

**Table S1.** The Information for 78 NTS isolates strains in this study.

Numbers	Years	Regions	Sources	Breeds	Domestic or Imported Breeds	Serotypes	Antimicrobial Resistance Patterns*	Antimicrobial Resistance Genes	Plasmids	MLST
20SD01	2020	Shandong	Feed	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD02	2020	Shandong	Feed	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	ColpVC, IncHI2, IncHI2A	26
20SD03	2020	Shandong	Stool	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD04	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD05	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD07	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD09	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD10	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-TET-DOX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD11	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD12	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD13	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26

20SD14	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD15	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD16	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD17	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD18	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD19	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD20	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD21	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD22	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD23	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD24	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD25	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	ColpVC, IncHI2, IncHI2A	26

20SD26	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD27	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD28	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-STR-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD29	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-GM-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD30	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	SXT-AMX-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD31	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	AMX-STR-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20SD32	2020	Shandong	Parental embryos	Langya	Domestic breeds	S. Thompson	AMX-STR-AMP	<i>aac(3)-IId, aadA2, armA, blaTEM-1B, dfrA12, parC, qacE, sul1</i>	IncHI2, IncHI2A	26
20JN04	2020	Shandong	Parental embryos	Bairi	Domestic breeds	S. Enteritidis	TET-GM-AMP-AMX-DOX	<i>aph(3'')-Ib, aph(6)-Id, blaTEM-1B, gyrA, sul2, tet(A)</i>	IncFIB(S), IncFII(S)	11
20JN14	2020	Shandong	Parental embryos	Bairi	Domestic breeds	S. Enteritidis	TET-GM-AMP-AMX-DOX	<i>aph(3'')-Ib, aph(6)-Id, blaTEM-1B, gyrA, sul2, tet(A)</i>	IncFIB(S), IncFII(S)	11
20TA01	2020	Shandong	Parental embryos	Hubbard chicken	Imported breeds	S. Enteritidis	TET-STR-GM-AMP-AMX-DOX	<i>aph(3'')-Ib, aph(6)-Id, blaTEM-1B, gyrA, sul2, tet(A)</i>	IncFIB(S), IncFII(S)	11
20TA15	2020	Shandong	Parental embryos	Hubbard chicken	Imported breeds	S. Enteritidis	GM-AMP-AMX	<i>dfrG, erm(B), gyrA, lsa(A), tet(L)</i>	IncFIB(S), IncFII(S)	19
C104	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium	TET-STR	<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C108	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium	STR	<i>gyrA</i>	IncFIB(S), IncFII(S)	19

C111	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium	STR	<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C113	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium		<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C121	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium		<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C122	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium		<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C129	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium	STR	<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C130	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium	STR	<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C145	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium	STR	<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C151	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium	STR	<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C162	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium	STR	<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C170	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium		<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C182	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium		<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C185	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium		<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C190	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium	STR	<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C191	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium	STR	<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C192	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium	STR	<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C195	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium		<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C197	2021	Zhejiang	Stool	Broiler	Domestic breeds	S. Typhimurium		<i>gyrA</i>	IncFIB(S), IncFII(S)	19
C205	2021	Zhejiang	Water	Broiler	Domestic breeds	S. Typhimurium		<i>gyrA</i>	IncFIB(S), IncFII(S)	19

D2	2021	Anhui	Commercial embryos	Partfidge chicken	Domestic breeds	S. Tennessee	STR	<i>gyrA, parC</i>		319
D5	2021	Anhui	Commercial embryos	Partfidge chicken	Domestic breeds	S. Tennessee	STR	<i>gyrA, parC</i>		319
D84	2021	Anhui	Commercial embryos	Partfidge chicken	Domestic breeds	S. Enteritidis		<i>gyrA</i>	IncFIB(S), IncFII(S)	11
D89	2021	Anhui	Commercial embryos	Partfidge chicken	Domestic breeds	S. Gallinarum	STR	<i>gyrA</i>	ColpVC	3717
E17	2021	Fujian	Parental embryos	White feather chicken	Imported breeds	S. Enteritidis	TET	<i>gyrA</i>	IncFIB(S), IncFII(S)	11
E70	2021	Fujian	Parental embryos	White feather chicken	Imported breeds	S. Enteritidis		<i>gyrA</i>	IncFIB(S), IncFII(S)	11
E86	2021	Fujian	Parental embryos	White feather chicken	Imported breeds	S. Enteritidis	TET	<i>gyrA</i>	IncFIB(S), IncFII(S)	11
E88	2021	Fujian	Parental embryos	White feather chicken	Imported breeds	S. Enteritidis		<i>gyrA</i>	IncFIB(S), IncFII(S)	11
K57	2021	Shandong	Parental embryos	Bairi	Domestic breeds	S. Enteritidis			IncFIB(S), IncFII(S)	11
K16	2021	Shandong	Parental embryos	Bairi	Domestic breeds	S. Enteritidis	STR-CAZ		IncFIB(S), IncFII(S)	11
K6	2021	Shandong	Parental embryos	Bairi	Domestic breeds	S. Enteritidis			IncFIB(S), IncFII(S)	11
21JX20	2021	Shandong	Parental tissue	Langya	Domestic breeds	S. Kentucky	SXT-TET-GM-STR-AMP-OF-AMX-DOX	<i>aac(3)-Id, aac(3)-IId, aadA17, aadA7, aph(3')-Ia, ARR-2, blaCTX-M-55, blaTEM-214, dfrA14, floR, fosA3, gyrA, lnu(F), mph(A), qacE, qnrS1, rmtB, sul1, tet(A)</i>	ColpVC	198
21JX21	2021	Shandong	Parental tissue	Langya	Domestic breeds	S. Kentucky	SXT-TET-GM-STR-AMP-OF-AMX-CAZ-DOX	<i>aac(3)-Id, aac(3)-IId, aadA17, aadA7, aph(3')-Ia, ARR-2, blaCTX-M-55, blaTEM-214, dfrA14, floR, fosA3, gyrA,</i>	ColpVC	198

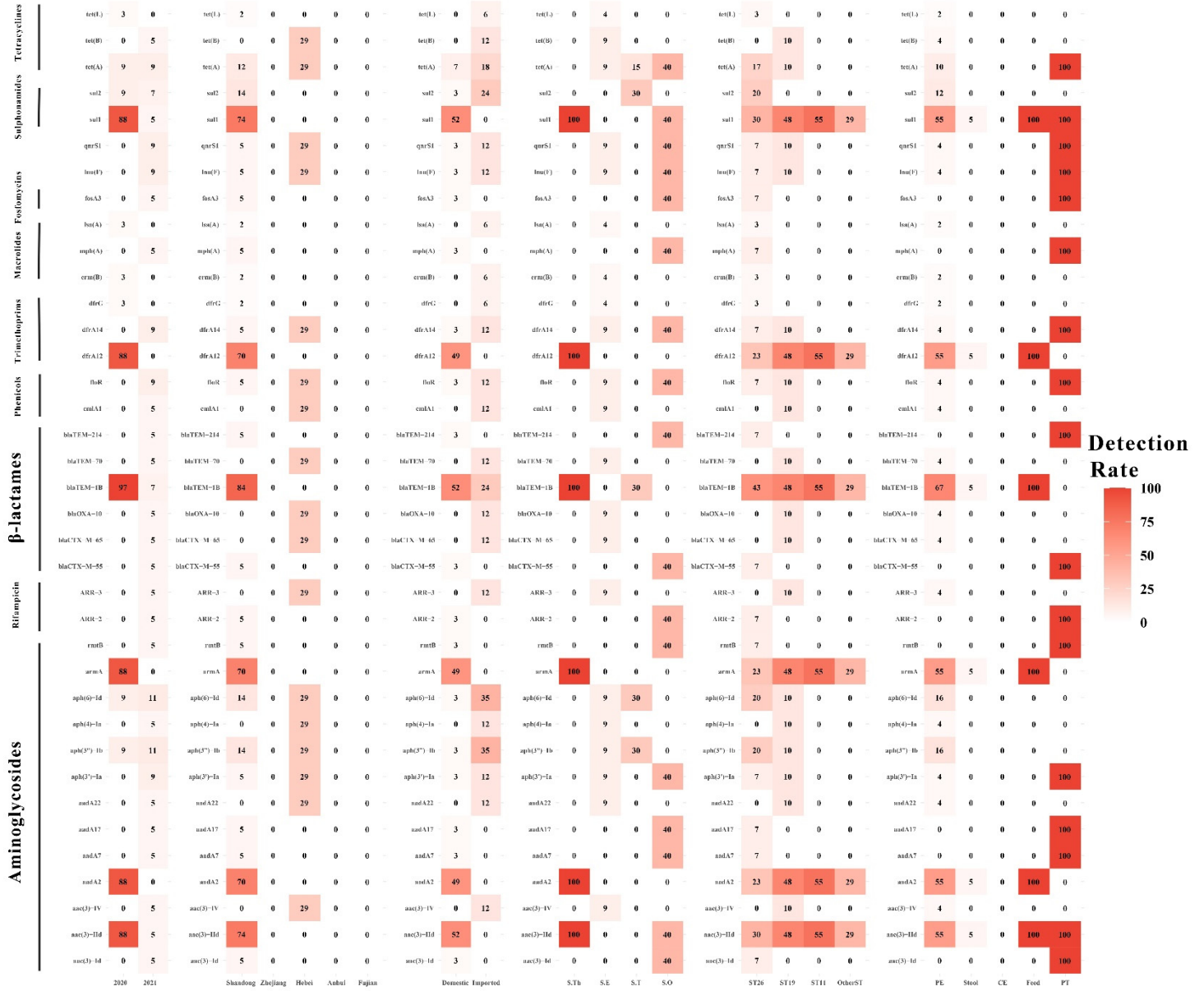
								<i>lnu(F), mph(A), qacE, qnrS1, rmtB, sul1, tet(A)</i>		
T14	2021	Shandong	Parental embryos	White feather chicken	Imported breeds	<i>S. Enteritidis</i>	SXT-TET-GM-STR-AMP-AMX	<i>aph(3'')-Ib, aph(6)-Id, blaTEM-1B, gyrA, sul2</i>	IncFIB(S), IncFII(S)	11
T28	2021	Shandong	Parental embryos	White feather chicken	Imported breeds	<i>S. Enteritidis</i>	STR-AMP-AMX	<i>aph(3'')-Ib, aph(6)-Id, blaTEM-1B, gyrA, sul2</i>	IncFIB(S), IncFII(S)	11
T67	2021	Shandong	Parental embryos	White feather chicken	Imported breeds	<i>S. Enteritidis</i>	TET-STR-AMP-AMX	<i>aph(3'')-Ib, aph(6)-Id, blaTEM-1B, gyrA, sul2</i>	IncFIB(S), IncFII(S)	11
21SD18	2021	Shandong	Parental embryos	HY-line brown layer	Imported breeds	<i>S. Enteritidis</i>	STR		IncFIB(S), IncFII(S)	11
A1	2021	Hebei	Parental embryos	White feather chicken	Imported breeds	<i>S. Enteritidis</i>		<i>gyrA</i>	IncFIB(S), IncFII(S)	11
A2	2021	Hebei	Parental embryos	White feather chicken	Imported breeds	<i>S. Enteritidis</i>		<i>gyrA</i>	IncFIB(S), IncFII(S)	11
B12	2021	Hebei	Parental embryos	White feather chicken	Imported breeds	<i>S. Typhimurium</i>	TET-GM-STR-AMP-AMX-DOX	<i>aadA22, aph(3'')-Ib, aph(3')-Ia, aph(6)-Id, ARR-3, blaCTX-M-65, blaOXA-10, blaTEM-70, cmlA1, dfrA14, fosA3, lnu(F), qnrS1, tet(A), tet(B)</i>	IncHI2, IncHI2A	34
B28	2021	Hebei	Parental embryos	White feather chicken	Imported breeds	<i>S. Typhimurium</i>	TET-GM-STR-AMP-AMX-DOX	<i>aadA22, aph(3'')-Ib, aph(3')-Ia, aph(6)-Id, ARR-3, blaCTX-M-65, blaOXA-10, blaTEM-70, cmlA1, dfrA14, fosA3, lnu(F), qnrS1, tet(A), tet(B)</i>	IncHI2, IncHI2A	34
1–5	2021	Hebei	Parental embryos	White feather chicken	Imported breeds	<i>S. Enteritidis</i>	TET	<i>gyrA</i>	IncFIB(S), IncFII(S)	11
4–15	2021	Hebei	Parental embryos	White feather chicken	Imported breeds	<i>S. Enteritidis</i>		<i>gyrA</i>	IncFIB(S), IncFII(S)	11

5–15	2021	Hebei	Parental embryos	White feather chicken	Imported breeds	<i>S. Enteritidis</i>	<i>gyrA</i>	IncFIB(S), IncFII(S)	11
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\*: ampicillin-AMP, amoxicillin-AMX, ceftazidime-CAZ, cefoxitin-FOX, tetracycline-TET, doxycycline-DOX, ofloxacin-OF, gentamicin-GM, streptomycin -STR, sulfamethoxazole-trimethoprim -SXT.

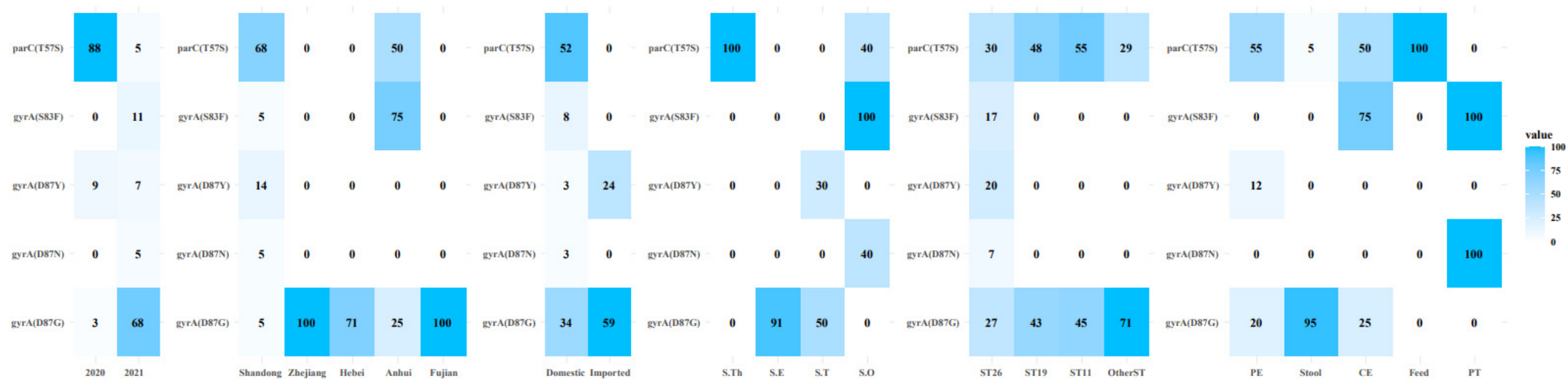
**Table S2.** Distribution of serotypes and MLST patterns for *Salmonella* isolates ( $n = 78$ ).

Serotypes	Sample types (no. of isolates)							MLST patterns							
	Parental dead embryos ( $n = 49$ )	Feces ( $n = 20$ )	Commercial dead embryos ( $n = 4$ )	Food ( $n = 2$ )	Parental tissue ( $n = 2$ )	Water ( $n = 1$ )	Total $n/N$ (%)	<i>aroC</i>	<i>dnaN</i>	<i>hemD</i>	<i>hisD</i>	<i>purE</i>	<i>sucA</i>	<i>thrA</i>	STs
<i>S. Thompson</i>	27	1	0	2	0	0	30/78 (38.46%)	14	13	18	12	14	18	1	26
<i>S. Typhimurium</i>	1	19	0	0	0	1	21/78 (26.92%)	10	7	12	9	5	9	2	19
<i>S. Typhimurium</i>	2	0	0	0	0	0	2/78 (2.56%)	10	19	12	9	5	9	2	34
<i>S. Enteritidis</i>	19	0	1	0	0	0	20/78 (25.64%)	5	2	3	7	6	6	11	11
<i>S. Kentucky</i>	0	0	0	0	2	0	2/78 (2.56%)	76	14	3	77	64	64	67	198
<i>S. Tennessee</i>	0	0	2	0	0	0	2/78 (2.56%)	118	107	8	51	2	117	16	319
<i>S. Gallinarum</i>	0	0	1	0	0	0	1/78 (1.28%)	5	2	361	7	31	668	11	3717

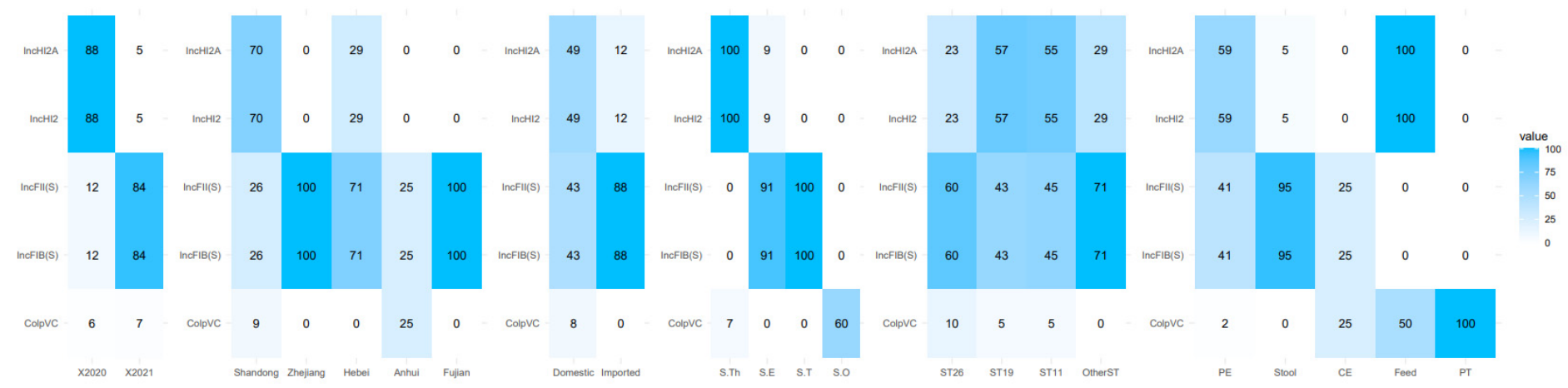


**Figure S1.** The heatmap of antimicrobial resistance genes in the studied NTS isolates.

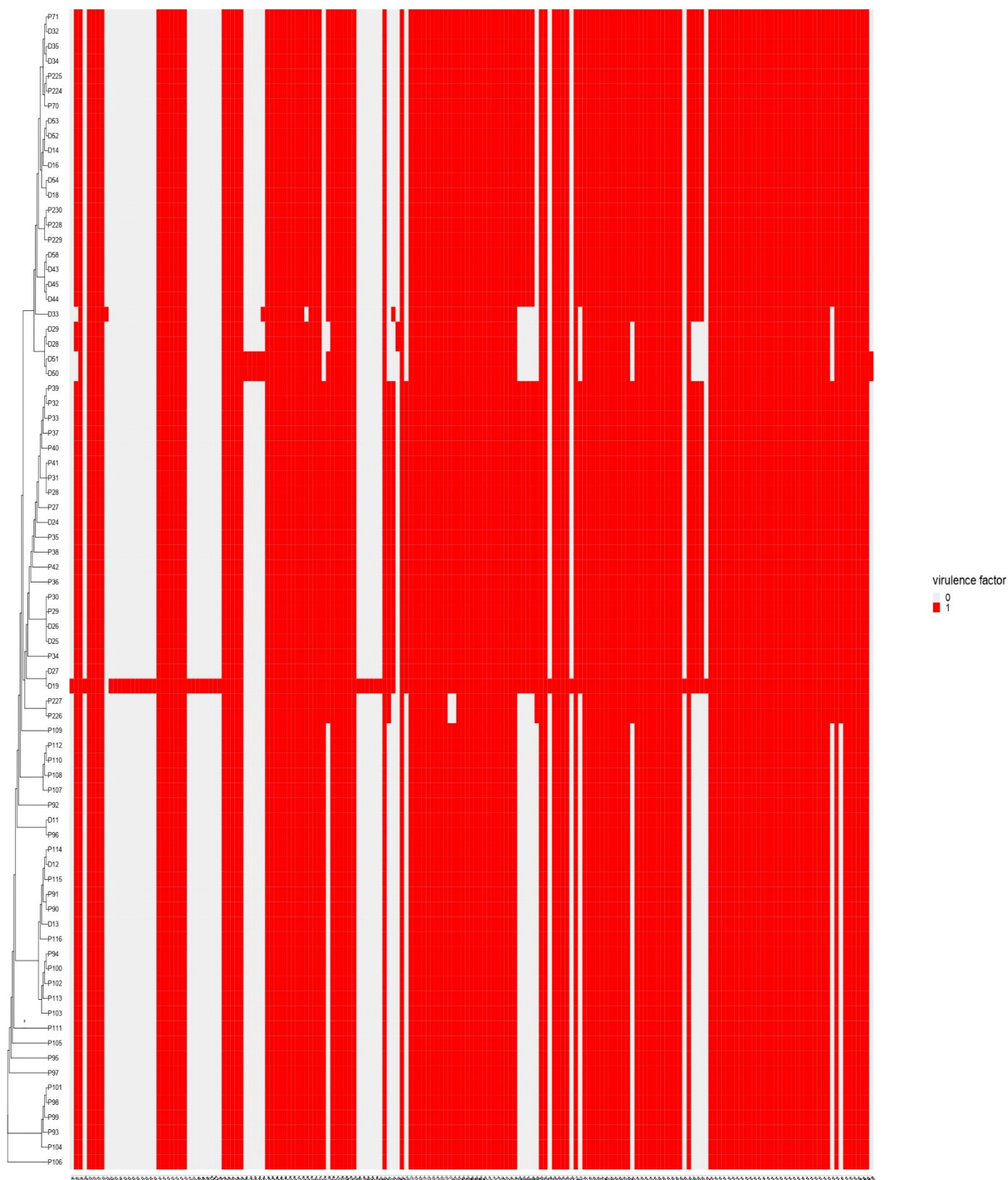




**Figure S2.** The heatmap of chromosomal mutations in NTS isolates.



**Figure S3.** The heatmap of plasmids distribution in *Salmonella* isolates.



**Figure S4.** Virulence gene detection based on WGS of *Salmonella* strains.