

Revision to: “Usage of Antibiotics in Agricultural Livestock in the Netherlands in 2019 - Trends, benchmarking of livestock farms and veterinarians”

1. Two mistakes were made in the $DDDA_F$ calculations for the veal farming sector: for white veal farms a wrong standardized weight was used and for all animal categories (white veal farms, rosé veal starter farms, rosé veal fattening farms and rosé veal combination farms) there was an error in the conversion formula for the one and a half year calculation used only in the veal farming sector. These errors only concern the $DDDA_F$, not the $DDDA_{NAT}$. An overview of the changes:

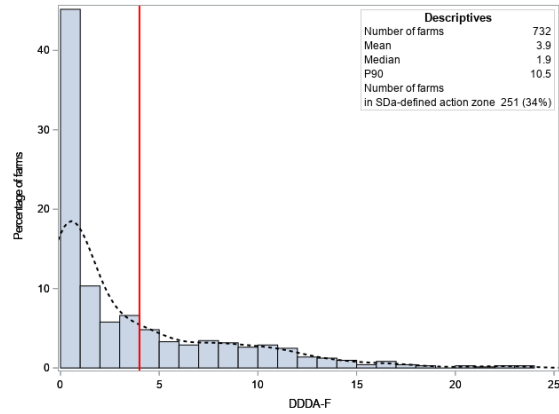
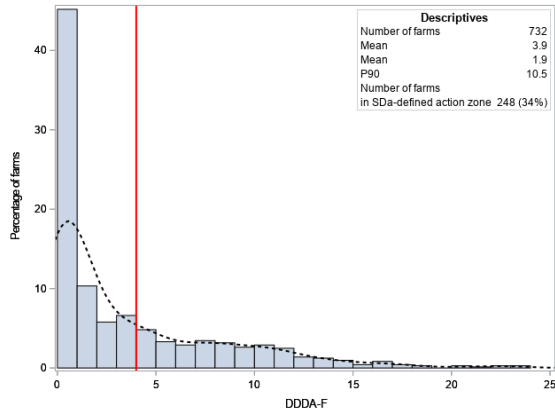
Textual changes in the report:

Page	Animal category	Previous text	Revision
30, 2 nd paragraph, 7 th line	White veal farms	White veal farms did manage to reduce their antibiotic use by 13% during the 2019 reporting year.	White veal farms did manage to reduce their antibiotic use by 1% during the 2019 reporting year.
30, 2 nd paragraph, 9 th line	White veal farms	In 2019, 16% of white veal farms exceeded the SDa-defined provisional benchmark threshold.	In 2019, 30% of white veal farms exceeded the SDa-defined provisional benchmark threshold.
31, 1 st paragraph, 1 st line	Rosé veal starter farms	In 2019, mean antibiotic use at rosé veal starter farms was high, 74.7 $DDDA_F$, and usage levels exceeding 100 $DDDA_F$ were no exception.	In 2019, mean antibiotic use at rosé veal starter farms was high, 75.9 $DDDA_F$, and usage levels exceeding 100 $DDDA_F$ were no exception.
31, 1 st paragraph, 2 nd line	Rosé veal starter farms	Usage levels differed significantly between individual rosé veal starter farms, and 60% recorded usage levels above the SDa defined provisional benchmark threshold.	Usage levels differed significantly between individual rosé veal starter farms, and 63% recorded usage levels above the SDa defined provisional benchmark threshold.

Changes in figures (differences are not always clearly visible, however for the sake of completeness all changes figures are displayed):

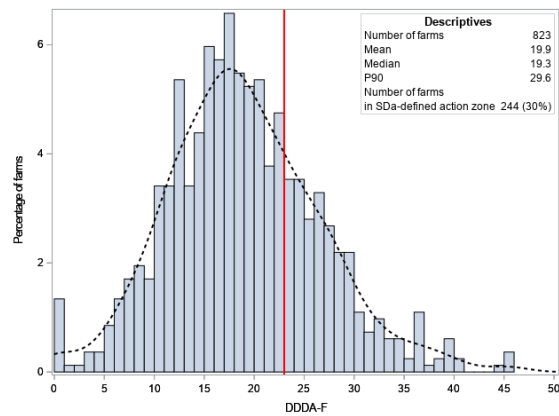
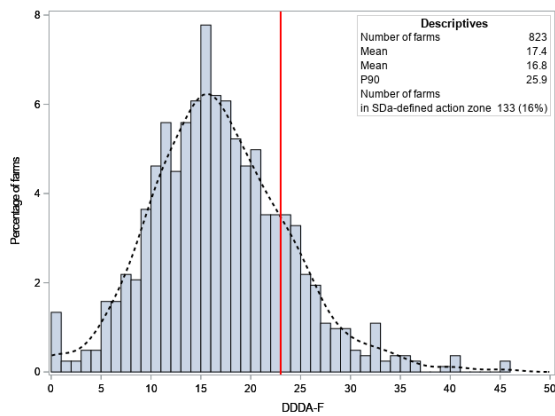
Old figure 7 (DDDA_F distribution rosé veal fattening farms).

New figure 7.



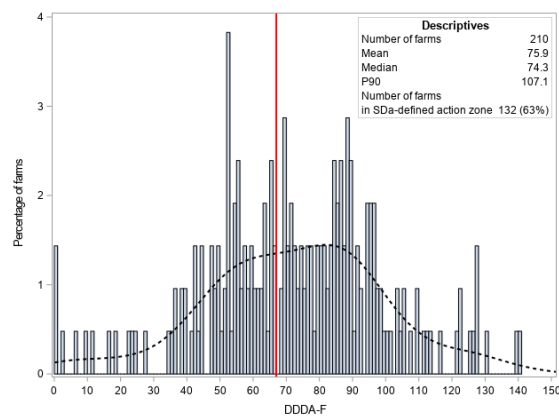
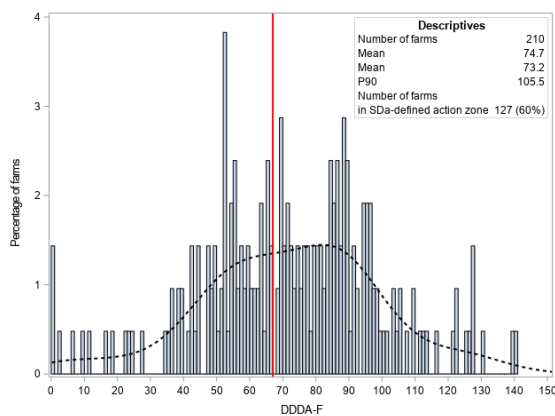
Old figure 8 (DDDA_F distribution white veal farms).

New figure 8.

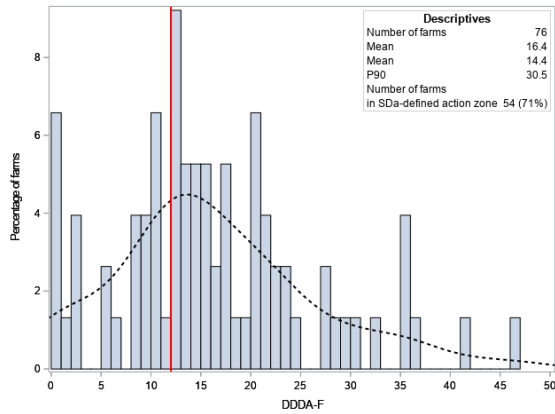


Old figure 9 (DDDA_F distribution rosé veal starter farms).

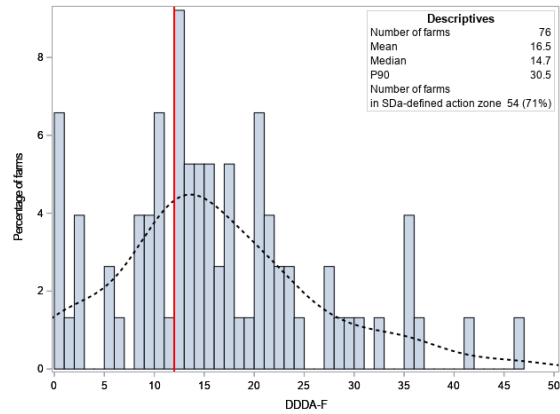
New figure 9.



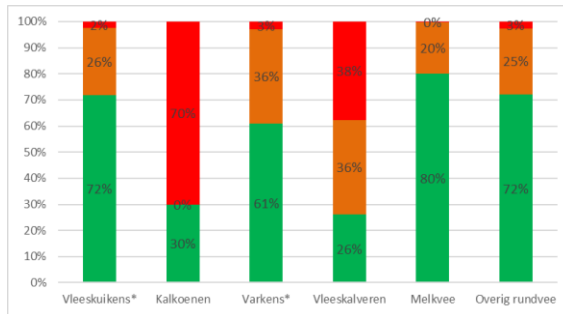
Old figure 10 (DDDA_F distribution rosé veal combination farms).



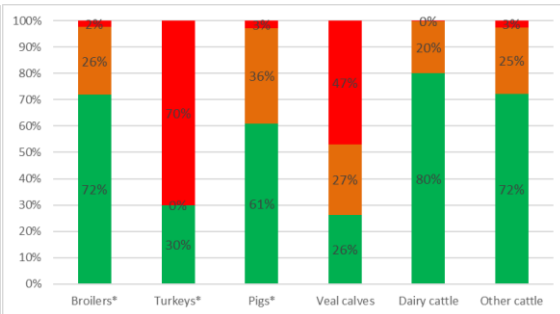
New figure 10.



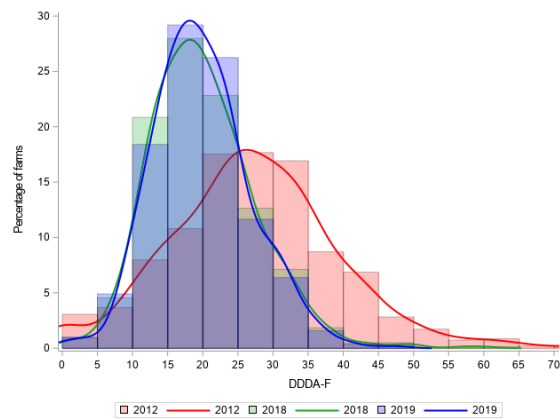
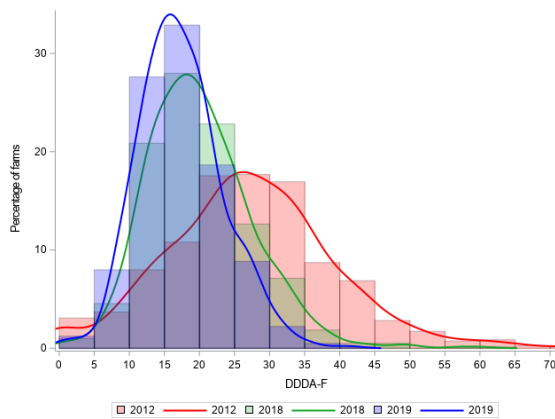
Old figure 14 (VBI).



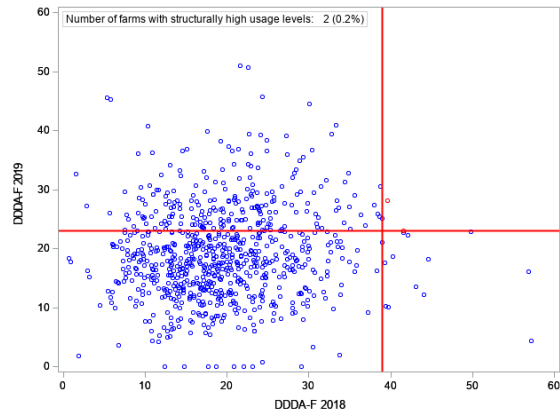
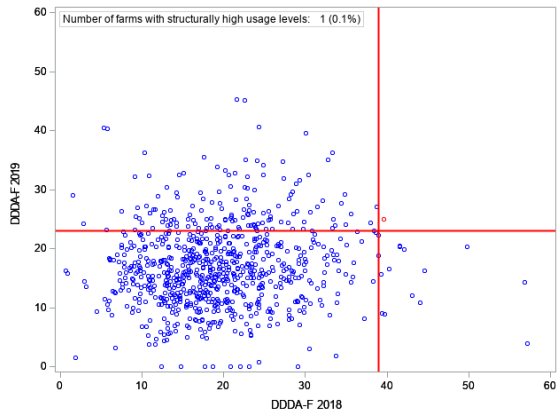
New figure 14.



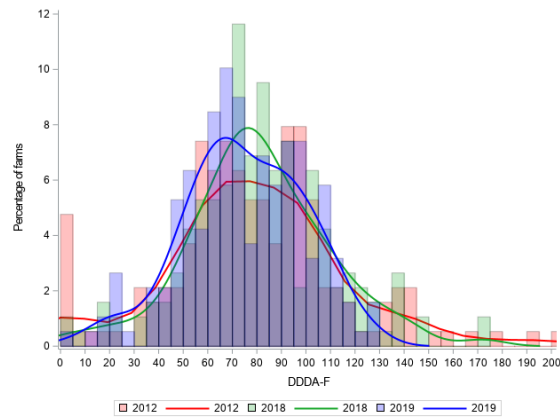
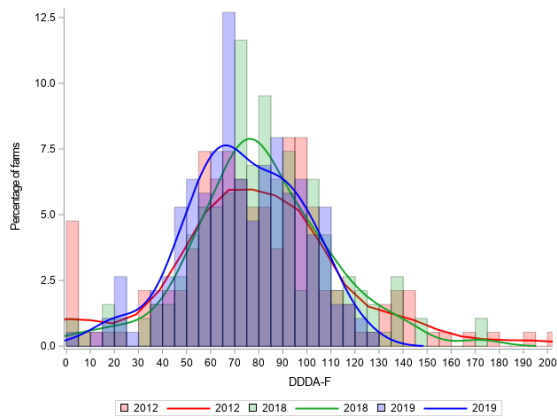
Old figure A24 (DDDA_F distributions white veal farms). New figure A24.



Old figure A25 (scatter plot white veal farms). New figure A25.

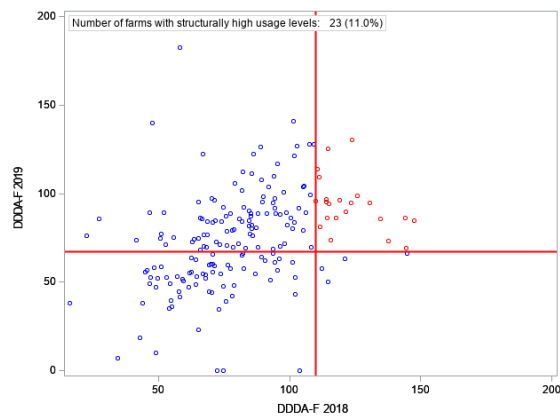
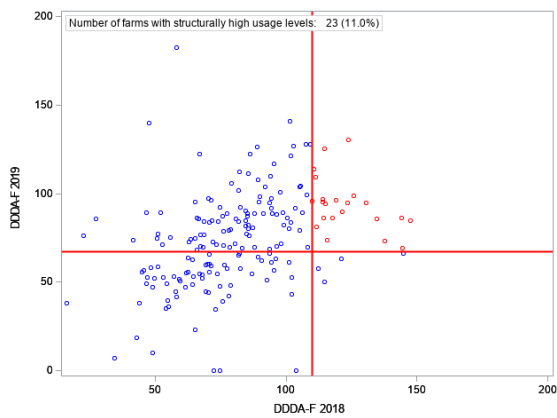


Old figure A26 (DDDA_F distributions rosé veal starter farms).



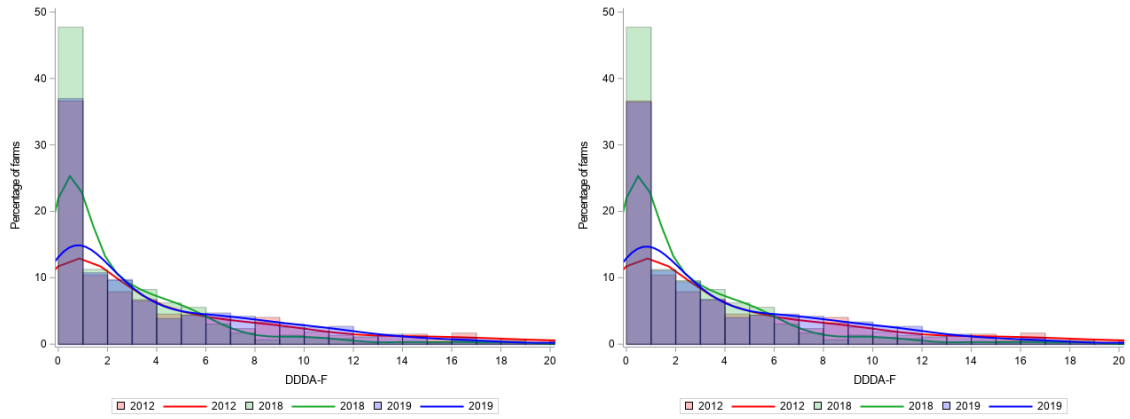
New figure A26.

Old figure A27 (scatter plot rosé veal starter farms).

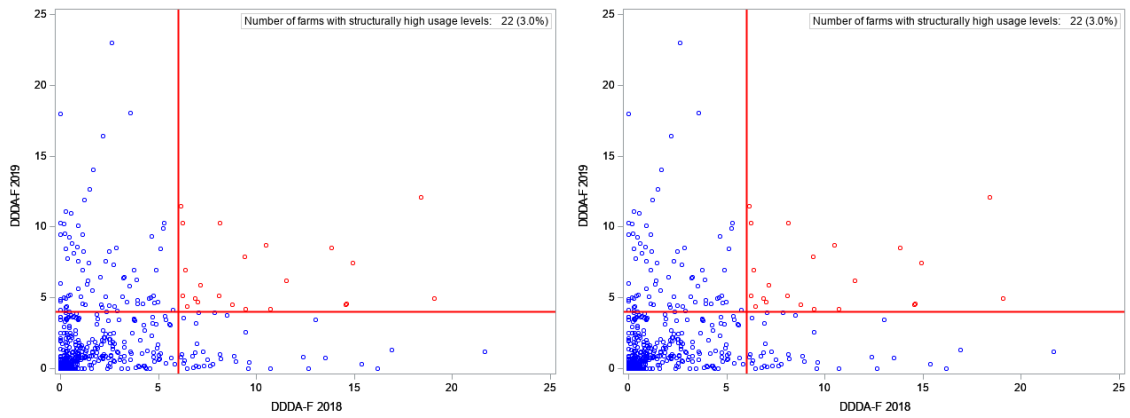


New figure A27.

Old figure A28 (DDDA_F distributions rosé veal fattening farms). New figure A28.

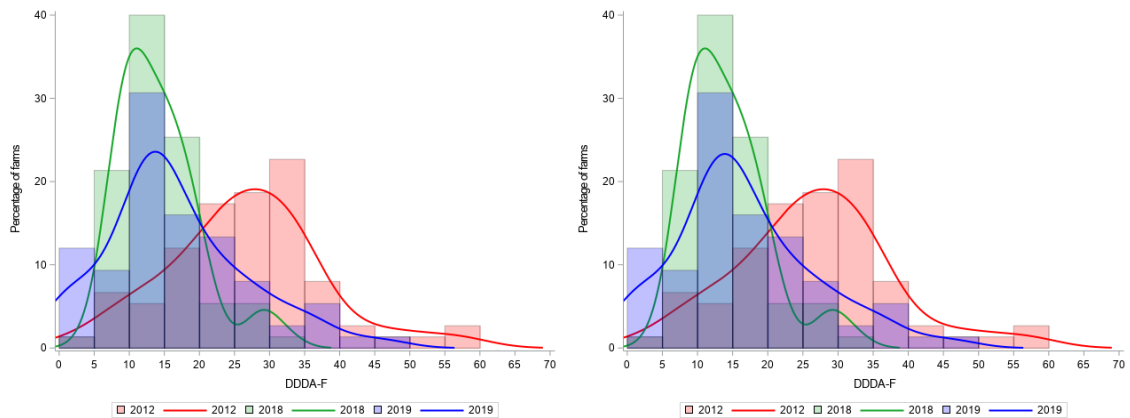


Old figure A29 (scatter plot rosé veal fattening farms). New figure A29.

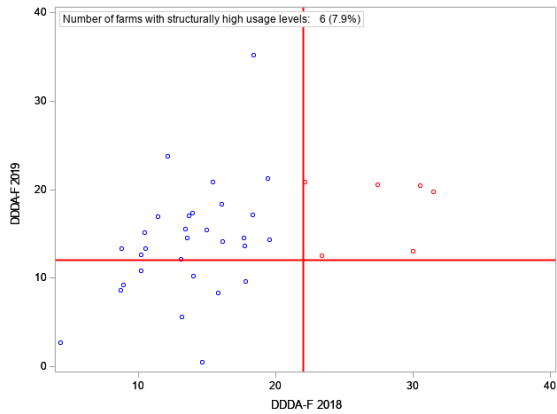


Old figure A30 (DDDA_F distributions rosé veal combination farms).

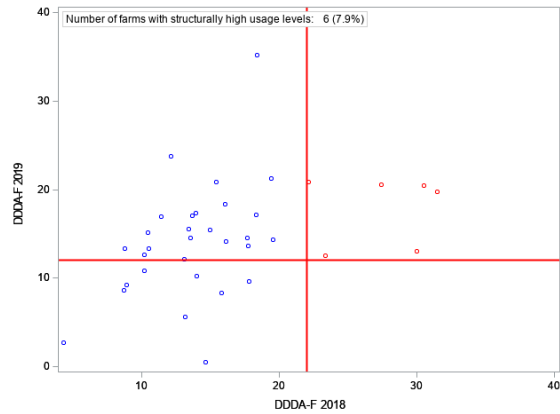
New figure A30.



Old figure A31 (scatter plot rosé veal combination farms).



New figure A31.



Changes in tables:

White veal farms

Table 2.

	Animal category	N	Mean	Median	P75	P90
Previous value	White veal	61	14.9	14.8	16.6	17.9
Revision	White veal	61	17.7	17.6	19.7	21.3

Table A37.

	Year	N	Mean	Median	P75	P90
Previous value	2019	823	17.4	16.8	20.8	25.9
Revision	2019	823	19.9	19.3	23.9	29.6

Old table A38.

Category of antibiotics	Pharmacotherapeutic group	Route of administration	# of farms with DDDA _F =0	DDDA _F		
				Median	P75	Mean
1st choice	Amphenicols	Parenteral	7	0.75	1.20	0.91
1st choice	Macrolides/lincosamides	Oral	25	2.91	3.85	3.04
1st choice	Macrolides/lincosamides	Parenteral	257	0.02	0.08	0.11
1st choice	Penicillins	Parenteral	31	0.31	0.54	0.41
1st choice	Tetracyclines	Intrauterine	822	0.00	0.00	0.00
1st choice	Tetracyclines	Oral	3	8.57	11.14	9.06
1st choice	Tetracyclines	Parenteral	582	0.00	0.01	0.02
1st choice	Trimethoprim/sulfonamides	Oral	431	0.00	1.29	0.84
1st choice	Trimethoprim/sulfonamides	Parenteral	190	0.03	0.07	0.06
2nd choice	Aminoglycosiden	Oral	285	0.02	0.05	0.11
2nd choice	Aminoglycosiden	Parenteral	489	0.00	0.04	0.05
2nd choice	Aminopenicillins	Intramammary	822	0.00	0.00	0.00
2nd choice	Aminopenicillins	Oral	264	0.47	2.68	1.66
2nd choice	Aminopenicillins	Parenteral	123	0.07	0.14	0.10
2nd choice	Quinolones	Oral	622	0.00	0.00	0.47
2nd choice	Fixed-dose combinations	Parenteral	805	0.00	0.00	0.00
2nd choice	Macrolides/lincosamides	Parenteral	202	0.13	0.31	0.22
3rd choice	Fluoroquinolones	Oral	809	0.00	0.00	0.00
3rd choice	Fluoroquinolones	Parenteral	747	0.00	0.00	0.01
3rd choice	Polymyxins	Oral	810	0.00	0.00	0.01
3rd choice	Polymyxins	Parenteral	765	0.00	0.00	0.00

New table A38.

Category of antibiotics	Pharmacotherapeutic group	Route of administration	# of farms with DDDA _F =0	DDDA _F		
				Median	P75	Mean
1st choice	Amphenicols	Parenteral	7	0.88	1.40	1.06
1st choice	Macrolides/lincosamides	Oral	25	3.40	4.49	3.54
1st choice	Macrolides/lincosamides	Parenteral	257	0.02	0.09	0.13
1st choice	Penicillins	Parenteral	31	0.36	0.63	0.47
1st choice	Tetracyclines	Intrauterine	822	9.97	12.99	10.55
1st choice	Tetracyclines	Oral	3	0.00	0.01	0.02
1st choice	Tetracyclines	Parenteral	582	0.00	0.00	0.00
1st choice	Trimethoprim/sulfonamides	Oral	431	0.00	1.50	0.98
1st choice	Trimethoprim/sulfonamides	Parenteral	190	0.04	0.08	0.06
2nd choice	Aminoglycosiden	Oral	285	0.02	0.05	0.13
2nd choice	Aminoglycosiden	Parenteral	489	0.00	0.05	0.06
2nd choice	Aminopenicillins	Intramammary	822	0.00	0.00	0.00
2nd choice	Aminopenicillins	Oral	264	0.54	3.13	1.93
2nd choice	Aminopenicillins	Parenteral	123	0.08	0.16	0.12
2nd choice	Quinolones	Oral	622	0.00	0.00	0.54
2nd choice	Fixed-dose combinations	Parenteral	805	0.00	0.00	0.00
2nd choice	Macrolides/lincosamides	Parenteral	202	0.15	0.36	0.26
3rd choice	Fluoroquinolones	Oral	809	0.00	0.00	0.01
3rd choice	Fluoroquinolones	Parenteral	747	0.00	0.00	0.01
3rd choice	Polymyxins	Oral	810	0.00	0.00	0.01
3rd choice	Polymyxins	Parenteral	765	0.00	0.00	0.00

Rosé veal starter farms

Table A39.

	Year	N	Mean	Median	P75	P90
Previous value	2019	210	74.7	73.2	92.4	105.5
Revision	2019	210	75.9	74.3	94.1	107.1

Old table A40.

Category of antibiotics	Pharmacotherapeutic group	Route of administration	# of farms with DDDA _F =0	DDDA _F		
				Median	P75	Mean
1st choice	Amphenicols	Parenteral	0	5.38	8.55	6.80
1st choice	Macrolides/lincosamides	Oral	9	16.32	19.60	15.23
1st choice	Macrolides/lincosamides	Parenteral	52	0.16	0.46	0.61
1st choice	Penicillins	Parenteral	10	1.11	2.00	1.57
1st choice	Tetracyclines	Oral	2	38.20	48.26	38.12
1st choice	Tetracyclines	Parenteral	158	0.00	0.00	0.16
1st choice	Trimethoprim/sulfonamides	Oral	63	3.81	9.31	6.06
1st choice	Trimethoprim/sulfonamides	Parenteral	61	0.15	0.38	0.36
2nd choice	Aminoglycosides	Oral	124	0.00	0.20	0.52
2nd choice	Aminoglycosides	Parenteral	96	0.05	0.45	0.35
2nd choice	Aminopenicillins	Oral	109	0.00	4.16	2.53
2nd choice	Aminopenicillins	Parenteral	32	0.30	0.60	0.43
2nd choice	Quinolones	Oral	170	0.00	0.00	0.65
2nd choice	Fixed-dose combinations	Parenteral	206	0.00	0.00	0.00
2nd choice	Macrolides/lincosamides	Parenteral	64	0.53	1.73	1.21
3rd choice	Fluoroquinolones	Oral	206	0.00	0.00	0.01
3rd choice	Fluoroquinolones	Parenteral	196	0.00	0.00	0.02
3rd choice	Polymyxins	Oral	209	0.00	0.00	0.06
3rd choice	Polymyxins	Parenteral	205	0.00	0.00	0.00

New table A40.

Category of antibiotics	Pharmacotherapeutic group	Route of administration	# of farms with DDDA _F =0	DDDA _F		
				Median	P75	Mean
1st choice	Amphenicols	Parenteral	0	5.44	8.71	6.91
1st choice	Macrolides/lincosamides	Oral	9	16.62	19.96	15.48
1st choice	Macrolides/lincosamides	Parenteral	52	0.16	0.47	0.62
1st choice	Penicillins	Parenteral	10	1.13	2.04	1.60
1st choice	Tetracyclines	Oral	2	38.87	49.14	38.74
1st choice	Tetracyclines	Parenteral	158	0.00	0.00	0.17
1st choice	Trimethoprim/sulfonamides	Oral	63	3.88	9.48	6.16
1st choice	Trimethoprim/sulfonamides	Parenteral	61	0.15	0.38	0.36
2nd choice	Aminoglycosides	Oral	124	0.00	0.20	0.53
2nd choice	Aminoglycosides	Parenteral	96	0.05	0.45	0.35
2nd choice	Aminopenicillins	Oral	109	0.00	4.24	2.57
2nd choice	Aminopenicillins	Parenteral	32	0.30	0.61	0.44
2nd choice	Quinolones	Oral	170	0.00	0.00	0.66
2nd choice	Fixed-dose combinations	Parenteral	206	0.00	0.00	0.00
2nd choice	Macrolides/lincosamides	Parenteral	64	0.54	1.76	1.23
3rd choice	Fluoroquinolones	Oral	206	0.00	0.00	0.01
3rd choice	Fluoroquinolones	Parenteral	196	0.00	0.00	0.02
3rd choice	Polymyxins	Oral	209	0.00	0.00	0.06
3rd choice	Polymyxins	Parenteral	205	0.00	0.00	0.00

Rosé veal fattening farms

Table A41.

	Year	N	Mean	Median	P75	P90
Previous value	2019	732	3.9	1.9	6.0	10.5
Revision	2019	732	3.9	1.9	6.1	10.5

Old table A42.

Category of antibiotics	Pharmacotherapeutic group	Route of administration	# of farms with DDDA _F =0	DDDA _F		
				Median	P75	Mean
1st choice	Amphenicols	Parenteral	104	0.34	0.72	0.57
1st choice	Macrolides/lincosamides	Oral	592	0.00	0.00	0.39
1st choice	Macrolides/lincosamides	Parenteral	509	0.00	0.01	0.06
1st choice	Penicillins	Parenteral	271	0.07	0.21	0.17
1st choice	Tetracyclines	Oral	378	0.00	3.27	1.93
1st choice	Tetracyclines	Parenteral	634	0.00	0.00	0.02
1st choice	Trimethoprim/sulfonamides	Oral	542	0.00	0.10	0.46
1st choice	Trimethoprim/sulfonamides	Parenteral	548	0.00	0.00	0.02
2nd choice	Aminoglycosides	Oral	674	0.00	0.00	0.01
2nd choice	Aminoglycosides	Parenteral	679	0.00	0.00	0.01
2nd choice	Aminopenicillins	Intramammary	731	0.00	0.00	0.00
2nd choice	Aminopenicillins	Oral	691	0.00	0.00	0.04
2nd choice	Aminopenicillins	Parenteral	427	0.00	0.05	0.04
2nd choice	Quinolones	Oral	720	0.00	0.00	0.01
2nd choice	Fixed-dose combinations	Parenteral	701	0.00	0.00	0.00
2nd choice	Macrolides/lincosamides	Parenteral	424	0.00	0.17	0.13
3rd choice	Fluoroquinolones	Oral	731	0.00	0.00	0.00
3rd choice	Fluoroquinolones	Parenteral	722	0.00	0.00	0.00
3rd choice	Polymyxins	Oral	731	0.00	0.00	0.00
3rd choice	Polymyxins	Parenteral	723	0.00	0.00	0.00

New table A42.

Category of antibiotics	Pharmacotherapeutic group	Route of administration	# of farms with DDDA _F =0	DDDA _F		
				Median	P75	Mean
1st choice	Amphenicols	Parenteral	104	0.35	0.73	0.58
1st choice	Macrolides/lincosamides	Oral	592	0.00	0.00	0.39
1st choice	Macrolides/lincosamides	Parenteral	509	0.00	0.01	0.06
1st choice	Penicillins	Parenteral	271	0.07	0.21	0.17
1st choice	Tetracyclines	Oral	378	0.00	3.33	1.95
1st choice	Tetracyclines	Parenteral	634	0.00	0.00	0.02
1st choice	Trimethoprim/sulfonamides	Oral	542	0.00	0.10	0.46
1st choice	Trimethoprim/sulfonamides	Parenteral	548	0.00	0.00	0.02
2nd choice	Aminoglycosides	Oral	674	0.00	0.00	0.01
2nd choice	Aminoglycosides	Parenteral	679	0.00	0.00	0.01
2nd choice	Aminopenicillins	Intramammary	731	0.00	0.00	0.00
2nd choice	Aminopenicillins	Oral	691	0.00	0.00	0.04
2nd choice	Aminopenicillins	Parenteral	427	0.00	0.05	0.04
2nd choice	Quinolones	Oral	720	0.00	0.00	0.01
2nd choice	Fixed-dose combinations	Parenteral	701	0.00	0.00	0.00
2nd choice	Macrolides/lincosamides	Parenteral	424	0.00	0.17	0.13
3rd choice	Fluoroquinolones	Oral	731	0.00	0.00	0.00
3rd choice	Fluoroquinolones	Parenteral	722	0.00	0.00	0.00
3rd choice	Polymyxins	Oral	731	0.00	0.00	0.00
3rd choice	Polymyxins	Parenteral	723	0.00	0.00	0.00

Rosé veal combination farms

Table A43.

	Year	N	Mean	Median	P75	P90
Previous value	2019	76	16.4	14.4	22.1	30.5
Revision	2019	76	16.5	14.7	22.1	30.5

Old table A44.

Category of antibiotics	Pharmacotherapeutic group	Route of administration	# of farms with DDDA _F =0	DDDA _F		
				Median	P75	Mean
1st choice	Amphenicols	Parenteral	4	1.09	2.11	1.57
1st choice	Macrolides/lincosamides	Oral	16	2.72	3.98	2.78
1st choice	Macrolides/lincosamides	Parenteral	27	0.03	0.07	0.14
1st choice	Penicillins	Parenteral	10	0.21	0.42	0.30
1st choice	Tetracyclines	Oral	8	7.58	11.16	8.51
1st choice	Tetracyclines	Parenteral	64	0.00	0.00	0.01
1st choice	Trimethoprim/sulfonamides	Oral	36	0.26	1.32	1.09
1st choice	Trimethoprim/sulfonamides	Parenteral	26	0.02	0.06	0.04
2nd choice	Aminoglycosides	Oral	41	0.00	0.04	0.11
2nd choice	Aminoglycosides	Parenteral	48	0.00	0.03	0.11
2nd choice	Aminopenicillins	Oral	34	0.12	1.12	0.95
2nd choice	Aminopenicillins	Parenteral	17	0.07	0.15	0.11
2nd choice	Quinolones	Oral	62	0.00	0.00	0.27
2nd choice	Fixed-dose combinations	Parenteral	72	0.00	0.00	0.00
2nd choice	Macrolides/lincosamides	Parenteral	25	0.19	0.41	0.35
3rd choice	Fluoroquinolones	Oral	75	0.00	0.00	0.00
3rd choice	Fluoroquinolones	Parenteral	67	0.00	0.00	0.01
3rd choice	Polymyxins	Parenteral	75	0.00	0.00	0.00

New table A44.

Category of antibiotics	Pharmacotherapeutic group	Route of administration	# of farms with DDDA _F =0	DDDA _F		
				Median	P75	Mean
1st choice	Amphenicols	Parenteral	4	1.10	2.14	1.58
1st choice	Macrolides/lincosamides	Oral	16	2.77	4.05	2.80
1st choice	Macrolides/lincosamides	Parenteral	27	0.03	0.07	0.14
1st choice	Penicillins	Parenteral	10	0.21	0.42	0.30
1st choice	Tetracyclines	Oral	8	7.72	11.36	8.56
1st choice	Tetracyclines	Parenteral	64	0.00	0.00	0.01
1st choice	Trimethoprim/sulfonamides	Oral	36	0.26	1.32	1.10
1st choice	Trimethoprim/sulfonamides	Parenteral	26	0.02	0.06	0.04
2nd choice	Aminoglycosides	Oral	41	0.00	0.04	0.11
2nd choice	Aminoglycosides	Parenteral	48	0.00	0.03	0.11
2nd choice	Aminopenicillins	Oral	34	0.12	1.13	0.95
2nd choice	Aminopenicillins	Parenteral	17	0.07	0.15	0.11
2nd choice	Quinolones	Oral	62	0.00	0.00	0.28
2nd choice	Fixed-dose combinations	Parenteral	72	0.00	0.00	0.00
2nd choice	Macrolides/lincosamides	Parenteral	25	0.19	0.41	0.35
3rd choice	Fluoroquinolones	Oral	75	0.00	0.00	0.00
3rd choice	Fluoroquinolones	Parenteral	67	0.00	0.00	0.01
3rd choice	Polymyxins	Parenteral	75	0.00	0.00	0.00