

From: Basu, Pat - FSIS
Sent: Thursday, August 02, 2012 2:19 PM
To: Chen, Vivian - FSIS; Kause, Janell - FSIS; Esteban, Emilio - FSIS
Cc: Edelstein, Rachel - FSIS; Goldman, David - Commissioned Corps - FSIS; Basu, Pat - FSIS
Subject: Re: Priority Assignment: Due 1 week



Glad to assist in this project. I will handle the history, as requested.
Pat B.

Dr. Pat Basu
SL-Chemistry and Toxicology
OPHS, FSIS, USDA

From: Chen, Vivian - FSIS
Sent: Thursday, August 02, 2012 01:13 PM
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Hi.

Today there was a discussion on equine testing and it was determined that we need to develop an internal discussion paper as we move forward in determining a suitable approach/position.

Please coordinate with one another as to how you would like to approach this quick turn-around assignment. This is due in a week.

Thanks. If you have any questions, please let me or Dr. Goldman know....thanks...v

August 9, 2012

History of residue testing by FSIS in horses

Pat Basu, DVM, MS
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Chemistry, Toxicology and Related Sciences
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We currently have records in FSIS for about 25 years of residue testing in horses presented for slaughter at USDA licensed facilities. This data starts from 1983 through 2007, with no further records from 2008 forward. The detailed data has now been captured to indicate the details of the yearly testing and the results.

While no archived records remain as to the reason for selections of the compounds that were tested for in horses, there is enough evidence from the data to indicate the selection of the compounds for horses mirrors that for cattle. This selection is traditionally made by the joint USDA-FDA-EPA Strategic Advisory Team (SAT), that meets at least once a year to guide FSIS towards the compounds to be selected in SAT meeting held in the prior year. The final compound selection is based on a history of use, an official tolerance, availability of regulatory method and appropriate equipment at the FSIS laboratories.

For the years that we could locate the data, there was between 29,707 heads slaughter in 2007, to a maximum of 104,433 heads slaughtered in 2006 under FSIS inspection. Of the compounds detected in violative levels (per FDA guidelines), the most were for antibiotics. Examples include: Streptomycin (59 violations in 2000, 35 in 1999); Penicillin (9 violations in 2000, 8 in 1999); Chlortetracycline, Gentamicin, Oxytetracycline, etc.). There are a few violative findings for different sulfa compounds and antiparasitic drugs. There are a few pesticide violations in the 1980's data; however, that is not recorded in the later years of this program. There is evidence however, that some testing was done as "Exploratory", which is defined as a follow-up to intelligence or violative findings for a given compound. In plant residue quick-tests STOP (Swab Test on Premises) and FAST (Field Antibiotic and Sulfa Test) are also recorded for animals, resulting in a few more antibiotic violative findings.

Having worked in the Southwestern Region of FSIS as the Residue Staff Officer in the late 1980's, I have often visited the largest horse slaughter plants in the USA, that slaughter over 1000 animals a week. Most horses arriving appeared healthy, although a few appeared culled, where in-plant residue quick tests (such as the KIS test) would easily screen for residues of any drugs used to enable transporting these animals to the slaughterhouse. In general, I did not note misuse of drugs in horses; historically the occurrence of residues in horses has been less than what we find in the cull dairy cow and the bob veal slaughter facility.

The data mentioned above is attached.

AR0002262

FSIS National Residue Program - Historical Data on Equine Residue Testing

YEAR	Monitoring Program				Surveillance Samples		
	Compounds	# Analyzed	NV Positive	Violations	# tested	NV Positive	Violations
1983	Sulfadimethoxine	96	0	0	8	0	0
	Sulfamethazine	96	3	4	8	2	0
	Sulfathizole	96	1	0	8	0	0
	Sulfabromomethazine	96	0	0	8	0	0
	Penicillin	94	0	1	8	0	0
	Streptomycin	94	0	0	8	0	1
	Tetracycline	94	0	0	8	0	0
	Erythromycin	94	0	0	8	0	0
	Neomycin	94	0	0	8	0	0
	Oxytetracycline	94	0	0	8	0	0
	Chlortetracycline	94	0	0	8	0	0
	Chloramphenicol	11	0	0			

FSIS National Residue Program - Historical Data on Equine Residue Testing

YEAR	Monitoring Program				Surveillance Samples		
	Compounds	# Analyzed	NV Positive	Violations	# tested	NV Positive	Violations
1984	Aldrin	343	0	0	30	0	0
	Benzene Hydrochloride	343	62	1	30	0	0
	Chlordane	343	4	1	30	1	0
	Dieldrin	343	25	1	30	5	0
	DDT and metabolites	343	69	0	30	5	0
	Endrin	343	2	0	30	1	0
	Heptachlor	343	32	0	30	13	0
	Lindane	343	3	0	30	0	0
	Methoxychlor	343	1	0	30	0	0
	Toxaphene	343	1	0	30	0	0
	PCB	343	0	0	30	0	0
	Hexachlorobenzene	343	53	0	30	0	0
	Mirex	343	0	0	30	0	0
	Strobane	343	0	0	30	0	0
	Nonachlor	343	0	0	30	0	0
	Penicillin	281	0	1	6	0	0
	Streptomycin	281	0	1	6	0	0
	Tetracycline	281	0	0	6	0	0
	Erythromycin	281	0	0	6	0	0
	Neomycin	281	0	0	6	0	0
	Oxytetracycline	281	0	0	6	0	0
	Chlortetracycline	281	0	0	6	0	0
	Gentamicin	281	0	0			
	Sulfathoxyypyridazine	24	0	0			
	Sulfachloropyridazine	76	0	0			
	Sulfadimethoxine	102	0	0	1	0	0
	Sulfamethazine	102	0	3	1	1	0
	Sulfamethoxyypyridazine	24	0	0			
	Sulfathiazole	102	0	1	1	0	0
	Sulfaquinoxaline	102	0	0			
	Sulfabromomethazine	102	0	0	1	0	0
	Sulfapyridine	102	0	0	1	0	0
	Chloraphenicol	115	0	0			
	Fenbendazole	109	0	1			

FSIS National Residue Program - Historical Data on Equine Residue Testing

YEAR	Monitoring Program				Surveillance Samples		
	Compounds	# Analyzed	NV Positive	Violations	# tested	NV Positive	Violations
1985	Aldrin	313	0	0	10	0	0
	Benzene Hydrochloride	313	3	0	10	0	0
	Chlordane	313	3	0	10	0	0
	Dieldrin	313	2	0	10	0	0
	DDT and metabolites	313	35	1	10	0	0
	Endrin	343	0	0	10	0	0
	Heptachlor	313	5	0	10	0	0
	Lindane	313	1	0	10	0	0
	PCB				10	1	0
	Mirex	313	1	0	10	0	0
	Penicillin	339	0	1	5	0	0
	Streptomycin	339	0	1	5	0	0
	Tetracycline	339	0	0	5	0	0
	Tylosin	339	0	0	5	0	0
	Erythromycin	339	0	0	5	0	0
	Neomycin	339	0	0	5	0	0
	Oxytetracycline	339	0	0	5	0	0
	Chlortetracycline	339	0	0	5	0	0
	Gentamicin	339	0	0	5	0	0
	Licomycin	339	0	0	5	0	0
	Novobiocin	339	0	0	5	0	0
	Virginiamycin	339	0	0	5	0	0
	Sulfathoxyypyridazine	105	0	0			
	Sulfachloropyridazine	105	0	0			
	Sulfadimethoxine	105	0	0			
	Sulfamethazine	105	0	1			
	Sulfamethoxyypyridazine	105	0	0			
	Sulfathiazole	105	0	0			
	Sulfaquinolaline	105	0	0			
	Sulfabromomethazine	105	0	0			
	Sulfapyridine	105	0	0			
	OPs (Screen)/Parathion				1	1	0

OP Screen: Coumaphos, Dichlrvos, Diazinon, Ethion, Malathion, Parathion, Ronnel, Cruomate, Trichlorfon, Methyl Parathion, Dioxathion

FSIS National Residue Program - Historical Data on Equine Residue Testing

YEAR	Monitoring Program				Surveillance Samples		
	Compounds	# Analyzed	NV Positive	Violations	# tested	NV Positive	Violations
1986	Aldrin	108	0	0			
	Benzene Hydrochloride	108	5	0			
	Chlordane	108	0	0			
	Dieldrin	108	9	1			
	DDT and metabolites	108	39	0			
	Endrin	108	0	0			
	Heptachlor	108	16	0			
	Lindane	108	1	0			
	Methoxychlor	108	0	0			
	Toxaphene	108	0	0			
	PCB	108	0	0			
	HCB	108	5	0			
	Mirex	108	0	0			
	Strobane	108	0	0			
	Nonachlor	108	0	0			
	Penicillin	111	0	3	20	0	0
	Streptomycin	111	0	2	20	0	3
	Tetracycline	111	0	0	20	0	0
	Tylosin	111	0	0	20	0	0
	Erythromycin	111	0	0	20	0	0
	Neomycin	111	0	0	20	0	1
	Oxytetracycline	111	0	0	20	0	0
	Chlortetracycline	111	0	0	20	0	0
	Gentamicin	111	0	0	20	0	0
	Licomycin	111	0	0	20	0	0
	Novobiocin	111	0	0	20	0	0
	Virginiamycin	111	0	0	20	0	0
	Sulfathoxypyridazine	111	0	0			
	Sulfachloropyridazine	111	0	0			
	Sulfadimethoxine	111	0	0			
	Sulfamethazine	111	0	0			
	Sulfamethoxypyridazine	111	0	0			
	Sulfathiazole	111	0	0			
	Sulfaguinoxaline	111	0	0			
	Sulfabromomethazine	111	0	0			
	Sulfadiazine	111	0	1			
	Sulfapyridine	111	0	0			
	OP (Screen)	106	0	0			

FSIS National Residue Program - Historical Data on Equine Residue Testing

YEAR	Monitoring Program				Surveillance Samples		
	Compounds	# Analyzed	NV Positive	Violations	# tested	NV Positive	Violations
1987	Aldrin	337	0	0			
	Benzene Hydrochloride	337	15	0			
	Chlordane	337	4	3			
	Dieldrin	337	17	0			
	DDT and metabolites	337	68	0			
	Endrin	337	0	0			
	Heptachlor	337	30	1			
	Lindane	337	4	0			
	Methoxychlor	337	1	0			
	Toxaphene	337	0	0			
	PCB	337	0	0			
	HCB	337	44	0			
	Mirex	337	0	0			
	Strobane	337	0	0			
	Nonachlor	337	0	0			
	Penicillin	338	0	3	25	0	4
	Streptomycin	338	0	6	25	0	4
	Tetracycline	338	0	0	25	0	0
	Tylosin	338	0	0	25	0	0
	Erythromycin	338	0	0	25	0	0
	Neomycin	338	0	0	25	0	0
	Oxytetracycline	338	0	0	25	0	0
	Chlortetracycline	338	0	0	25	0	1
	Gentamicin	338	0	0	25	0	0
	Licomycin	338	0	0	25	0	0
	Novobiocin	338	0	0	25	0	0
	Virginiamycin	338	0	0	25	0	0
	Sulfathoxyridazine	134	0	0			
	Sulfachloropyridazine	134	0	0			
	Sulfadimethoxine	134	0	0			
	Sulfamethazine	134	0	0			
	Sulfamethoxyipyridazine	134	0	0			
	Sulfathiazole	134	0	0			
	Sulfaquinoxaline	134	0	0			
	Sulfabromomethazine	134	0	0			
	Sulfadiazine	134	0	0			
	Sulfapyridine	134	0	0			
	Arsenic	341	27	0			

FSIS National Residue Program - Historical Data on Equine Residue Testing

YEAR	Monitoring Program			Surveillance Samples		
	Compounds	# Analyzed	Violations	# STOP	Violations	Violations
1988-89	CHC screen	300	0			
	Chlorinated OPs	299	0			
	Ivermectin	305	1			
	Penicillin	305	0	552		5
	Streptomycin	305	3	552		1
	Tetracycline	305	0	552		1
	Tylosin	305	0			
	Erythromycin	305	0	552		0
	Neomycin	305	0	552		0
	Oxytetracycline	305	0	552		1
	Chlortetracycline	305	0	552		0
	Gentamicin	305	0	552		0
	Sulfathoxypridazine	306	0			
	Sulfachloropyridazine	306	0			
	Sulfadimethoxine	306	0			
	Sulfamethazine	306	2			
	Sulfamethoxypridazine	306	0			
	Sulfathiazole	306	0			
	Sulfaquinoxaline	306	0			
	Sulfabromomethazine	306	0			
	Sulfadiazine	306	0			
	Sulfapyridine	306	0			
	Arsenic	304	1			

FSIS National Residue Program - Historical Data on Equine Residue Testing

YEAR	Monitoring Program			Surveillance Samples		
	Compounds	# Analyzed	Violations	# STOP	Violations	Violations
1990	GHC screen	298	0			
	Chlorinated OPs	298	0			
	Ivermectin	310	0			
	Penicillin	313	1	512		14
	Streptomycin	313	17	512		8
	Tetracycline	313	0	512		
	Tylosin	313	0			
	Erythromycin	313	0	512		
	Neomycin	313	0	512		
	Oxytetracycline	313	0	512		
	Chlortetracycline	313	0	512		
	Gentamicin	313	0	512		1
	Sulfathoxyipyridazine	313	0			
	Sulfachloropyridazine	313	0			
	Sulfadimethoxine	313	0			
	Sulfamethazine	313	0			
	Sulfamethoxyipyridazine	313	0			
	Sulfathiazole	313	0			
	Sulfaquinoxaline	313	0			
	Sulfabromomethazine	313	0			
	Sulfadiazine	313	0			
	Sulfapyridine	313	0			
	Arsenic	310	0			

FSIS National Residue Program - Historical Data on Equine Residue Testing

YEAR	Monitoring Program			Surveillance Samples		
	Compounds	# Analyzed	Violations	# STOP	Violations	Violations
1991	CHC screen	106	0			
	Chlorinated OPs	106	0			
	Ivermectin	101	3			
	Penicillin	100	0	708		17
	Streptomycin	100	2	708		17
	Tetracycline	100	0	708		
	Tylosin	100	0			
	Erythromycin	100	0	708		
	Neomycin	100	0	708		
	Oxytetracycline	100	0	708		
	Chlortetracycline	100	0	708		
	Gentamicin	100	0	708		3
	Sulachloropyrazine	106	0			
	Sulfachloropyridazine	106	0			
	Sulfadimethoxine	106	0			
	Sulfamethazine	106	0			
	Sulfamethoxypyridazine	106	0			
	Sulfathiazole	106	0			
	Arsenic	101	0			

FSIS National Residue Program - Historical Data on Equine Residue Testing

YEAR	Monitoring Program			Surveillance Samples		
	Compounds	# Analyzed	Violations	# STOP	Violations	Violations
1992	CHC/COP screen	98	1 (coumaphos)			
	Ivermectin	94	2			
	Penicillin	101	0	1008		25
	Streptomycin	101	0	1008		19
	Tetracycline	101	0	1008		0
	Tylosin	101	0			
	Erythromycin	101	0	1008		0
	Neomycin	101	0	1008		0
	Oxytetracycline	101	0	1008		1
	Chlortetracycline	101	0	1008		0
	Gentamicin	101	0	1008		0
	Sulachloropyrazine	103	0			
	Sulfachloropyridazine	103	0			
	Sulfadimethoxine	103	0	1008		1
	Sulfamethazine	103	0	1008		1
	Sulfamethoxypyridazine	103	0			
	Sulfathiazole	103	0			
	Arsenic	94	0			
	Benzimidazoles	99	0			

FSIS National Residue Program - Historical Data on Equine Residue Testing

YEAR	Monitoring Program		Violations		Surveillance Samples	
	Compounds	# Analyzed	Violations	# STOP Enforcement	Violations	
1993	CHC/COP screen	425	1 coumaphos 1 dieldrin 1 PCB		11 coumaphos	
	Ivermectin	405	0			
	Penicillin	309	2	725	19	
	Streptomycin	309	10		8	
	Tetracycline	309	0		0	
	Tylosin	309	0		0	
	Erythromycin	309	0		0	
	Neomycin	309	0		0	
	Oxytetracycline	309	0		4	
	Chlortetracycline	309	0		0	
	Gentamicin	309	0		2	
	Sulachloropyrazine	306	0		0	
	Sulfachloropyridazine	306	0		0	
	Sulfadimethoxine	306	1		6	
	Sulfamethazine	306	2		0	
	Sulfamethoxyipyridazine	306	0		0	
	Sulfathiazole	306	0		0	
	Arsenic	0				

FSIS National Residue Program - Historical Data on Equine Residue Testing

YEAR	Monitoring Program		Surveillance Samples	
	Compounds	# Analyzed	Violations	# STOP
1994	CHC/COP screen	217	0	
	Ivermectin			
	Penicillin	0		421
	Streptomycin	0		421
	Tetracycline	0		
	Tylosin	0		
	Erythromycin	0		
	Neomycin	0		
	Oxytetracycline	0		
	Chlortetracycline	0		
	Gentamicin	0		421
	Sulachloropyrazine	0		
	Sulfachloropyridazine	0		
	Sulfadimethoxine	0		
	Sulfamethazine	0		
	Sulfamethoxyypyridazine	0		
Sulfathiazole	0			
Arsenic	0			

YEAR	Monitoring Program		Surveillance Samples	
	Compounds	# Analyzed	Violations	# STOP
1995	CHC/COPs screen	507	4 coumaphos 1 heptachlor	Enforcement 180 samples
	Ivermectin			
	Penicillin	0		318
	Streptomycin	0		
	Tetracycline	0		
	Tylosin	0		
	Erythromycin	0		
	Neomycin	0		
	Oxytetracycline	0		
	Chlortetracycline	0		
	Gentamicin	0		
	Sulfonamides	0		

FSIS National Residue Program - Historical Data on Equine Residue Testing

YEAR	Program			Surveillance Samples			
	Compounds	Monitoring Analyzed/V	Enforcement Analyzed/V	Violative Compound	# STOP Test/V	# FAST	Violative Compounds
1996	Antibiotics -			0	306/11		
	Bacitracin						
	Chlortetracycline						
	Erythromycin						
	Gentamicin						
	Hygromycin						
	Neomycin						
	Novobiocin						
	Oxytetracycline						1
	Penicillin						8
	Streptomycin						2
	Tetracycline						
	Tylosin						
	Sulfonamides -						
	Sulfafloxacin						
	Sulfadiazine						
	Sulfamethoxazole						
	Sulfathiazole						
	Sulfadiazine						
	CHC/COPs screen	503/1	53/18	Dieldrin-1 Coumaphos-18 none			
	Trace metals	503	53				

FSIS National Residue Program - Historical Data on Equine Residue Testing

Total Horse Slaughter in 1997: 82,025 heads

YEAR	Monitoring Program			Surveillance Samples			
	Compounds	Monitored Analyzed/V	Enforcement Analyzed/V	Violative Compounds	# STOP Tests/Viol.	# FAST Tests/Viol.	Violations Compounds
1997	Antibiotics -	386/20	0		59/1		
	Bacitracin						
	Chlortetracycline						
	Erythromycin						
	Flavomycin						
	Gentamicin						
	Hygromycin						
	Neomycin						
	Novobiocin						
	Oxytetracycline						1
	Penicillin			5			
	Streptomycin			17			
	Tetracycline						
	Tilmicosin						
	Tylosin						
	Sulfonamides -	234/1					
	Sulfachloropyridazine						
	Sulfadimethoxine			1			
	Sulfamethazole						
	Sulfadiazine						
	CHC/COPs screen	457/5		Diethrin - 1 Heptachlor - 1 PCB - 2 Phenylbutazone - 1			
	Arsenic	87/0					
	Ivermectin	256/1					
	Clenbuterol		1,420				

FSIS National Residue Program - Historical Data on Equine Residue Testing

Total Horse Slaughter in 1998: 68,783 heads

YEAR	Monitoring Program			Surveillance Samples			
	Compounds	Monitoring Analyzed/V	Enforcement Analyzed/V	Violative Compounds	# STOP Tests/Viol.	# FAST Tests/Viol.	Violations Compounds
1998	Antibiotics -	442/20	10-0		70/0		
	Bacitracin						
	Chlortetracycline						
	Erythromycin						
	Flavomycin						
	Gentamicin						
	Hygromycin						
	Neomycin						
	Novobiocin						
	Oxytetracycline						
	Penicillin			6			
	Streptomycin			15			
	Tetracycline						
	Tylosin						
	Sufonamides -	226/0					
	Sulfacloxyridazine						
	Sulfadimethoxine						
	Sulfamthazole						
	Sulfadiazine						
	CHC/COPs screen	467/0					
	Arsenic	91/0					
	Ivermectin	292/0					

FSIS National Residue Program - Historical Data on Equine Residue Testing

Total Horse Slaughter in 1999: 64,036 heads

YEAR	Monitoring Program		Violations	Surveillance Samples	
	Compounds	# Analyzed		# STOP	# FAST
1999	Antibiotics -	446		222	
	Bacitracin				
	Chlortetracycline		2		
	Erythromycin				
	Flavomycin				
	Gentamicin		1		
	Hygromycin				
	Neomycin				
	Novobiocin				
	Oxytetracycline		1		
	Penicillin		8		1
	Streptomycin		35		
	Tetracycline				
	Tilmicosin				
	Tylosin				
	Sulfonamides -	285			
	Sulfachloropyridazine				
	Sulfadimethoxine		1		
	Sulfamthazole				
	Sulfadiazine				
	CHC/COPs screen	301	Phenylbutazone 1		

FSIS National Residue Program - Historical Data on Equine Residue Testing

YEAR	Monitoring Program		Surveillance Samples		
	Compounds	# Analyzed	Violations	# STOP # FAST	Violations
2000	Antibiotics -	434		552	
	Bacitracin				
	Chlortetracycline		1		
	Erythromycin				
	Flavomycin				
	Gentamicin		1		1
	Hygromycin				
	Neomycin				
	Novobiocin				
	Oxytetracycline		1		
	Penicillin		9		3
	Streptomycin		59		2
	Tetracycline				
	Tilmicosin				
	Tylosin				
	Sufonamides -				
	21 Sulfa compounds			Sulfadimethoxine	
			1		
CHC/COPs screen	285		Phenbutazone		
21 compound			1		
Avermectin	285		2		
Moxidectin	285				

FSIS National Residue Program - Historical Data on Equine Residue Testing

Total Horse Slaughter in 2003: 50,062 heads

YEAR	Monitoring Program			Surveillance Samples		
	Compounds	# Analyzed	Violations	# STOP	# FAST	Violations
2003	Antibiotics -	193	0	108	9	0
	Bacitracin					
	Chlortetracycline					
	Erythromycin					
	Flavomycin					
	Gentamicin					
	Hygromycin					
	Neomycin					
	Novobiocin					
	Oxytetracycline					
	Penicillin					
	Streptomycin					
	Tetracycline					
	Tilmicosin					
	Tylosin					
	Sulfonamides -	199	0			
	Sulfachloropyridazine					
	Sulfadimethoxine					
	Sulfamthazole					
	Sulfadiazine					
	CHC/COPs screen	157	0			
	Avermectin	149	0			
	Moxidectin	149	0			

FSIS National Residue Program - Historical Data on Equine Residue Testing

Total Horse Slaughter in 2004: 65,200 heads

YEAR	EXPLORATORY Program				Surveillance Samples		
	Compounds	# Analyzed	Violations	# STOP	# FAST	Violations	
2004	Antibiotics -	15					
	Bacitracin						
	Chlortetracycline						
	Erythromycin						
	Flavomycin						
	Gentamicin						
	Hygromycin						
	Neomycin						
	Novobiocin						
	Oxytetracycline						
	Penicillin		2				
	Streptomycin						
	Tetracycline						
	Tilmicosin						
	Tylosin						
	Sulfonamides -	17					
	Sulfachloropyridazine						
Sulfadimethoxine							
Sulfamethazole							
Sulfadiazine							
CHC/COPs screen	15		Phenylbutazone 1				
Avermectin	17						
Moxidectin							

FSIS National Residue Program - Historical Data on Equine Residue Testing

Total Horse Slaughter in 2005: 93,768 heads

YEAR	EXPLORATORY PROGRAM				SURVEILLANCE SAMPLES		
	Compounds	# Analyzed	Violations	# STOP	# FAST	Violations	
2005	Antibiotics -	8		85	30	0	
	Bacitracin						
	Chlortetracycline						
	Erythromycin						
	Flavomycin						
	Gentamicin						
	Hygromycin						
	Neomycin						
	Novobiocin						
	Oxytetracycline						
	Penicillin		2				
	Streptomycin						
	Tetracycline						
	Tilmicosin						
	Tylosin						
	Sulfonamides -	10					
	Sulfachloropyridazine						
	Sulfadimethoxine						
	Sulfamthazole						
	Sulfadiazine						
	CHC/COPs screen	9	Phenbutazone				
	Avermectin	7	1				
	Moxidectin						

FSIS National Residue Program - Historical Data on Equine Residue Testing

Total Horse Slaughter in 2006: 104,433 heads

YEAR	Monitoring Program			Surveillance Samples		
	Compounds	# Analyzed	Violations	# STOP	# FAST	Violations
2006	Antibiotics -	112	0	75	4	0
	Bacitracin					
	Chlortetracycline					
	Erythromycin					
	Flavomycin					
	Gentamicin					
	Hygromycin					
	Neomycin					
	Novobiocin					
	Oxytetracycline					
	Penicillin					
	Streptomycin					
	Tetracycline					
	Tilmicosin					
	Tylosin					
	Sulfonamides -	0				
	Sulfachloropyridazine					
	Sulfadimethoxine					
	Sulfamthazole					
	Sulfadiazine					
	CHC/COPs screen	281	PBDE - 1			
	Avermectin	113	0			
	Moxidectin	113	0			

FSIS National Residue Program - Historical Data on Equine Residue Testing

Total Horse Slaughter in 2007: 29,707 heads

YEAR	Monitoring Program			Surveillance Samples		
	Compounds	# Analyzed	Violations	# STOP	# FAST	Violations
2007	Antibiotics -	0		7	6	0
	Bacitracin					
	Chlortetracycline					
	Erythromycin					
	Flavomycin					
	Gentamicin					
	Hygromycin					
	Neomycin					
	Novobiocin					
	Oxytetracycline					
	Penicillin					
	Streptomycin					
	Tetracycline					
	Tilmicosin					
	Tylosin					
	Sulfonamides -					
	Sulfachloropyridazine					
	Sulfadimethoxine					
	Sulfamthazole					
	Sulfadiazine					
	CHC/COPs screen	50	0			
	Avermectin	54	0			
	Moxidectin	54	0			

YEAR	Monitoring Program			Surveillance Samples		
	Compounds	# Analyzed	Violations	# STOP	# FAST	Violations
2008	Antibiotics -	0		0	0	
	Sulfonamides -	0				
	CHC/COPs screen	0				
	Avermectin	0				
	Moxidectin	0				