Table 4.1
Scoring Table for Veterinary Drugs
2000 FSIS NRP, Monitoring Plan and Special Projects
(1=none; 2=low; 3=moderate; 4=high)

COMPOUND/ COMPOUND CLASS	Historical Testing Info. on Viol. (FSIS)	Regula-tory Concern (CVM)	With-drawal Time (CVM)	Relative No. of Animals Treated (CVM)	Impact on New and Existing Human Disease (CDC)	Acute or Chronic Toxicity Concerns (CVM)	Lack of Testing Info. on Violations (FSIS)
Those antibiotics quantitated by the FSIS Bioassay MRM	4	4	4	4	3	4	1
Amikacin (aminoglycoside)	NT	3	4	2	3	2	4
Apramycin (aminoglycoside)	NT	4	4	2	3	2	4
Kanamycin (aminoglycoside)	NT	3	4	2	3	2	4
Spectinomycin (aminoglycoside)	NA-D, NA-M	4	4	3	3	2	4
Streptomycin (aminoglycoside)	NA-D	4	4	3	3	2	4
Ampicillin (beta lactam)	NT	3	2	2	3	4	4
Amoxicillin (beta lactam)	NT	3	2	2	3	4	4
Cloxacillin (beta lactam)	NT	3	2	2	3	4	4
Hetacillin (beta lactam)	NT	2	2	2	3	4	4
Ticarcillin (beta lactam)	NT	2	2	2	3	4	4
Ceftiofur (cefalosporin)	NT	3	2	3	4	2	4
Cefazolin (synthetic cefalosporin)	NT	3	2	(2)	3	2	4
Chloramphenicol	NA-N	4	2	1	4	4	4
Florfenicol (chloramphen. deriv.)	NT	3	4	4	3	3	4
Thiamphenicol (chloramphen. deriv.)	NT	3	2	1	3	3	4
Fluoroquinolones	NT	4	3	3	4	2	4
Avoparcin (glycopeptide)	NT	4	2	1	4	2	4
Vancomycin (glycopeptide)	NT	4	2	1	4	2	4
Clindamycin (lincosamide)	NA-Q	2	2	2	3	3	4
Lincomycin (lincosamide)	NA-Q	2	2	2	3	3	4
Pirlimycin (lincosamide)	NA-Q	3	4	3	4	2	4
Oleandomycin (macrolide)	NA-Q	2	2	2	3	3	4
Spiramycin (macrolide)	NA-Q	2	3	2	3	2	4
Tilmicosin (macrolide)	NA-D	4	2	3	3	3	4
Tylosin (macrolide)	NA-D	3	3	2	3	2	1
Colistin (polypeptide antibiotic)	NT	2	1	(2)	1	2	4
Virginiamycin	NT	1	1	3	3	1	4
Amprolium (coccidiostat)	NT	4	2	2	3	2	4
Arsenicals (detected as As)	4	4	2	4	3	2	1
Avermectins in FSIS MRM (incl. doramectin, ivermectin, moxidectin) (antiparasitics)	3*	3	4	4	2	3	2
Eprinomectin (avermectin)	NT	2	2	(3)	2	2	4

Table 4.1 - *Continued*
Scoring Table for Veterinary Drugs
2000 FSIS NRP, Monitoring Plan and Special Projects
(1=none; 2=low; 3=moderate; 4=high)

COMPOUND/ COMPOUND CLASS	Historical Testing Info. on Viol. (FSIS)	Regula-tory Concern (CVM)	With-drawal Time (CVM)	Relative No. of Animals Treated (CVM)	Impact on New and Existing Human Disease (CDC)	Acute or Chronic Toxicity Concerns (CVM)	Lack of Testing Info. on Violations (FSIS)
Benzimidazoles (anthelmintic)	1	1	3	2	1	2	3
Berenil (antiprotozoal)	NA-G, Na-Mx	4	4	1	2	3	4
Beta agonists, unapproved (incl. clenbuterol) (growth promotants)	NA-C	4	2	1	1	4	4
Ractopamine (beta agonist)	NT	4	2	3	2	4	4
Carbadox (antimicrobial)	NA-W	4	4	(3)	3	4	4
Clorsulon (anthelmintic)	1	2	3	2	2	2	4
Dexamethasone (glucocorticoid)	NT	4	2	(2)	1	3	4
Methyl prednisone (glucocorticoid)	NT	4	2	(2)	1	3	4
Prednisone (glucocorticoid)	NT	2	2	1	1	3	4
Halofuginone (antiprotozoal, coccidiostat)	2	1	2	2	2	2	1
Hormones, naturally-occuring (17-β estradiol, progesterone, testosterone)	NT	2	1	(4)	2	2	4
DES (hormone, synthetic) (estrogenic)	NA-N	4	4	1	2	4	4
MGA (hormone, synthetic) (estrus regulator)	NA-N	3	1	4	2	3	4
Trenbolone (hormone, synthetic) (anabolic)	NT	3	3	(3)	2	3	4
Zeranol (hormone, synthetic) (anabolic)	NA-N	3	1	3	2	3	4
Lasalocid (coccidiostat)	NT	2	1	3	3	2	4
Levamisole (anthelmintic)	2	3	3	(2)	1	1	1
Morantel and pyrantel (anthelmintics)	1	1	1	(2)	2	1	2
Nicarbazin (coccidiostat)	1	2	2	1	2	1	3
Nitrofurans (incl. furazolidone, nitrofurazone) (antimicrobials)	NT	4	2	1	3	4	4
Nitromidazoles in FSIS MRM (dimetridazole, ipronidazole) (antiprotozoals)	NA-N	4	2	(1)	1	4	4
Ronidazole (nitroimidazole) (antimicrobial)	NT	2	2	(1)	1	4	4
Etodolac (NSAID)	NT	3	2	1	1	3	4
Flunixin (NSAID)	NT	3	2	3	1	3	4
Phenylbutazone (NSAID)	NT	4	3	2	1	3	4

Table 4.1 - *Continued*
Scoring Table for Veterinary Drugs
2000 FSIS NRP, Monitoring Plan and Special Projects
(1=none; 2=low; 3=moderate; 4=high)

COMPOUND/ COMPOUND CLASS	Historical Testing Info. on Viol. (FSIS)	Regula-tory Concern (CVM)	With-drawal Time (CVM)	Relative No. of Animals Treated (CVM)	Impact on New and Existing Human Disease (CDC)	Acute or Chronic Toxicity Concerns (CVM)	Lack of Testing Info. on Violations (FSIS)
Dipyrone (NSAID)	NT	3	3	1	1	3	4
Sulfonamides in FSIS MRM (antibacterials, some are coccidiostats or anitmicrobials)	4	4	3	4	3	3	1
Sulfanitran (antibacterial, coccidiostat)	NT	4	3	4	3	3	4
Thyreostats (incl. thiouracil)	NT	4	3	(1)	2	4	4
Veterinary tranquilizers in FSIS MRM	NT	4	2	2	1	1	4

*Scoring based on ivermectin violations only; method not extended to other avermectin compounds until 1999.

Numbers surrounded by parentheses are estimates

Key:
NT = Not Tested by FSIS (1989-1998)
NA = Compound has been tested by FSIS (1989-1998), but the information is not applicable:
NA-M = Problem with method
NA-N = New information since last testing,
NA-W = Withdrawal time for drug has changed
NA-Q = Detected but not quantitated by method
NA-D = Detected and quantitated, but not uniquely identified, i.e., method cannot distinguish between this compound and one or more other compounds
NA-C = Compound is of concern in several production classes, but testing has been carried out in only one; NA-G = testing carried out in limited geographical area only, and thus does not necessarily represent overall national violation rate, e.g., sampling for berenil in Puerto Rico
NA-Mx = New information indicates that testing was not carried out in the correct matrix, e.g., berenil testing carried out in plasma rather than serum
FSIS = Scores in this column supplied by FSIS
CVM = Scores in this column supplied by CVM
CDC = Sores in this column supplied by CDC;
MRM = Multi-residue method

Table 4.2
Veterinary Drug Residues Rated with Various Weighting Formulas
2000 FSIS NRP, Monitoring Plan and Special Projects

COMPOUND/ COMPOUND CLASS	ACTUAL VIOLA-TION SCORE	PREDIC-TED VIOLA-TION SCORE	VIOLA-TION SCORE USED IN FORMULAS (V)	DIS-EASE (D)	TOX-ICITY (T)	LACK INFO. (L)	V*[(D+3*T)/4] *{1+[(L-1)*0.1]}	*V*[(D+3*T)/4] *{1+[(L-1)*0.05]}*	V*[(D+2*T)/3] *{1+[(L-1)*0.05]}	V*[(D+T)/2] *{1+[(L-1)*0.05]}
Those antibiotics quantitated by the FSIS Bioassay MRM	4	3.95	4.00	3	4	1	15.0	***15.0***	14.7	14.0
Amikacin (aminoglycoside)	NT	1.94	1.94	3	2	4	5.7	***5.0***	5.2	5.6
Apramycin (aminoglycoside)	NT	2.34	2.34	3	2	4	6.8	***6.1***	6.3	6.7
Kanamycin (aminoglycoside)	NT	1.94	1.94	3	2	4	5.7	***5.0***	5.2	5.6
Spectinomycin (aminoglycoside)	NA-D, M	3.14	3.14	3	2	4	9.2	***8.1***	8.4	9.0
Streptomycin (aminoglycoside)	NA-D	3.14	3.14	3	2	4	9.2	***8.1***	8.4	9.0
Ampicillin (beta lactam)	NT	1.94	1.94	3	4	4	9.5	***8.4***	8.2	7.8
Amoxicillin (beta lactam)	NT	1.94	1.94	3	4	4	9.5	***8.4***	8.2	7.8
Cloxacillin (beta lactam)	NT	1.94	1.94	3	4	4	9.5	***8.4***	8.2	7.8
Hetacillin (beta lactam)	NT	1.54	1.54	3	4	4	7.5	***6.6***	6.5	6.2
Ticarcillin (beta lactam)	NT	1.54	1.54	3	4	4	7.5	***6.6***	6.5	6.2
Ceftiofur (cefalosporin)	NT	2.54	2.54	4	2	4	8.3	***7.3***	7.8	8.8
Cefazolin (synthetic cefalosporin)	NT	1.94	1.94	3	2	4	5.7	***5.0***	5.2	5.6
Chloramphenicol	NA-N	1.54	1.54	4	4	4	8.0	***7.1***	7.1	7.1
Florfenicol (chloramphen. deriv.)	NT	3.14	3.14	3	3	4	12.3	***10.8***	10.8	10.8

Table 4.2 – *Continued*
Veterinary Drug Residues Rated with Various Weighting Formulas
1999 FSIS NRP, Monitoring Plan and Special Projects

COMPOUND/ COMPOUND CLASS	ACTUAL VIOLA-TION SCORE	PREDIC-TED VIOLA-TION SCORE	VIOLA-TION SCORE USED IN FORMULAS (V)	DIS-EASE (D)	TOX-ICITY (T)	LACK INFO. (L)	V*[(D+3*T)/4] *{1+[(L-1)*0.1]}	*V*[(D+3*T)/4] *{1+[(L-1)*0.05]}*	V*[(D+2*T)/3] *{1+[(L-1)*0.05]}	V*[(D+T)/2] *{1+[(L-1)*0.05]}
Thiamphenicol (chloramphen. deriv.)	NT	1.34	1.34	3	3	4	5.2	***4.6***	4.6	4.6
Fluoroquinolones	NT	3.14	3.14	4	2	4	10.2	***9.0***	9.6	10.8
Avoparcin (glycopeptide)	NT	1.54	1.54	4	2	4	5.0	***4.4***	4.7	5.3
Vancomycin (glycopeptide)	NT	1.54	1.54	4	2	4	5.0	***4.4***	4.7	5.3
Clindamycin (lincosamide)	NA-Q	1.54	1.54	3	3	4	6.0	***5.3***	5.3	5.3
Lincomycin (lincosamide)	NA-Q	1.54	1.54	3	3	4	6.0	***5.3***	5.3	5.3
Pirlimycin (lincosamide)	NA-Q	2.54	2.54	4	2	4	8.3	***7.3***	7.8	8.8
Oleandomycin (macrolide)	NA-Q	1.54	1.54	3	3	4	6.0	***5.3***	5.3	5.3
Spiramycin (macrolide)	NA-Q	1.54	1.54	3	2	4	4.5	***4.0***	4.1	4.4
Tilmicosin (macrolide)	NA-D	3.14	3.14	3	3	4	12.3	***10.8***	10.8	10.8
Tylosin (macrolide)	NA-D	1.94	1.94	3	2	1	4.4	***4.4***	4.5	4.8
Colistin (polypeptide antibiotic)	NT	1.54	1.54	1	2	4	3.5	***3.1***	2.9	2.7
Virginiamycin	NT	1.34	1.34	3	1	4	2.6	***2.3***	2.6	3.1
Amprolium (coccidiostat)	NT	2.34	2.34	3	2	4	6.8	***6.1***	6.3	6.7
Arsenicals (detected as As)	4	3.95	4.00	3	2	1	9.0	***9.0***	9.3	10.0

Table 4.2 – *Continued*
Veterinary Drug Residues Rated with Various Weighting Formulas
1999 FSIS NRP, Monitoring Plan and Special Projects

COMPOUND/ COMPOUND CLASS	ACTUAL VIOLA-TION SCORE	PREDIC-TED VIOLA-TION SCORE	VIOLA-TION SCORE USED IN FORMULAS (V)	DIS-EASE (D)	TOX-ICITY (T)	LACK INFO. (L)	V*[(D+3*T)/4] *{1+[(L-1)*0.1]}	*V*[(D+3*T)/4] *{1+[(L-1)*0.05]}*	V*[(D+2*T)/3] *{1+[(L-1)*0.05]}	V*[(D+T)/2] *{1+[(L-1)*0.05]}
Avermectins in FSIS MRM (incl. Doramectin, ivermectin, moxidectin) (antiparasitics)	3*	3.14	3.00	2	3	2	9.1	***8.7***	8.4	7.9
Eprinomectin (avermectin)	NT	1.94	1.94	2	2	4	5.0	***4.5***	4.5	4.5
Benzimidazoles (anthelmintic)	1	1.14	1.00	1	2	3	2.1	***1.9***	1.8	1.7
Berenil (antiprotozoal)	NA-G NA-Mx	1.54	1.54	2	3	4	5.5	***4.9***	4.7	4.4
Beta agonists, unapproved (incl. Clenbuterol) (growth promotants)	NA-C	1.54	1.54	1	4	4	6.5	***5.7***	5.3	4.4
Ractopamine (beta agonist)	NT	3.14	3.14	2	4	4	14.3	***12.7***	12.0	10.8
Carbadox	NA-W	3.14	3.14	3	4	4	15.3	***13.6***	13.3	12.7
Clorsulon (anthelmintic)	1	1.54	1.00	2	2	4	2.6	***2.3***	2.3	2.3
Dexamethasone (glucocorticoid)	NT	2.34	2.34	1	3	4	7.6	***6.7***	6.3	5.4
Methyl prednisone (glucocorticoid)	NT	2.34	2.34	1	3	4	7.6	***6.7***	6.3	5.4
Prednisone (glucocorticoid)	NT	1.14	1.14	1	3	4	3.7	***3.3***	3.0	2.6
Halofuginone (antiprotozoal)	2	1.14	2.00	2	2	1	4.0	***4.0***	4.0	4.0

Table 4.2 – *Continued*
Veterinary Drug Residues Rated with Various Weighting Formulas
1999 FSIS NRP, Monitoring Plan and Special Projects

COMPOUND/ COMPOUND CLASS	ACTUAL VIOLA-TION SCORE	PREDIC-TED VIOLA-TION SCORE	VIOLA-TION SCORE USED IN FORMULAS (V)	DIS-EASE (D)	TOX-ICITY (T)	LACK INFO. (L)	V*[(D+3*T)/4] *{1+[(L-1)*0.1]}	*V*[(D+3*T)/4] *{1+[(L-1)*0.05]}*	V*[(D+2*T)/3] *{1+[(L-1)*0.05]}	V*[(D+T)/2] *{1+[(L-1)*0.05]}
Hormones, naturally-occuring (17-β estradiol, progesterone, testosterone)	NT	2.34	2.34	2	2	4	6.1	***5.4***	5.4	5.4
DES (hormone, synthetic) (estrogenic)	NA-N	1.54	1.54	2	4	4	7.0	***6.2***	5.9	5.3
MGA (hormone, synthetic) (estrus regulator)	NA-N	3.14	3.14	2	3	4	11.2	***9.9***	9.6	9.0
Trenbolone (hormone, synthetic) (anabolic)	NT	2.54	2.54	2	3	4	9.1	***8.0***	7.8	7.3
Zeranol (hormone, synthetic) (anabolic)	NA-N	2.54	2.54	2	3	4	9.1	***8.0***	7.8	7.3
Lasalocid (coccidiostat)	NT	1.94	1.94	3	2	4	5.7	***5.0***	5.2	5.6
Levamisole (anthelmintic)	2	1.94	2.00	1	1	1	2.0	***2.0***	2.0	2.0
Morantel and pyrantel (anthelmintics)	1	1.14	1.00	2	1	2	1.4	***1.3***	1.4	1.6
Nicarbazin (coccidiostat)	1	1.14	1.00	2	1	3	1.5	***1.4***	1.5	1.7
Nitrofurans (incl. Furazolidone, nitrofurazone) (antimicrobials)	NT	1.54	1.54	3	4	4	7.5	***6.6***	6.5	6.2

Table 4.2 – *Continued*
Veterinary Drug Residues Rated with Various Weighting Formulas
1999 FSIS NRP, Monitoring Plan and Special Projects

COMPOUND/ COMPOUND CLASS	ACTUAL VIOLA-TION SCORE	PREDIC-TED VIOLA-TION SCORE	VIOLA-TION SCORE USED IN FORMULAS (V)	DIS-EASE (D)	TOX-ICITY (T)	LACK INFO. (L)	V*[(D+3*T)/4] *{1+[(L-1)*0.1]}	*V*[(D+3*T)/4] *{1+[(L-1)*0.05]}*	V*[(D+2*T)/3] *{1+[(L-1)*0.05]}	V*[(D+T)/2] *{1+[(L-1)*0.05]}
Nitromidazoles in FSIS MRM (dimetridazole, ipronidazole) (antiprotozoals)	NA-N	1.54	1.54	1	4	4	6.5	***5.7***	5.3	4.4
Ronidazole (nitroimidazole) (antimicrobial)	NT	1.14	1.14	1	4	4	4.8	***4.2***	3.9	3.3
Etodolac (NSAID)	NT	1.34	1.34	1	3	4	4.3	***3.8***	3.6	3.1
Flunixin (NSAID)	NT	2.54	2.54	1	3	4	8.3	***7.3***	6.8	5.8
Phenylbutazone (NSAID)	NT	2.34	2.34	1	3	4	7.6	***6.7***	6.3	5.4
Dipyrone (NSAID)	NT	1.34	1.34	1	3	4	4.3	***3.8***	3.6	3.1
Sulfonamides in FSIS MRM (antibacterials, some are coccidiostats or anitmicrobials)	4	3.95	4.00	3	3	1	12.0	***12.0***	12.0	12.0
Sulfanitran (antibacterial, coccidiostat)	NT	3.95	3.95	3	3	4	15.4	***13.6***	13.6	13.6
Thyreostats (incl. thiouracil)	NT	1.54	1.54	2	4	4	7.0	***6.2***	5.9	5.3
Veterinary tranquilizers in FSIS MRM	NT	2.34	2.34	1	1	4	3.0	***2.7***	2.7	2.7

Key:
V = Predicted or actual score for FSIS Historical Information on Violations
D = Impact on New and Existing Human Disease
T = Acute or Chronic Toxicity Concerns
L = Lack of FSIS Testing Information on Violations
MRM = Multi-residue method

Table 4.3
Veterinary Drug Residues Rated with Various Weighting Formulas, Sorted by Rating
2000 FSIS NRP, Monitoring Plan and Special Projects

RANK	DRUG	V*((D+3*T)/4)*{1+[(L-1)*0.1]}	DRUG	V*((D+3*T)/4)*{1+[(L-1)*0.05]}	DRUG	V*((D+2*T)/4)*{1+[(L-1)*0.05]}	DRUG	V*((D+T)/4) * {1+[(L-1)*0.05]}
1	Sulfntrn	15.39	**Antibiots**	**15.00**	Antibiots	14.67	Antibiots	14.00
2	Carbadx	15.32	**Sulfntrn**	**13.61**	Sulfntrn	13.61	Sulfntrn	13.61
3	Antibiots	15.00	**Carbadx**	**13.55**	Carbadx	13.25	Carbadx	12.65
4	Ractopa	14.30	**Ractopa**	**12.65**	Ractopa	12.05	Sulfas	12.00
5	Flofencl	12.26	**Sulfas**	**12.00**	Sulfas	12.00	Flofencl	10.84
6	Tilmicos	12.26	**Flofencl**	**10.84**	Flofencl	10.84	Fluorqns	10.84
7	Sulfas	12.00	**Tilmicos**	**10.84**	Tilmicos	10.84	Tilmicos	10.84
8	MGA	11.24	**MGA**	**9.94**	Fluorqns	9.64	Ractopa	10.84
9	Fluorqns	10.22	**Fluorqns**	**9.04**	MGA	9.64	Arsencls	10.00
10	Ampicil	9.45	**Arsencls**	**9.00**	Arsencls	9.33	Spectino	9.04
11	Amoxicil	9.45	**Avrmecs**	**8.66**	Spectino	8.43	Strepto	9.04
12	Cloxacil	9.45	**Ampicil**	**8.36**	Strepto	8.43	MGA	9.04
13	Spectino	9.19	**Amoxicil**	**8.36**	Avrmecs	8.40	Ceftiofur	8.77
14	Strepto	9.19	**Cloxacil**	**8.36**	Ampicil	8.17	Pirlimyc	8.77
15	Trenboln	9.08	**Spectino**	**8.13**	Amoxicil	8.17	Avrmecs	7.88
16	Zeranol	9.08	**Strepto**	**8.13**	Cloxacil	8.17	Ampicil	7.80
17	Avrmecs	9.08	**Trenboln**	**8.04**	Ceftiofur	7.79	Amoxicil	7.80
18	Arsencls	9.00	**Zeranol**	**8.04**	Pirlimyc	7.79	Cloxacil	7.80
19	Ceftiofur	8.26	**Ceftiofur**	**7.31**	Trenboln	7.79	Trenboln	7.31
20	Pirlimyc	8.26	**Pirlimyc**	**7.31**	Zeranol	7.79	Zeranol	7.31
21	Flunixin	8.26	**Flunixin**	**7.31**	Clfencl	7.07	Clfencl	7.07
22	Clfencl	7.99	**Clfencl**	**7.07**	Flunixin	6.82	Apramy	6.73
23	Dexamth	7.61	**Dexamth**	**6.73**	Hetacil	6.48	Amproli	6.73
24	MePred	7.61	**MePred**	**6.73**	Ticarcil	6.48	Hetacil	6.19
25	Phnlbute	7.61	**Phnlbute**	**6.73**	Nitrofrs	6.48	Ticarcil	6.19
26	Hetacil	7.49	**Hetacil**	**6.63**	Apramy	6.28	Nitrofrs	6.19
27	Ticarcil	7.49	**Ticarcil**	**6.63**	Amproli	6.28	Flunixin	5.84
28	Nitrofrs	7.49	**Nitrofrs**	**6.63**	Dexamth	6.28	Amikacn	5.57
29	DES	6.99	**DES**	**6.19**	MePred	6.28	Kanamy	5.57
30	Threos	6.99	**Threos**	**6.19**	Phnlbute	6.28	Cefazoln	5.57
31	Apramy	6.84	**Apramy**	**6.06**	DES	5.89	Lasalcid	5.57
32	Amproli	6.84	**Amproli**	**6.06**	Threos	5.89	Dexamth	5.38
33	BetaAgs	6.49	**BetaAgs**	**5.75**	Hrms,ntl	5.38	MePred	5.38
34	Nitroims	6.49	**Nitroims**	**5.75**	Clindmy	5.30	Hrms,ntl	5.38
35	Hrms,ntl	6.08	**Hrms,ntl**	**5.38**	Lincomy	5.30	Phnlbute	5.38
36	Clindmy	5.99	**Clindmy**	**5.30**	Olandmy	5.30	Avoparc	5.30
37	Lincomy	5.99	**Lincomy**	**5.30**	BetaAgs	5.30	Vacomy	5.30
38	Olandmy	5.99	**Olandmy**	**5.30**	Nitroims	5.30	Clindmy	5.30
39	Amikacn	5.67	**Amikacn**	**5.02**	Amikacn	5.20	Lincomy	5.30
40	Kanamy	5.67	**Kanamy**	**5.02**	Kanamy	5.20	Olandmy	5.30
41	Cefazoln	5.67	**Cefazoln**	**5.02**	Cefazoln	5.20	DES	5.30
42	Lasalcid	5.67	**Lasalcid**	**5.02**	Lasalcid	5.20	Threos	5.30
43	Berenil	5.50	**Berenil**	**4.86**	Avoparc	4.71	Tylosin	4.85

Table 4.3 - *Continued*
Veterinary Drug Residues Rated with Various Weighting Formulas, Sorted by Rating
2000 FSIS NRP, Monitoring Plan and Special Projects

44	Thifencl	5.21	**Thifencl**	**4.61**	Vacomy	4.71	Thifencl	4.61
45	Eprinom	5.04	**Eprinom**	**4.46**	Berenil	4.71	Eprinom	4.46
46	Avoparc	5.00	**Avoparc**	**4.42**	Thifencl	4.61	Spiramy	4.42
47	Vacomy	5.00	**Vacomy**	**4.42**	Tylosin	4.52	Berenil	4.42
48	Ronidzl	4.80	**Tylosin**	**4.36**	Eprinom	4.46	BetaAgs	4.42
49	Spiramy	4.50	**Ronidzl**	**4.24**	Spiramy	4.12	Nitroims	4.42
50	Tylosin	4.36	**Halofugi**	**4.00**	Halofugi	4.00	Halofugi	4.00
51	Etodolc	4.34	**Spiramy**	**3.98**	Ronidzl	3.92	Ronidzl	3.26
52	Dipyron	4.34	**Etodolc**	**3.84**	Etodolc	3.59	Virgnmy	3.07
53	Halofugi	4.00	**Dipyron**	**3.84**	Dipyron	3.59	Etodolc	3.07
54	Pred	3.69	**Pred**	**3.26**	Pred	3.05	Dipyron	3.07
55	Colistin	3.50	**Colistin**	**3.09**	Colistin	2.95	VetTrnks	2.69
56	VetTrnks	3.04	**VetTrnks**	**2.69**	VetTrnks	2.69	Colistin	2.65
57	Virgnmy	2.61	**Virgnmy**	**2.31**	Virgnmy	2.56	Pred	2.61
58	Clorsuln	2.60	**Clorsuln**	**2.30**	Clorsuln	2.30	Clorsuln	2.30
59	Benzims	2.10	**Levamsl**	**2.00**	Levamsl	2.00	Levamsl	2.00
60	Levamsl	2.00	**Benzims**	**1.93**	Benzims	1.83	Benzims	1.65
61	Nicarbzn	1.50	**Nicarbzn**	**1.38**	Nicarbzn	1.47	Nicarbzn	1.65
62	Mor,pyr	1.38	**Mor,pyr**	**1.31**	Mor,pyr	1.40	Mor,pyr	1.58

Key:
V = Predicted or actual score for FSIS Historical Information on Violations
D = Impact on New and Existing Human Disease
L = Lack of FSIS Testing Information on Violations
T = Acute or Chronic Toxicity Concerns
The two **bolded** columns show the results obtained with the formula chosen in consultation with FDA-CVM.

Table 4.4
Key to Abbreviations Used for Veterinary Drugs
2000 FSIS NRP, Monitoring Plan and Special Projects

Rank	COMPOUND/CMPD. CLASS	ABBRV.	Rank	COMPOUND/CMPD. CLASS	ABBRV.
1	Antibiotics in FSIS Bioassay MRM	Antibiots	32	Apramycin (aminoglycoside)	Amproli
2	Sulfanitran (antibacterial, coccidiostat)	Sulfntrn	33	Beta agonists, unapproved, in FSIS MRM (incl. clenbuterol, cimaterol, and fenoterol) (growth promotant)	BetaAgs
3	Carbadox (antimicrobial)	Carbadx	34	Nitromidazoles in FSIS MRM (dimetridazole and ipronidazole) (antiprotozoal)	Nitroims
4	Ractopamine (beta agonist)	Ractopa	35	Hormones, naturally-occurring (17-. estradiol, testosterone, and progesterone)	Hrms,ntl
5	Sulfonamides in FSIS MRM	Sulfas	36	Clindamycin (lincosamide)	Clindmy
6	Florfenicol (chloramphenicol derivative)	Flofencl	37	Lincomycin (lincosamide)	Lincomy
7	Tilmicosin (macrolide)	Tilmicos	38	Oleandomycin (macrolide)	Olandmy
8	MGA (hormone, synthetic) (estrus regulator)	MGA	39	Amikacin (aminoglycoside)	Amikacn
9	Fluoroquinolones	Fluorqns	40	Cefazolin (synthetic cefalosporin)	Kanamy
10	Arsenicals (detected as As)	Arsencls	41	Kanamycin (aminoglycoside)	Cefazoln
11	Avermectins in FSIS MRM (doramectin, ivermectin, and moxidectin) (antiparasitic)	Avrmecs	42	Lasalocid (coccidiostat)	Lasalcid
12	Amoxicillin (beta lactam)	Ampicil	43	Berenil (antiprotozoal)	Berenil
13	Ampicillin (beta lactam)	Amoxicil	44	Thiamphenicol (chloramphenicol derivative)	Thifencl
14	Cloxacillin (beta lactam)	Cloxacil	45	Eprinomectin (avermectin)	Eprinom
15	Spectinomycin (aminoglycoside)	Spectino	46	Avoparcin (glycopeptide)	Avoparc
16	Streptomycin (aminoglycoside)	Strepto	47	Vancomycin (glycopeptide)	Vacomy
17	Trenbolone (hormone, synthetic) (anabolic)	Trenboln	48	Tylosin (macrolide)	Tylosin
18	Zeranol (hormone, synthetic) (anabolic)	Zeranol	49	Ronidazole (nitroimidazole) (antimicrobial)	Ronidzl
19	Ceftiofur (cefalosporin)	Ceftiofur	50	Halofuginone (antiprotozoal, coccidiostat)	Halofugi
20	Flunixin (NSAID)	Pirlimyc	51	Spiramycin (macrolide)	Spiramy
21	Pirlimycin (lincosamide)	Flunixin	52	Dipyrone (NSAID)	Etodolc
22	Chloramphenicol	Clfencl	53	Etodolac (NSAID)	Dipyron
23	Dexamethasone (glucocorticoid)	Dexamth	54	Prednisone (glucocorticoid)	Pred
24	Methyl prednisone (glucocorticoid)	MePred	55	Colistin (polypeptide antibiotic)	Colistin
25	Phenylbutazone (NSAID)	Phnlbute	56	Veterinary tranquilizers in FSIS MRM (azaperone and its metabolite azaperol, xylazine, haloperidol, acetopromazine, propionylpromazine, and chlorpromazine)	VetTrnks
26	Hetacillin (beta lactam)	Hetacil	57	Virginiamycin	Virgnmy
27	Nitrofurans (incl. furazolidone and nitrofurazone) (antimicrobial)	Ticarcil	58	Clorsulon (anthelmintic)	Clorsuln
28	Ticarcillin (beta lactam)	Nitrofrs	59	Levamisole (anthelmintic)	Levamsl
29	DES (hormone, synthetic) (estrogenic)	DES	60	Benzimidazoles (anthelmintic)	Benzims
30	Thyreostats (incl. thiouracil)	Threos	61	Nicarbazin (coccidiostat)	Nicarbzn
31	Amprolium (coccidiostat)	Apramy	62	Morantel and pyrantel (anthelmintic)	Mor,pyr

Table 4.5
Rank and Status for Veterinary Drugs
2000 FSIS NRP, Monitoring Plan and Special Projects

Rank	DRUG	SCORE	STATUS IN 2000 NATIONAL RESIDUE PROGRAM
1	**Antibiotics in FSIS MRM (tetracycline, oxytetracycline, chlortetracycline, beta-lactams (penicillins and cephalosporins; not differentiated within this category), ,streptomycin/spectinomycin (not differentiated), gentamicin, erythromycin, tilmicosin, tylosin, neomycin, flavomycin, bacitracin, hygromycin, novobiocin, lincomycin*, pirlimycin*, clindamycin*, spiramycin*, oleandomycin*] *identification by follow-up with mass spectrometry; not quantitated**	**15.00**	Monitoring Plan, MRM (Bioassay and associated follow-up methodologies), all domestic production classes except egg products.
2	Sulfanitran (antibacterial, coccidiostat)	**13.61**	NIP, **no method - need to add to sulfonamide MRM, or find new method.**
3	**Carbadox (antimicrobial)**	**13.55**	Special Project, roaster pigs and imp. fresh pork.
4	**Ractopamine (beta agonist)**	**12.65**	Special Project, market hogs and imp. fresh pork.
5	**Sulfonamides in FSIS MRM (sulfapyridine, sulfadiazine, sulfathiazole, sulfamerazine, sulfamethazine, sulfachloropyridazine, sulfadoxine, sulfamethoxypyridazine, sulfaquinoxaline, sulfadimethoxine, sulfisoxazole, sulfacetamide, sulfamethoxazole, sulfamethizole, sulfanilamide, sulfaguanidine, sulfabromomethazine, sulfasalazine, sulfaethoxypyridazine, sulfaphenazole, and sulfatroxazole) (antibacterial, some are coccidiostats or antimicrobials)**	**12.00**	Monitoring Plan, MRM, all domestic production classes except sheep, mature chickens, and rabbits.
6	**Florfenicol (chloramphenicol derivative)**	**10.84**	Special Project, dairy cattle; **new method** (NADA method)**, need analyst familiarization; ultimately want MRM for chloramphenicol, florfenicol, and thiamphenicol.**
7	**Tilmicosin (macrolide)**	**10.84**	Monitoring Plan, dairy cattle, beef cattle, steers.
8	**MGA (hormone, synthetic) (estrus regulator)**	**9.94**	Monitoring Plan, steers and heifers; **method not used in several years - need analyst familiarization. Should also be analyzable by extension of FSIS DES/zeranol method, or by adoption of Swiss MRM.**
9	**Fluoroquinolones in FSIS MRM (ciprofloxacin, desethyleneciprofloxacin, danofloxacin, difloxacin, enrofloxacin, marbofloxacin, orbifloxacin, and sarafloxacin)**	**9.04**	Special Project, MRM, dairy cattle, young chicken, market hogs, imp. fresh chicken.
10	**Arsenicals (detected as As)**	**9.00**	Monitoring Plan, beef cows, goats, all porcine production classes, and all avian production classes (including egg products) except geese.

Table 4.5 - *Continued*
Rank and Status for Veterinary Drugs
2000 FSIS NRP, Monitoring Plan and Special Projects

Rank	DRUG	SCORE	STATUS IN 2000 NATIONAL RESIDUE PROGRAM
11	**Avermectins in FSIS MRM (doramectin, ivermectin, and moxidectin) (antiparasitic)**	**8.66**	Monitoring Plan, MRM, all domestic production classes except bob veal calves and avians**; moxidectin analyst familiarization needed.**
12	Amoxicillin (beta lactam)	**8.36**	NIP, **no method - need MRM for beta-lactams.**
13	Ampicillin (beta lactam)	**8.36**	NIP, **no method - need MRM for beta-lactams.**
14	Cloxacillin (beta lactam)	**8.36**	NIP, **no method - need MRM for beta-lactams.**
15	Spectinomycin (aminoglycoside)	**8.13**	NIP, **method not operational - ultimately need MRM for aminoglycosides.**
16	Streptomycin (aminoglycoside)	**8.13**	NIP, **no method - need MRM for aminoglycosides; will need bridging data to use chemical method on streptomycin.**
17	Trenbolone (hormone, synthetic) (anabolic)	**8.04**	NIP, **method needs improvement. Should also be analyzable by extension of FSIS DES/zeranol method, or by adoption of Swiss MRM.**
18	**Zeranol (hormone, synthetic) (anabolic)**	**8.04**	Special Project, MRM with DES, formula-fed veal, **contingent upon getting method to work at ppt level.**
19	Ceftiofur (cefalosporin)	**7.31**	NIP, **no method - need MRM for beta-lactams.**
20	**Flunixin (NSAID**)	**7.31**	Special Project, dairy cattle and imp. fresh beef.
21	Pirlimycin (lincosamide)	**7.31**	NIP, **method needs improvement.**
22	**Chloramphenicol**	**7.07**	Special Project, dairy cattle, formula-fed veal, bob veal, and imp. fresh beef and fresh veal; **, method not used in several years - need analyst familiarization; ultimately want MRM for chloramphenicol, florfenicol, and thiamphenicol**
23	**Dexamethasone (glucocorticoid)**	**6.73**	Special Project, dairy cattle and imp. fresh beef. **Should also be analyzable by extension of FSIS DES/zeranol method, or by adoption of Swiss MRM.**
24	Methyl prednisone (glucocorticoid)	**6.73**	NIP, **no method, but should be analyzable by extension of FSIS DES/zeranol method, *or by adoption of Swiss MRM.**
25	**Phenylbutazone (NSAID)**	**6.73**	Monitoring Plan, all production classes except roaster pigs, as part of CHC method (**method extension work not yet completed by WL and QAB**).
26	Hetacillin (beta lactam)	**6.63**	NIP, **no method - need MRM for beta-lactams.**
27	Nitrofurans (incl. furazolidone and nitrofurazone) (antimicrobial)	**6.63**	NIP, **no viable method available.**
28	Ticarcillin (beta lactam)	**6.63**	NIP, **no method - need MRM for beta-lactams.**
29	**DES (hormone, synthetic) (estrogenic)**	**6.19**	Special Project, MRM with zeranol, formula-fed veal, **contingent upon getting method to work at ppt level.**
30	Thyreostats (incl. thiouracil)	**6.19**	NIP, **no method.**
31	Amprolium (coccidiostat)	**6.06**	NIP, **no method.**
32	Apramycin (aminoglycoside)	**6.06**	NIP, **no method - need MRM for aminoglycosides.**
33	**Beta agonists, unapproved, in FSIS MRM (incl. clenbuterol, cimaterol, and fenoterol) (growth promotant)**	**5.75**	Monitoring Plan, formula-fed veal, steers, market hogs, by multi-residue eyeball screen followed by determinative method for clenbuterol; **but need to test eyeball screen to extend to other beta agonists, and install NCTR confirmatory MRM for beta agonists.**
34	**Nitromidazoles in FSIS MRM (dimetridazole and ipronidazole) (antiprotozoal)**	**5.75**	Special Project, MRM, formula-fed veal, imp. fresh pork.

Table 4.5 - *Continued*
Rank and Status for Veterinary Drugs
2000 FSIS NRP, Monitoring Plan and Special Projects

Rank	DRUG	SCORE	STATUS IN 2000 NATIONAL RESIDUE PROGRAM
BASED ON CONSULTATION WITH FDA, CDC AND OTHER AGENCIES, COMPOUNDS BELOW THIS POINT WERE NOT CONSIDER TO REPRESENT A BROAD POTENTIAL PUBLIC HEALTH RISK. HOWEVER, SOME OF THESE MAY BE SAMPLED ON A SPECIFIC, AS-NEEDED BASIS. THUS, NONE OF THE COMPOUNDS BELOW WAS SELECTED FOR INCLUSION INTO THE 2000 FSIS NRP, EXCEPT FOR VETERINARY TRANQILIZERS, WHICH WILL BE SAMPLED UNDER A LIMITED SPECIAL PROJECT IN MARKET HOGS.			
35	Hormones, naturally-occurring (17-. estradiol, testosterone, and progesterone)	**5.38**	NIP, no method, low priority, **but should be analyzable by extension of FSIS DES/zeranol method, or by adoption of Swiss MRM.**
36	Clindamycin (lincosamide)	**5.30**	NIP, no method, low priority.
37	Lincomycin (lincosamide)	**5.30**	NIP, no method, low priority.
38	Oleandomycin (macrolide)	**5.30**	NIP, no method, low priority.
39	Amikacin (aminoglycoside)	**5.02**	NIP, **no method - need MRM for aminoglycosides.**
40	Cefazolin (synthetic cefalosporin)	**5.02**	NIP, **no method - need MRM for beta-lactams.**
41	Kanamycin (aminoglycoside)	**5.02**	NIP, **no method - need MRM for aminoglycosides.**
42	Lasalocid (coccidiostat)	**5.02**	NIP, Official FSIS Method available, low priority.
43	Berenil (antiprotozoal)	**4.86**	NIP, low priority, Official FSIS (determinative) Method available, but for plasma only. **Will need to extend the method to the target tissue and develop a confirmatory method.**
44	Thiamphenicol (chloramphenicol derivative)	**4.61**	NIP, **no method - ultimately would like MRM for chloramphenicol, florfenciol, and thiamphenicol.**
45	Eprinomectin (avermectin)	**4.46**	NIP, no method, low priority.
46	Avoparcin (glycopeptide)	**4.42**	NIP, no method, low priority.
47	Vancomycin (glycopeptide)	**4.42**	NIP, no method, low priority.
48	Tylosin (macrolide)	**4.36**	NIP, no method, low priority.
49	Ronidazole (nitroimidazole) (antimicrobial)	**4.24**	NIP - **may be able to extend MRM for nitroimidazoles to capture this compound.**
50	Halofuginone (antiprotozoal, coccidiostat)	**4.00**	NIP, Official FSIS Method available, low priority.
51	Spiramycin (macrolide)	**3.98**	NIP, low priority.
52	Dipyrone (NSAID)	**3.84**	NIP, no method, low priority, **but MRM for all NSAID's may be desirable.**
53	Etodolac (NSAID)	**3.84**	NIP, no method, low priority, **but MRM for all NSAID's may be desirable.**
54	Prednisone (glucocorticoid)	**3.26**	NIP, no method, low priority, **but should be analyzable by extension of FSIS DES/zeranol method, or by adoption of Swiss MRM.**
55	Colistin (polypeptide antibiotic)	**3.09**	NIP, no method, low priority.
56	**Veterinary tranquilizers in FSIS MRM (azaperone and its metabolite azaperol, xylazine, haloperidol, acetopromazine, propionylpromazine, and chlorpromazine)**	**2.69**	Special Project, MRM, market hogs, ***contingent upon QAB approval for use of method as screen; need determinative and confirmatory methods.***
57	Virginiamycin	**2.31**	NIP, no method, low priority.
58	Clorsulon (anthelmintic)	**2.30**	NIP, Official FSIS Method available, low priority.
59	Levamisole (anthelmintic)	**2.00**	NIP, Official FSIS Method available, low priority.

Table 4.5 - *Continued*
Rank and Status for Veterinary Drugs
2000 FSIS NRP, Monitoring Plan and Special Projects

Rank	DRUG	SCORE	STATUS IN 2000 NATIONAL RESIDUE PROGRAM
60	Benzimidazoles (anthelmintic)	**1.93**	NIP, Official FSIS Method available, low priority.
61	Nicarbazin (coccidiostat)	**1.38**	NIP, no method, low priority.
62	Morantel and pyrantel (anthelmintic)	**1.31**	NIP, Official FSIS Method available, low priority.

Key:
MRM = Multi-residue method
NIP = Not included in 2000 FSIS National Residue Program
In the second column, compounds/compound classes included in the 2000 NRP have been bolded.
In the last column, statements describing actions needed are bolded.

Table 4.6
Production Classes to be Considered for Each Veterinary Drug/Drug Class
2000 FSIS NRP, Monitoring Plan and Special Projects

Est. Rel. % Dom. Cons.	DRUG->	Anti-biots	Car-badx	Rac-topa	Sul-fas	Flo-fencl	Til-mic	MGA	Fluo-rqns	Ar-sencls	Av-mecs	Spec-tin	Zer-anol	Flu-nixin	Clf-encl	Dex	Phnl-bute	DES	Beta Ags	Nitro-ims	Vet. Trks
	DRUG SCORE->	15.0	13.6	12.7	12.0	10.8	10.8	9.9	9.0	9.0	8.7	8.1	8.0	7.3	7.1	6.7	6.7	6.2	5.8	5.8	2.7
0.041	Horses	●			●						●					○	●				
0.598	Bulls	●			●						●					○	●				
1.797	Beef cows	●			●		●			●	●	○				○	●				
1.800	Dairy cows	●			●	●	●		●		●	●		●	●	●	●				○
8.479	Heifers	●			●		○	●			●						●	○			
14.128	Steers	●			●		●	●			●						●	○	●		
0.059	Bob veal calves	●			●		○								●		⭘				
0.194	Formula-fed veal	●			●		○	○			●		●		●	○	⭘	●	●	●	
0.009	Non-formula-fed veal	●			●			○			●		○				⭘				
0.017	Heavy calves	●			●	○	○				●						●				
0.012	Sheep	●									●					○	⭘				
0.250	Lambs	●			●						●						⭘				
0.023	Goats	●			●					●	●						⭘				
18.839	Market hogs	●	○	●	●				●	●	●						⭘		●	○	●
0.012	Roaster pigs	●	●	○	●					●	●										
0.170	Boars/Stags	●	○		●					●	●					○	●				
1.064	Sows	●	○		●					●	●					○	●				
40.817	Young chickens	●			●				●	●							⭘				
0.919	Mature chickens	●							○	●							⭘				
7.342	Young turkeys	●			●				○	●							⭘				
0.087	Mature turkeys	●			●				○	●							⭘				
0.169	Ducks	●			●					●							⭘				
0.003	Geese	●			●												⭘				
0.019	Other fowl	●			●					●							⭘				
0.002	Rabbits	●									●						⭘				
3.149	Egg products	○			●				○	●							⭘				

Key:

Est. Rel. % Dom. Cons. = Estimated relative percent of domestic consumption. This was derived by estimating the total annual U.S. domestic production (pounds dressed weight) for each production class, and dividing by the total poundage for all production classes on this list.

● = Scheduled for sampling under the 2000 FSIS NRP.

○ = Of potential regulatory concern, but could not be sampled under the 2000 FSIS NRP because of laboratory resource constraints.

⭘ = Since all production classes will be sampled with the CHC/COP method (see Section 6), and since this method also detects phenylbutazone, the latter will, by default, likewise be sampled in all production classes. However, phenylbutazone is not of regulatory concern in all production class. Thus, this designation indicates those production classes in which phenylbutazone will be sampled because it is detected as part of the CHC/COP method, but where it is NOT of regulatory concern.

Table 4.7
Veterinary Drug Compound/Production Class Pairs,
Sorted by Sampling Priority Score, "Full-Resource" Sampling
2000 FSIS NRP, Monitoring Plan and Special Projects

RANK	COMPOUND CLASS	COMPOUND PRIORITY RATING (P)	PRODUCTION CLASS	EST. RELATIVE % DOMESTIC CONSUMPTION (D)	C/PC PAIR PRIORITY SCORE (P x D)	# SAMPLES
1	Antibiotics	15.00	Young chickens	40.817	612.262	460
2	Sulfonamides	12.00	Young chickens	40.817	489.809	460
3	Arsenicals	9.00	Young chickens	40.817	367.357	460
4	Antibiotics	15.00	Market hogs	18.839	282.583	460
5	Sulfonamides	12.00	Market hogs	18.839	226.066	460
6	Antibiotics	15.00	Steers	14.128	211.923	460
7	Arsenicals	9.00	Market hogs	18.839	169.550	460
8	Avermectins	9.00	Market hogs	18.839	169.550	460
9	Sulfonamides	12.00	Steers	14.128	169.538	460
10	Antibiotics	15.00	Heifers	8.479	127.180	460
11	Avermectins	9.00	Steers	14.128	127.154	460
12	Antibiotics	15.00	Young turkeys	7.342	110.133	460
13	Sulfonamides	12.00	Heifers	8.479	101.744	460
14	Sulfonamides	12.00	Young turkeys	7.342	88.106	460
15	Avermectins	9.00	Heifers	8.479	76.308	460
16	Arsenicals	9.00	Young turkeys	7.342	66.080	460
17	Antibiotics	15.00	Eggs	3.149	47.233	460
18	Sulfonamides	12.00	Eggs	3.149	37.786	460
19	Arsenicals	9.00	Eggs	3.149	28.340	460
20	Antibiotics	15.00	Dairy cows	1.800	26.995	300
21	Antibiotics	15.00	Beef cows	1.797	26.962	300
22	Sulfonamides	12.00	Dairy cows	1.800	21.596	300
23	Sulfonamides	12.00	Beef cows	1.797	21.570	300
24	Avermectins	9.00	Dairy cows	1.800	16.197	300
25	Arsenicals	9.00	Beef cows	1.797	16.177	300
26	Avermectins	9.00	Beef cows	1.797	16.177	300
27	Antibiotics	15.00	Sows	1.064	15.956	300
28	Antibiotics	15.00	Mature chickens	0.919	13.792	300
29	Sulfonamides	12.00	Sows	1.064	12.765	300
30	Arsenicals	9.00	Sows	1.064	9.574	300
31	Avermectins	9.00	Sows	1.064	9.574	300
32	Antibiotics	15.00	Bulls	0.598	8.973	300
33	Arsenicals	9.00	Mature chickens	0.919	8.275	300
34	Sulfonamides	12.00	Bulls	0.598	7.178	300
35	Avermectins	9.00	Bulls	0.598	5.384	300
36	Antibiotics	15.00	Lambs	0.250	3.754	300
37	Sulfonamides	12.00	Lambs	0.250	3.003	300
38	Antibiotics	15.00	Formula-fed	0.194	2.912	300
39	Antibiotics	15.00	Boars/Stags	0.170	2.546	300
40	Antibiotics	15.00	Ducks	0.169	2.533	300

Table 4.7 - *Continued*
Veterinary Drug Compound/Production Class Pairs,
Sorted by Sampling Priority Score, "Full-Resource" Sampling
2000 FSIS NRP, Monitoring Plan and Special Projects

RANK	COMPOUND CLASS	COMPOUND PRIORITY RATING (P)	PRODUCTION CLASS	EST. RELATIVE % DOMESTIC CONSUMPTION (D)	C/PC PAIR PRIORITY SCORE (P x D)	# SAMPLES
41	Sulfonamides	12.00	Formula-fed	0.194	2.329	230
42	Avermectins	9.00	Lambs	0.250	2.252	230
43	Sulfonamides	12.00	Boars/Stags	0.170	2.037	230
44	Sulfonamides	12.00	Ducks	0.169	2.026	230
45	Avermectins	9.00	Formula-fed	0.194	1.747	230
46	Arsenicals	9.00	Boars/Stags	0.170	1.528	230
47	Avermectins	9.00	Boars/Stags	0.170	1.528	230
48	Arsenicals	9.00	Ducks	0.169	1.520	230
49	Antibiotics	15.00	Mature turkeys	0.087	1.304	230
50	Sulfonamides	12.00	Mature turkeys	0.087	1.043	230
51	Antibiotics	15.00	Bob calves	0.059	0.890	230
52	Arsenicals	9.00	Mature turkeys	0.087	0.783	230
53	Sulfonamides	12.00	Bob calves	0.059	0.712	230
54	Antibiotics	15.00	Horses	0.041	0.609	230
55	Sulfonamides	12.00	Horses	0.041	0.487	230
56	Avermectins	9.00	Horses	0.041	0.366	230
57	Antibiotics	15.00	Goats	0.023	0.339	230
58	Antibiotics	15.00	Other fowl	0.019	0.288	230
59	Sulfonamides	12.00	Goats	0.023	0.271	230
60	Antibiotics	15.00	Heavy calves	0.017	0.262	230
61	Sulfonamides	12.00	Other fowl	0.019	0.230	230
62	Sulfonamides	12.00	Heavy calves	0.017	0.209	230
63	Arsenicals	9.00	Goats	0.023	0.204	230
64	Avermectins	9.00	Goats	0.023	0.204	230
65	Antibiotics	15.00	Roaster pigs	0.012	0.187	230
66	Antibiotics	15.00	Sheep	0.012	0.187	230
67	Arsenicals	9.00	Other fowl	0.019	0.173	230
68	Avermectins	9.00	Heavy calves	0.017	0.157	230
69	Sulfonamides	12.00	Roaster pigs	0.012	0.150	90
70	Antibiotics	15.00	Non-formula	0.009	0.131	90
71	Arsenicals	9.00	Roaster pigs	0.012	0.112	90
72	Avermectins	9.00	Roaster pigs	0.012	0.112	90
73	Avermectins	9.00	Sheep	0.012	0.112	90
74	Sulfonamides	12.00	Non-formula	0.009	0.105	90
75	Avermectins	9.00	Non-formula	0.009	0.079	90
76	Antibiotics	15.00	Geese	0.003	0.039	90
77	Sulfonamides	12.00	Geese	0.003	0.031	90
78	Antibiotics	15.00	Rabbits	0.002	0.027	90
79	Avermectins	9.00	Rabbits	0.002	0.016	90

Table 4.8
Adjusted Number of Analyses for Each Veterinary Drug Compound/Production Class Pair, "Full Resource" Sampling
2000 FSIS NRP Monitoring Plan and Special Projects

COMPOUND CLASS	PRODUCTION CLASS	SCORE	# SAMP.	%VIOL.	UNADJ. #	ADJUST-MENT	INITIAL ADJ.#	ADJUST-MENT	FINAL ADJ.#
Antibiotics	Young chickens	612.262	3848	0.03	460		460		**460**
Antibiotics	Market hogs	282.583	4779	0.50	460	+1	690		**690**
Antibiotics	Steers	211.923	2789	0.07	460		460		**460**
Antibiotics	Heifers	127.180	2214	0.09	460		460		**460**
Antibiotics	Young turkeys	110.133	3968	0.23	460		460		**460**
Antibiotics	Eggs	47.233	NT	NT	460	+1	690		**690**
Antibiotics	Dairy cows	26.995	4507	0.89	300	+2	690		**690**
Antibiotics	Beef cows	26.962	3872	0.23	300		300		**300**
Antibiotics	Sows	15.956	4351	0.28	300		300		**300**
Antibiotics	Mature chickens	13.792	3422	0.00	300	-1	230		**230**
Antibiotics	Bulls	8.973	1848	0.00	300	-1	230		**230**
Antibiotics	Lambs	3.754	3816	0.24	300		300		**300**
Antibiotics	Formula-fed	2.912	7326	0.71	300	+2	690		**690**
Antibiotics	Boars/Stags	2.546	2660	0.26	300		300		**300**
Antibiotics	Ducks	2.533	3213	0.12	300		300		**300**
Antibiotics	Mature turkeys	1.304	1911	0.10	230		230		**230**
Antibiotics	Bob calves	0.890	5242	1.34	230	+2	460		**460**
Antibiotics	Horses	0.609	1957	3.78	230	+2	460		**460**
Antibiotics	Goats	0.339	2895	0.24	230		230		**230**
Antibiotics	Other fowl	0.288	NT	NT	230	+1	300		**300**
Antibiotics	Heavy calves	0.262	3380	0.38	230		230		**230**
Antibiotics	Roaster pigs	0.187	NT	NT	230	+1	300		**300**
Antibiotics	Sheep	0.187	2058	0.05	230		230		**230**
Antibiotics	Non-formula	0.131	3142	0.45	90	min. 230	230		**230**
Antibiotics	Geese	0.039	343	0.29	90	NO ADJ	90		**90**
Antibiotics	Rabbits	0.027	1293	5.10	90	+2	300		**300**
TOTAL # SAMPLES					**7570**		**9620**		**9620**

Table 4.8 - *Continued*
Adjusted Number of Analyses for Each Veterinary Drug Compound/Production Class Pair, "Full Resource" Sampling
2000 FSIS NRP Monitoring Plan and Special Projects

COMPOUND CLASS	PRODUCTION CLASS	SCORE	# SAMP.	%VIOL.	UNADJ. #	ADJUST-MENT	INITIAL ADJ.#	ADJUST-MENT	FINAL ADJ.#
Avermectins	Market hogs	169.550	3179	0.00	460	NO ADJ	460		**460**
Avermectins	Steers	127.154	2923	0.03	460		460		**460**
Avermectins	Heifers	76.308	1848	0.00	460	NO ADJ	460		**460**
Avermectins	Dairy cows	16.197	2553	0.16	300		300		**300**
Avermectins	Beef cows	16.177	3155	0.22	300		300		**300**
Avermectins	Sows	9.574	2752	0.04	300		300		**300**
Avermectins	Bulls	5.384	1373	0.29	300		300		**300**
Avermectins	Lambs	2.252	2675	0.07	230		230		**230**
Avermectins	Formula-fed	1.747	3009	0.13	230		230		**230**
Avermectins	Boars/Stags	1.528	1459	0.00	230	NO ADJ	230		**230**
Avermectins	Horses	0.366	1357	0.59	230	+1	300		**300**
Avermectins	Goats	0.204	2838	0.70	230	+2	460		**460**
Avermectins	Heavy calves	0.157	3084	0.45	230		230		**230**
Avermectins	Roaster pigs	0.112	NT	NT	90	+1	230		**230**
Avermectins	Sheep	0.112	1601	0.19	90		90		**90**
Avermectins	Non-formula	0.079	2447	0.45	90		90		**90**
Avermectins	Rabbits	0.016	0	NT	90	+1	230		**230**
TOTAL # SAMPLES					**4320**		**4900**		**4900**

Table 4.8 - *Continued*
Adjusted Number of Analyses for Each Veterinary Drug Compound/Production Class Pair, "Full Resource" Sampling
2000 FSIS NRP Monitoring Plan and Special Projects

COMPOUND CLASS	PRODUCTION CLASS	SCORE	# SAMP.	%VIOL.	UNADJ. #	ADJUST-MENT	INITIAL ADJ.#	ADJUST-MENT	FINAL ADJ.#
Sulfonamides	Young chickens	489.809	4387	0.11	460		460		**460**
Sulfonamides	Market hogs	226.066	17280	0.78	460	+2	460		**460**
Sulfonamides	Steers	169.538	2445	0.12	460		460		**460**
Sulfonamides	Heifers	101.744	2181	0.05	460		460		**460**
Sulfonamides	Young turkeys	88.106	4366	0.21	460		460		**460**
Sulfonamides	Eggs	37.786	NT	NT	460	+1	460		**460**
Sulfonamides	Dairy cows	21.596	4129	0.36	300		300		**300**
Sulfonamides	Beef cows	21.570	3520	0.14	300		300		**300**
Sulfonamides	Sows	12.765	4564	0.79	300	+2	460		**460**
Sulfonamides	Bulls	7.178	1866	0.05	300		300		**300**
Sulfonamides	Lambs	3.003	2919	0.31	300		300		**300**
Sulfonamides	Formula-fed	2.329	6032	0.07	230		230		**230**
Sulfonamides	Boars/Stags	2.037	2811	0.92	230	+2	460		**460**
Sulfonamides	Ducks	2.026	2623	0.08	230		230		**230**
Sulfonamides	Mature turkeys	1.043	1995	0.55	230	+1	300		**300**
Sulfonamides	Bob calves	0.712	4399	0.73	230	+2	460		**460**
Sulfonamides	Horses	0.487	1590	0.25	230		230		**230**
Sulfonamides	Goats	0.271	2182	0.32	230		230		**230**
Sulfonamides	Other fowl	0.230	NT	NT	230	+1	300		**300**
Sulfonamides	Heavy calves	0.209	3551	0.20	230		230		**230**
Sulfonamides	Roaster pigs	0.150	NT	NT	90	+1	230		**230**
Sulfonamides	Non-formula	0.105	3182	0.57	90	+1	230		**230**
Sulfonamides	Geese	0.031	350	0.29	90		90		**90**
TOTAL # SAMPLES					**6600**		**7640**		**7640**

Table 4.8 - *Continued*
Adjusted Number of Analyses for Each Veterinary Drug Compound/Production Class Pair, "Full Resource" Sampling
2000 FSIS NRP Monitoring Plan and Special Projects

COMPOUND CLASS	PRODUCTION CLASS	SCORE	# SAMP.	%VIOL.	UNADJ. #	ADJUST-MENT	INITIAL ADJ.#	ADJUST-MENT	FINAL ADJ.#
Arsenicals	Young chickens	367.357	3199	0.41	460		460	+740	**1200**
Arsenicals	Market hogs	169.550	2538	0.00	460	-1	300		**300**
Arsenicals	Young turkeys	66.080	2601	0.19	460		460		**460**
Arsenicals	Eggs	28.340	NT	NT	460	+1	460		**460**
Arsenicals	Beef cows	16.177	765	0.13	300		300		**300**
Arsenicals	Sows	9.574	946	0.00	300	-1	230		**230**
Arsenicals	Mature chickens	8.275	934	0.00	300	-1	230		**230**
Arsenicals	Boars/Stags	1.528	777	0.00	230	-1	90		**90**
Arsenicals	Ducks	1.520	89	0.00	230		230		**230**
Arsenicals	Mature turkeys	0.783	450	0.00	230	-1	90		**90**
Arsenicals	Goats	0.204	944	0.64	230	+1	300		**300**
Arsenicals	Other fowl	0.173	NT	NT	230	+1	300		**300**
Arsenicals	Roaster pigs	0.112	NT	NT	90	+1	230		**230**
TOTAL # SAMPLES					**3980**		**3680**		**4420**

Key:
#SAMP. = Total number of samples analyzed by the FSIS Monitoring Plan and/or Special Projects (i.e., random sampling only), 1/1/89 - 12/31/98.
%VIOL. = Percent violative, i.e., the percent of samples with residue concentrations exceeding the tolerance or action level (or, for a drug whose use was not permitted in the production class in which it was detected, the percent of samples with any detectable residue).
UNADJ. # = Unadjusted number of samples, obtained from last column of Table 4.7.
INITIAL ADJ.# = Number of samples proposed following adjustment for historical violation rate information or lack of testing information.
FINAL ADJ.# = Finalized sample numbers, obtained following any adjustments needed to match sample volume to laboratory capacity.
NT = Not Tested.
+1 level, +2 levels, -1 level = There are four different sampling levels: 90, 230, 300 and 460 (five for antibiotics: 90, 230, 300, 460, and 690). Sampling levels were increased or decreased (e.g., changed from 300 samples to 230 samples) based on the rules described in Section 4.
NO ADJ = As explained in Section 4, the number of samples taken from geese is limited to 90 per compound class per year, and thus this number could not be adjusted upward based on the rules applied to the other production class.