remain confined indoors	Yes	0,000		9,68E+71	0,991
	Pets have access to animal wastes	Yes	1,935	0,345	36,387	0,538
	BPS animals have contact with animals from other BPS	Yes	1,667	0,564	6,132	0,390
	BPS animals have contact with neighbors' pets	Yes	2,216	0,842	5,853	0,104
<i>S. enterica</i> /STEC C (+)	BPS Positivity to <i>S. enterica</i>	Positive	9,00E+07	0,000		0,988
	BPS Positivity to STEC	Positive	9,04E+09	0,000		0,992
	BPS altitude	-	1,000	0,998	1,002	0,884
	BPS area (hectares)	-	1,238	0,944	1,883	0,169
	BPS productive objective	Forestry	11,000	0,291	573,745	0,173
		Mixed	1,492	0,237	29,085	0,719
		Other	0,000		1,05E+21	0,989
		Livestock	4,812	0,813	92,253	0,150
	BPS productive objective_2	2	0,373	0,140	0,927	0,038
		3	0,000		7,62E+27	0,988
	Economic activity of the household provider	Agricultural worker	2,350	0,871	6,645	0,096
		Dependent employee	0,392	0,020	2,396	0,395

		Household and care work	0,839	0,042	5,707	0,877
		Self-employed	0,734	0,104	3,318	0,714
	Economic activity of the household provider 2	2	1,445	0,577	3,854	0,442
		3	0,839	0,042	5,707	0,877
	Number of household members	-	0,910	0,712	1,089	0,388
	Level of importance of animals	2	3,923	0,444	84,537	0,259
		3	2,720	0,363	55,698	0,389
		4	2,975	0,476	57,848	0,325
		5	7,650	1,249	148,480	0,065
	Bird species raised in the BPS	Mixed	0,686	0,258	1,712	0,429
		No	4,200	0,160	110,380	0,320
		Ducks	0,000		9,12E+63	0,989
	Raising pigs at the BPS	Si	1,569	0,410	4,978	0,469
	Other domestic species raised at the BPS	Goats	1,000			1,000
		Rabbits	1,000	0,000	1,25E+44	1,000
		Guinea pigs	1,000	0,000	3,70E+76	1,000
		Mixed	9,74E+07	0,000		0,992
		Does not apply	1,16E+07	0,000		0,993
		Sheeps	5,78E+07	0,000		0,992
		Cows	1,000	0,000	6,00E+35	1,000
	Pets kept at the BPS	No	0,714	0,072	16,131	0,789
		Dogs	0,581	0,061	12,837	0,661

	Dogs and Cats	0,600	0,070	12,696	0,670
Pets kept at the BPS_2	Yes	0,849	0,301	2,787	0,769
Number of gallus gallus raised at the BPS	-	1,007	1,001	1,016	0,076
Number of waterfowl raised at the BPS	-	0,972	0,886	1,021	0,428
Number of other birds raised at the BPS	-	1,037	0,995	1,115	0,173
Number of pigs raised at the BPS	-	1,044	0,914	1,160	0,439
Number of equids raised at the BPS	-	1,135	1,025	1,287	0,026
Number of ruminants raised at the BPS	-	1,048	1,016	1,088	0,008
Number of other species raised at the BPS	-	1,106	1,007	1,300	0,153
Number of pets kept at the BPS	-	0,944	0,842	1,034	0,264
Total number of BPS animals	-	1,008	1,003	1,017	0,027
Sampling density	-	0,313	0,015	2,869	0,380
Gini-Simpson Diversity Index	-	1,484	0,239	9,723	0,673
Productive objective of BPS animals	Consumption and sales	3,426	1,085	15,205	0,059
	Hobbies	0,000		1,70E+33	0,993
	Sales	5,25E+08	0,000		0,996
Time of rearing of current animals	More than 5 years	0,000		2,99E+32	0,992
	Less than 1 year	2,538	0,798	11,305	0,155
Length of experience raising animals	Between 2 and 10 years	0,806	0,147	6,236	0,814
	More than 20 years	1,212	0,283	8,391	0,815
	Less than 2 years	0,625	0,026	7,732	0,720
Gender of the person in charge of animal handling	Male	2,044	0,565	7,712	0,273
	Female	2,848	0,983	9,498	0,065

	Confinement of BPS animals	Mixed	0,321	0,089	1,330	0,093
		Permanent	0,818	0,200	3,688	0,783
	Variation in the number of animals during the year	No change	0,391	0,065	3,122	0,318
		Spring/Summer	0,400	0,070	3,098	0,318
	Origin of replacement animals	Purchase	0,000		5,16E+63	0,989
		Their own animals	0,440	0,176	1,124	0,080
	BPS animal feed	Cereals	0,100	0,004	1,358	0,095
		Mixed	0,325	0,051	2,579	0,234
	Water source for BPS animals	Mixed	1,333	0,104	17,648	0,819
		Drinking water	0,364	0,064	2,800	0,268
		Well water	0,387	0,059	3,237	0,330
	Treatments applied to sick animals	Mixed	0,646	0,130	2,522	0,552
		Nothing	0,540	0,185	1,554	0,251
		Natural medicines	0,810	0,196	2,902	0,755
	Handling of dead animals	Consumption and sales	0,000		2,92E+108	0,993
		Buries them	2,638	0,800	11,979	0,147
		Leaves them far from home	1,500	0,068	14,318	0,744
		Mixed	0,000		5,87E+205	0,995
		Nothing	0,643	0,030	5,563	0,713
		Burns them	2,571	0,296	18,709	0,348
	BPS receives veterinary attention	More than 1 per year	2,62E+07	0,000		0,989
		No	7,48E+06	0,000		0,989

BPS poultry and pigs have contact with each other	Does not apply	1,019	0,154	20,061	0,986
	Yes	2,000	0,143	51,833	0,615
BPS has functional fences	Yes	0,706	0,290	1,740	0,442
There are watercourses within the BPS	Yes	0,909	0,375	2,234	0,833
There are watercourses or wetlands near the BPS	Yes	1,351	0,288	4,782	0,665
There are neighboring BPSs that raise poultry and swine	Yes	1,485	0,602	3,919	0,403
There are commercial poultry and swine farms close to the BPS	Yes	2,204	0,448	8,654	0,279
BPS birds have free access to watercourses	Yes	0,753	0,295	1,834	0,539
Backyard animals have contact with wild birds	Yes	1,117	0,374	4,137	0,853
BPS animals have contact with neighboring animals	Yes	0,956	0,389	2,313	0,920
Handling of new animals entering BPS	Does not quarantine	0,253	0,013	1,458	0,204
	Quarantines	1,300	0,522	3,320	0,575
People outside the household have contact with BPS animals	Yes	1,423	0,546	4,191	0,491
SAG has visited the BPS	Yes	3,609	1,376	9,339	0,008
SAG has made a subsequent visit to the BPS	Yes	11,300	2,067	85,527	0,007
The owner of the BPS is a user of INDAP or PRODESAL	Yes	2,328	0,911	5,820	0,071
Someone in the family recently had diarrhea recently	Yes	0,671	0,035	4,034	0,715
Someone in the family had a fever recently	Yes	1,226	0,263	4,277	0,767
Anyone in the family had vomiting recently	Yes	0,000		1,48E+60	0,992
Someone in the family recently had poor appetite	Yes	0,780	0,116	3,133	0,756
Someone in the family had muscle pain recently	Yes	2,063	0,668	5,795	0,182
Sick people have contact with the BPS animals	Yes	1,720	0,294	32,695	0,617

	Pets remain confined indoors	Yes	0,000		8,05E+71	0,991
	Pets have access to animal wastes	Yes	1,048	0,253	7,124	0,954
	BPS animals have contact with animals from other BPS	Yes	1,207	0,460	3,570	0,714
	BPS animals have contact with neighbors' pets	Yes	2,286	0,930	5,640	0,070