

Scheduled Sampling Plans for Environmental and Processing Contaminants

A. Environmental Contaminants

- Heavy metals
- Mycotoxins

B. Processing Contaminants

- Nitrosamines
- Maillard reaction products (from charring)
- Compounds migrating from packaging
- Polyaromatic hydrocarbons
- Breakdown products of oils used in deep frying

Of these, the heavy metals were identified by the Surveillance Advisory Team as meriting inclusion in the NRP. FSIS will conduct a specifically designed survey of the heavy metals, lead and cadmium in the production classes, "Steers." Sampling for the survey began in 2003 (October through December; heifers and dairy cows) and continued through 2004 (boars and stags, dairy cows, heifers, and mature chickens). Production classes and sample numbers for 2005 are summarized in Table 46.

No processing contaminants have been designated for analysis this year.

Even if a contaminant is not scheduled for inclusion in the FSIS NRP, should a contamination incident occur during the year, FSIS can initiate residue sampling as part of an FSIS Emergency Response Project.

Table 46
2005 FSIS NRP Domestic Specifically Designed Survey
Number of Samples/Product Class for Lead and Cadmium

Production Class	Number of Samples
Steers	300
Total	300

Sampling Plan for Specifically Designed Surveys

Carbadox

Carbadox is an antimicrobial and a growth-promoting agent that was approved for use in swine in the 1970s. Generally, carbadox is administered to swine using Type C medicated feeds. In swine, carbadox is metabolically converted to desoxycarbadox and hydrazine before ultimately being transformed to quinoxaline-2-carboxylic acid. Quinoxaline-2-carboxylic acid has been shown to be non-toxic; however, carbadox, desoxycarbadox and hydrazine have been shown to be carcinogenic. In the past, regulatory agencies assigned a withdrawal period to carbadox since the end product is non-toxic. However, carbadox has recently been reevaluated because of concerns over the drug use in market hogs, non-adherence to withdrawal schedules, and accidental cross-contamination with non-carbadox containing feeds. Currently, carbadox is approved for use in the U.S. with the following limitations: carbadox is not to be administered to swine over 75 pounds and within 10 weeks of slaughter (21 CFR 558.115). FDA has set a tolerance of 30 ppb in liver for the non-carcinogenic marker residue, quinoxaline-2-carboxylic acid (21 CFR 556). Because of the concerns cited above and because market hogs represent a large percentage of the total quantity of meat consumed in the U.S., FSIS has developed and initiated a specifically designed survey for carbadox in market hogs.

Table 47
2005 FSIS NRP Domestic Specifically Designed Survey for Carbadox
Production Class and Number of Samples

Production Class	Number of Samples
Market hogs	300
Total Samples	300

Summary of Domestic and Import Sampling Plans

Domestic Sampling Plan

The number of scheduled samples for veterinary drugs and pesticides in all production classes is listed in Table 49, *Domestic Sampling Plan: Summary I, 2005 FSIS NRP, Domestic Scheduled Sampling and Specifically Designed Surveys*. The table also specifies, for each combination of compound and production class, which FSIS laboratory will be conducting the analyses and the sampling plan type. The categories are: *Scheduled Sampling and Specifically Designed Surveys*. For the convenience of the reader, this information is also presented in summary form (including all sampling numbers, but not including the laboratory and sampling plan designation), in Table 50, *Detailed Sampling Plan: Summary II, 2005 FSIS NRP, Domestic Sampling and Specifically Designed Surveys*.

Import Sampling Plan

The final detailed import plan sample numbers for all compounds (veterinary drugs and pesticides), in all production classes and all countries, are listed in Table 51, *Summary, 2005 FSIS NRP, Import Sampling Plan*. A summary of the total number of samples per compound per production class is presented in Table 52, *Number of Compounds/Product Class, 2005 FSIS NRP, Import Sampling Plan*. In Table 53, *Number of Samples/Country/Product Class, 2005 FSIS NRP, Import Sampling Plan*, the number of samples per country per production class is listed.

A summary of all sampling plans (domestic and import) is provided in Table 54, *Combined Summary, 2005 FSIS NRP, Domestic and Import Sampling Plans and Specifically Designed Surveys*.

Table 49
Domestic Sampling Plan: Summary I
2005 FSIS NRP, Domestic Scheduled Sampling and Specifically Designed Surveys

Analysis	Lab	Production Class	Number of Samples	Plan Type
Antibiotics by Bioassay	MWL	Market hogs	300	Scheduled Sampling
Antibiotics by Bioassay	MWL	Dairy cows	300	Scheduled Sampling
Antibiotics by Bioassay	MWL	Formula-fed veal	90	Scheduled Sampling
Antibiotics by Bioassay	MWL	Young chickens		Scheduled Sampling
Antibiotics by Bioassay	MWL	Steers		Scheduled Sampling
Antibiotics by Bioassay	MWL	Heifers	460	Scheduled Sampling
Antibiotics by Bioassay	MWL	Young turkeys		Scheduled Sampling
Antibiotics by Bioassay	MWL	Bob veal	300	Scheduled Sampling
Antibiotics by Bioassay	MWL	Horses		Scheduled Sampling
Antibiotics by Bioassay	MWL	Beef cows	300	Scheduled Sampling
Antibiotics by Bioassay	MWL	Sows	300	Scheduled Sampling
Antibiotics by Bioassay	MWL	Lambs		Scheduled Sampling
Antibiotics by Bioassay	MWL	Roaster pigs		Scheduled Sampling
Antibiotics by Bioassay	MWL	Bison		Scheduled Sampling
Antibiotics by Bioassay	MWL	Ratites		Scheduled Sampling
Antibiotics by Bioassay	MWL	Rabbits		Scheduled Sampling
Antibiotics by Bioassay	MWL	Bulls		Scheduled Sampling
Antibiotics by Bioassay	MWL	Mature chickens		Scheduled Sampling
Antibiotics by Bioassay	MWL	Ducks		Scheduled Sampling
Antibiotics by Bioassay	MWL	Boars/stags		Scheduled Sampling
Antibiotics by Bioassay	MWL	Mature turkeys		Scheduled Sampling
Antibiotics by Bioassay	MWL	Goats		Scheduled Sampling
Antibiotics by Bioassay	MWL	Heavy calves	230	Scheduled Sampling
Antibiotics by Bioassay	MWL	Sheep		Scheduled Sampling
Antibiotics by Bioassay	MWL	Non-formula-fed veal	300	Scheduled Sampling
Antibiotics by Bioassay	MWL	Geese		Scheduled Sampling
Antibiotics by Bioassay	MWL	Squab		Scheduled Sampling
Total Antibiotics by Bioassay			2,580	

Table 49 - Continued
Domestic Sampling Plan: Summary I
2005 FSIS NRP, Domestic Scheduled Sampling and Specifically Designed Surveys

Analysis	Lab	Production Class	Number of Samples	Plan Type
Avermectins	EL	Steers	1,000	Scheduled Sampling
Avermectins	EL	Horses		Scheduled Sampling
Avermectins	EL	Market hogs		Scheduled Sampling
Avermectins	EL	Heifers		Scheduled Sampling
Avermectins	EL	Dairy cows		Scheduled Sampling
Avermectins	EL	Beef cows		Scheduled Sampling
Avermectins	EL	Bulls	300	Scheduled Sampling
Avermectins	EL	Lambs	230	Scheduled Sampling
Avermectins	EL	Goats	300	Scheduled Sampling
Avermectins	EL	Sows		Scheduled Sampling
Avermectins	EL	Formula-fed veal		Scheduled Sampling
Avermectins	EL	Bob veal		Scheduled Sampling
Avermectins	EL	Heavy calves	230	Scheduled Sampling
Avermectins	EL	Roaster pigs		Scheduled Sampling
Avermectins	EL	Bison		Scheduled Sampling
Avermectins	EL	Ratites		Scheduled Sampling
Avermectins	EL	Non-formula-fed veal	90	Scheduled Sampling
Avermectins	EL	Boars/stags		Scheduled Sampling
Avermectins	EL	Sheep	90	Scheduled Sampling
Total Avermectins			2,240	
Arsenicals	EL	Young chickens		Not Scheduled
Arsenicals	EL	Young turkeys		Not Scheduled
Arsenicals	EL	Egg products		Not Scheduled
Arsenicals	EL	Market hogs		Not Scheduled
Arsenicals	EL	Beef cows		Not Scheduled
Arsenicals	EL	Goats		Not Scheduled
Arsenicals	EL	Sows		Not Scheduled
Arsenicals	EL	Mature chickens		Not Scheduled
Arsenicals	EL	Ducks		Not Scheduled
Arsenicals	EL	Roaster pigs		Not Scheduled
Arsenicals	EL	Boars/stags		Not Scheduled
Arsenicals	EL	Mature turkeys		Not Scheduled
Arsenicals	EL	Geese		Not Scheduled
Total Arsenicals	EL		0	

Table 49 Continued
Domestic Sampling Plan: Summary I
2005 FSIS NRP, Domestic Scheduled Sampling and Specifically Designed Surveys

Analysis	Lab	Production Class	Number of Samples	Plan Type
Sulfonamides	EL	Market hogs	460	Scheduled Sampling
Sulfonamides	EL	Steers	460	Scheduled Sampling
Sulfonamides	EL	Egg products		Scheduled Sampling
Sulfonamides	EL	Dairy cows	300	Scheduled Sampling
Sulfonamides	EL	Beef cows	300	Scheduled Sampling
Sulfonamides	EL	Sows		Scheduled Sampling
Sulfonamides	EL	Bulls	300	Scheduled Sampling
Sulfonamides	EL	Mature chickens		Scheduled Sampling
Sulfonamides	EL	Lambs	230	Scheduled Sampling
Sulfonamides	EL	Formula-fed veal	90	Scheduled Sampling
Sulfonamides	EL	Boars/stags	230	Scheduled Sampling
Sulfonamides	EL	Mature turkeys	90	Scheduled Sampling
Sulfonamides	EL	Bob veal	460	Scheduled Sampling
Sulfonamides	EL	Roaster pigs	300	Scheduled Sampling
Sulfonamides	EL	Bison		Scheduled Sampling
Sulfonamides	EL	Ducks		Scheduled Sampling
Sulfonamides	EL	Goats		Scheduled Sampling
Sulfonamides	EL	Horses		Scheduled Sampling
Sulfonamides	EL	Heavy calves	230	Scheduled Sampling
Sulfonamides	EL	Ratites		Scheduled Sampling
Sulfonamides	EL	Non-formula-fed veal	230	Scheduled Sampling
Sulfonamides	EL	Geese		Scheduled Sampling
Sulfonamides	EL	Squab		Scheduled Sampling
Total Sulfonamides			3,680	

Table 49 Continued
Domestic Sampling Plan: Summary I
2005 FSIS NRP, Domestic Scheduled Sampling and Specifically Designed Surveys

Analysis	Lab	Production Class	Number of Samples	Plan Type
CHC's/COP's/Phenylbutazone	WL	Horses		Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Young chickens	460	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Market hogs	460	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Steers	460	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Heifers	460	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Young turkeys	230	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Egg products	230	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Dairy cows	230	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Beef cows	300	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Sows	300	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Bulls	300	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Mature chickens	230	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Roaster pigs	230	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Lambs	300	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Formula-fed veal	90	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Ducks		Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Boars/stags	300	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Mature turkeys	90	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Goats	300	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Bob veal		Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Heavy calves	230	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Bison		Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Sheep	90	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Ratites		Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Non-formula-fed veal	90	Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Geese		Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Rabbits		Scheduled Sampling
CHC's/COP's/Phenylbutazone	WL	Squab		Scheduled Sampling
Total CHC's/COP's/Phenylbutazone			5,380	

Table 49 Continued
Domestic Sampling Plan: Summary I
2005 FSIS NRP, Domestic Scheduled Sampling and Specifically Designed Surveys

Analysis	Lab	Production Class	Number of Samples	Plan Type
Market hogs	WL	Market hogs	300	Specifically Designed Survey
Total Carbadox			300	
Chloramphenicol	EL	Dairy cows	230	Scheduled Sampling
Chloramphenicol	EL	Formula-fed veal	90	Scheduled Sampling
Chloramphenicol	EL	Non-formula-fed veal	90	Scheduled Sampling
Chloramphenicol	EL	Young Chickens	230	Scheduled Sampling
Chloramphenicol	EL	Mature Chickens	90	Scheduled Sampling
Chloramphenicol	EL	Young Turkeys	90	Scheduled Sampling
Chloramphenicol	EL	Mature Turkeys	90	Scheduled Sampling
Total Chloramphenicol			910	
<i>beta</i> -Agonists*	WL	Steers	1,000	Scheduled Sampling
Total <i>beta</i>-Agonists*			1,000	
Florfenicol	EL	Dairy cows	230	Scheduled Sampling
Florfenicol	EL	Formula-fed veal	90	Scheduled Sampling
Florfenicol	EL	non-Formula-fed veal	90	Scheduled Sampling
Total Florfenicol			410	
Lead and Cadmium	EL	Steers	300	Scheduled Sampling
Total Lead and Cadmium			300	
Melengesterol acetate (MGA)	WL	Heifers	300	Scheduled Sampling
Total MGA			300	
Phenylbutazone (ELISA)	WL	Steers	1,000	Scheduled Sampling
Total Phenylbutazone (ELISA)			1,000	
Ractopamine	WL	Steers	230	Scheduled Sampling
Ractopamine	WL	Formula-fed veal	90	Scheduled Sampling
Ractopamine	WL	Market hogs	90	Scheduled Sampling
Total Ractopamine			410	
Thyreostats	EL	Steers	300	Scheduled Sampling
Thyreostats	EL	Heifers	300	Scheduled Sampling
Total Thyreostats			600	
Trenbolone	MWL	Formula-fed veal	1,000	Scheduled Sampling
Total Trenbolone			1,000	
Zeranol	MWL	Formula-fed veal	1,000	Scheduled Sampling
Total Zeranol			1,000	

Table 49 Continued
Domestic Sampling Plan: Summary I
2005 FSIS NRP, Domestic Scheduled Sampling and Specifically Designed Surveys

*Samples from a total of 830 animals (from each animal, both eyeballs and a pound of liver will be collected) will be sent to WL. WL will perform a screen for clenbuterol in the eyeball, which is the most sensitive tissue in which to test for the presence of beta agonists. This screen has been officially validated for clenbuterol clenbuterol (bovine and porcine) and has been extended to salbutamol and cimaterol (bovine). The method has also demonstrated the ability to detect other beta agonists, including ractopamine.

Key:

CHC = Chlorinated hydrocarbon; COP = Chlorinated organophosphate; EL = FSIS Eastern Laboratory, Athens, GA;
MWL = FSIS Midwestern Laboratory, St. Louis, MO; WL = FSIS Western Laboratory, Alameda, CA; FDA = Food and
Drug Administration, National Center for Toxicological Research, Jefferson, AR
ELISA = Enzyme Linked Immunoassay
MGA = Melengesterol acetate

Table 50
Domestic Sampling Plan: Summary II
2005 FSIS NRP, Domestic Scheduled Sampling and Specifically Designed Surveys

Production Class	Antibiotics	Arsenicals	Avermectins	CHCs/COPs/ Phenylbutazone	Carbadox	Chloramphenicol
Bulls			300	300		
Beef cows	300			300		
Dairy cows	300			230		230
Heifers	460			460		
Steers			1,000	460		
Bob veal	300					
Formula-fed veal	90			90		90
Non-formula-fed veal	300		90	90		90
Heavy calves	230		230	230		
Subtotal, Cattle	1,980	0	1,620	2,510	0	410
Market hogs	300			460	300	
Roaster pigs				230		
Boars/Stags				300		
Sows	300			300		
Subtotal, Swine	600	0	0	1,360	300	0
Sheep			90	90		
Lambs			230	300		
Subtotal, Ovine	0	0	320	390	0	0
Goats			300	300		
Horses						
Bison						
Subtotal, Other Livestock	0	0	300	300	0	0
Total, All Livestock	2,580	0	2,240	4,560	300	410
Young chickens				460		230
Mature chickens				230		90
Young turkeys				230		90
Mature turkeys				90		90
Ducks						
Geese						
Ratites						
Squab						
Subtotal, Poultry	0	0	0	940	0	500
Rabbits						
Egg products				230		
Total, All Production Classes	2,580	0	2,240	5,380	300	910

Table 50 - continued
Domestic Sampling Plan: Summary II
2005 FSIS NRP, Domestic Scheduled Sampling and Specifically Designed Surveys

Production Class	Clenbuterol (and other beta agonists)	Florfenicol	Lead and Cadmium	Melengesterol acetate (MGA)
Bulls				
Beef cows				
Dairy cows		230		
Heifers				300
Steers	1,000		300	
Bob veal				
Formula-fed veal		90		
Non-formula-fed veal		90		
Heavy calves				
Subtotal, Cattle	1,000	410	300	300
Market hogs				
Roaster pigs				
Boars/Stags				
Sows				
Subtotal, Swine	0	0	0	0
Sheep				
Lambs				
Subtotal, Ovine	0	0	0	0
Goats				
Horses				
Bison				
Subtotal, Other Livestock	0	0	0	0
Total, All Livestock	1,000	410	300	300
Young chickens				
Mature chickens				
Young turkeys				
Mature turkeys				
Ducks				
Geese				
Ratites				
Squab				
Subtotal, Poultry	0	0	0	0
Rabbits				
Egg products				
Total, All Production Classes	1,000	410	300	300

Table 50 - continued
Domestic Sampling Plan: Summary II
2005 FSIS NRP, Domestic Scheduled Sampling and Specifically Designed Surveys

Production Class	Phenylbutazone (ELISA)	Ractopamine	Sulfonamides	Thyreostats	Trenbolone	Zeranol
Bulls			300			
Beef cows			300			
Dairy cows			300			
Heifers				300		
Steers	1,000	230	460	300		
Bob veal			460			
Formula-fed veal		90	90		1,000	1,000
Non-formula-fed veal			230			
Heavy calves			230			
Subtotal, Cattle	1,000	320	2,370	600	1,000	1,000
Market hogs		90	460			
Roaster pigs			300			
Boars/Stags			230			
Sows						
Subtotal, Swine	0	90	990	0	0	0
Sheep						
Lambs			230			
Subtotal, Ovine	0	0	230	0	0	0
Goats						
Horses						
Bison						
Subtotal, Other Livestock	0	0	0	0	0	0
Total, All Livestock	1,000	410	3,590	600	1,000	1,000
Young chickens						
Mature chickens						
Young turkeys						
Mature turkeys			90			
Ducks						
Geese						
Ratites						
Squab						
Subtotal, Poultry	0	0	90	0	0	0
Rabbits						
Egg products						
Total, All Production Classes	1,000	410	3,680	600	1,000	1,000

Table 51
Summary
2005 FSIS NRP, Import Scheduled Sampling

COUNTRY	PRODUCT	COMPOUND	NUMBER OF SAMPLES
Argentina	Beef, Processed	Sulfonamides	34
Argentina	Beef Processed	CHC/COP/Phenylbutazone	34
Australia	Pork Processed	Sulfonamides	0
Australia	Mutton/Lamb, Processed	Antibiotics	0
Australia	Mutton/Lamb, Processed	Avermectins	0
Australia	Mutton/Lamb, Processed	Sulfonamides	0
Australia	Goat, Fresh	Antibiotics	8
Australia	Goat, Fresh	Sulfonamides	8
Australia	Varied Combination, Processed	Sulfonamides	8
Australia	Varied Combination, Processed	Antibiotics	8
Australia	Beef, Fresh	Antibiotics	111
Australia	Beef, Fresh	Avermectins	111
Australia	Beef, Fresh	Sulfonamides	111
Australia	Beef, Fresh	Chloramphenicol	23
Australia	Beef, Processed	Sulfonamides	0
Australia	Pork, Fresh	Antibiotics	8
Australia	Pork, Fresh	Avermectins	8
Australia	Pork, Fresh	Sulfonamides	8
Australia	Veal Fresh	Antibiotics	19
Australia	Veal Fresh	Avermectins	19
Australia	Veal Fresh	Sulfonamides	19
Australia	Veal Fresh	Chloramphenicol	19
Australia	Mutton/Lamb, Fresh	Antibiotics	42
Australia	Mutton/Lamb, Fresh	Avermectins	42
Australia	Mutton/Lamb, Fresh	Sulfonamides	42
Australia	Pork Processed	CHC/COP/Phenylbutazone	0
Australia	Mutton/Lamb Processed	CHC/COP/Phenylbutazone	0
Australia	Goat Fresh	CHC/COP/Phenylbutazone	8
Australia	Varied combination Processed	CHC/COP/Phenylbutazone	8
Australia	Beef Fresh	CHC/COP/Phenylbutazone	111
Australia	Beef Processed	CHC/COP/Phenylbutazone	0
Australia	Pork Fresh	CHC/COP/Phenylbutazone	8

Table 51 - Continued
Summary
2005 FSIS NRP, Import Scheduled Sampling

COUNTRY	PRODUCT	COMPOUND	NUMBER OF SAMPLES
Australia	Veal Fresh	CHC/COP/Phenylbutazone	19
Australia	Mutton/Lamb Fresh	CHC/COP/Phenylbutazone	42
Belgium	Pork, Fresh	Antibiotics	8
Belgium	Pork, Fresh	Avermectins	8
Belgium	Pork, Fresh	Sulfonamides	8
Belgium	Pork Fresh	CHC/COP/Phenylbutazone	8
Brazil	Beef, Processed	Sulfonamides	79
Brazil	Beef Processed	CHC/COP/Phenylbutazone	79
Canada	Veal, Processed	Sulfonamides	0
Canada	Mutton/Lamb, Processed	Antibiotics	0
Canada	Mutton/Lamb, Processed	Avermectins	0
Canada	Mutton/Lamb, Processed	Sulfonamides	0
Canada	Turkey, Fresh	Sulfonamides	8
Canada	Turkey, Processed	Sulfonamides	0
Canada	Chicken, Fresh	Antibiotics	8
Canada	Chicken, Fresh	Sulfonamides	8
Canada	Varied Combination, Fresh	Antibiotics	8
Canada	Varied Combination, Fresh	Sulfonamides	8
Canada	Varied Combination, Processed	Sulfonamides	0
Canada	Varied Combination, Processed	Antibiotics	0
Canada	Beef, Fresh	Antibiotics	81
Canada	Beef, Fresh	Avermectins	81
Canada	Beef, Fresh	Sulfonamides	81
Canada	Beef, Fresh	Chloramphenicol	17
Canada	Beef, Processed	Sulfonamides	0
Canada	Pork, Fresh	Antibiotics	144
Canada	Pork, Fresh	Avermectins	144
Canada	Pork, Fresh	Sulfonamides	144
Canada	Veal Fresh	Antibiotics	25
Canada	Veal Fresh	Avermectins	25
Canada	Veal Fresh	Sulfonamides	25
Canada	Veal Fresh	Chloramphenicol	25
Canada	Turkey Fresh	Antibiotics	8
Canada	Mutton/Lamb, Fresh	Antibiotics	8
Canada	Mutton/Lamb, Fresh	Avermectins	8
Canada	Mutton/Lamb, Fresh	Sulfonamides	8
Canada	Chicken Processed	Sulfonamides	0
Canada	Veal Processed	CHC/COP/Phenylbutazone	0

Table 51 - Continued
Summary
2005 FSIS NRP, Import Scheduled Sampling

COUNTRY	PRODUCT	COMPOUND	NUMBER OF SAMPLES
Canada	Mutton/Lamb Processed	CHC/COP/Phenylbutazone	0
Canada	Turkey Fresh	CHC/COP/Phenylbutazone	8
Canada	Turkey processed	CHC/COP/Phenylbutazone	0
Canada	Chicken Fresh	CHC/COP/Phenylbutazone	8
Canada	Varied combination fresh	CHC/COP/Phenylbutazone	8
Canada	Varied combination Processed	CHC/COP/Phenylbutazone	0
Canada	Beef Fresh	CHC/COP/Phenylbutazone	81
Canada	Beef Processed	CHC/COP/Phenylbutazone	0
Canada	Pork Fresh	CHC/COP/Phenylbutazone	144
Canada	Veal Fresh	CHC/COP/Phenylbutazone	25
Canada	Mutton/Lamb Fresh	CHC/COP/Phenylbutazone	8
Canada	Chicken Processed	CHC/COP/Phenylbutazone	0
Costa Rica	Beef, Fresh	Antibiotics	8
Costa Rica	Beef, Fresh	Avermectins	8
Costa Rica	Beef, Fresh	Sulfonamides	8
Costa Rica	Beef, Fresh	Chloramphenicol	8
Costa Rica	Beef, Processed	Sulfonamides	0
Costa Rica	Beef Fresh	CHC/COP/Phenylbutazone	8
Costa Rica	Beef Processed	CHC/COP/Phenylbutazone	0
Croatia	Pork, Fresh	Antibiotics	8
Croatia	Pork, Fresh	Avermectins	8
Croatia	Pork, Fresh	Sulfonamides	8
Croatia	Pork Fresh	CHC/COP/Phenylbutazone	8
Czechoslovakia	Pork, Fresh	Antibiotics	8
Czechoslovakia	Pork, Fresh	Avermectins	8
Czechoslovakia	Pork, Fresh	Sulfonamides	8
Czechoslovakia	Pork Fresh	CHC/COP/Phenylbutazone	8
Denmark	Pork Processed	Sulfonamides	0
Denmark	Pork, Fresh	Antibiotics	15
Denmark	Pork, Fresh	Avermectins	15
Denmark	Pork, Fresh	Sulfonamides	15
Denmark	Mutton/Lamb, Fresh	Antibiotics	8
Denmark	Mutton/Lamb, Fresh	Avermectins	8
Denmark	Mutton/Lamb, Fresh	Sulfonamides	8
Denmark	Pork Fresh	CHC/COP/Phenylbutazone	15
Denmark	Mutton/Lamb Fresh	CHC/COP/Phenylbutazone	8
Finland	Pork, Fresh	Antibiotics	8
Finland	Pork, Fresh	Avermectins	8

Table 51 - Continued
Summary
2005 FSIS NRP, Import Scheduled Sampling

COUNTRY	PRODUCT	COMPOUND	NUMBER OF SAMPLES
Finland	Pork, Fresh	Sulfonamides	8
Finland	Pork Fresh	CHC/COP/Phenylbutazone	8
France	Veal, Processed	Sulfonamides	8
France	Mutton/Lamb, Processed	Antibiotics	8
France	Mutton/Lamb, Processed	Avermectins	8
France	Mutton/Lamb, Processed	Sulfonamides	8
France	Turkey, Processed	Sulfonamides	8
France	Varied Combination, Processed	Sulfonamides	8
France	Varied Combination, Processed	Antibiotics	8
France	Beef, Processed	Sulfonamides	8
France	Pork, Fresh	Antibiotics	8
France	Pork, Fresh	Avermectins	8
France	Pork, Fresh	Sulfonamides	8
France	Chicken Processed	Sulfonamides	8
France	Veal Processed	CHC/COP/Phenylbutazone	8
France	Mutton/Lamb Processed	CHC/COP/Phenylbutazone	8
France	Turkey processed	CHC/COP/Phenylbutazone	8
France	Varied combination Processed	CHC/COP/Phenylbutazone	8
France	Beef Processed	CHC/COP/Phenylbutazone	8
France	Pork Fresh	CHC/COP/Phenylbutazone	8
France	Chicken Processed	CHC/COP/Phenylbutazone	8
Germany	Pork, Fresh	Antibiotics	8
Germany	Pork, Fresh	Avermectins	8
Germany	Pork, Fresh	Sulfonamides	8
Germany	Pork Fresh	CHC/COP/Phenylbutazone	8
Honduras	Beef, Fresh	Antibiotics	8
Honduras	Beef, Fresh	Avermectins	8
Honduras	Beef, Fresh	Sulfonamides	8
Honduras	Beef, Fresh	Chloramphenicol	8
Honduras	Beef Fresh	CHC/COP/Phenylbutazone	8
Hungary	Pork, Fresh	Antibiotics	8
Hungary	Pork, Fresh	Avermectins	8
Hungary	Pork, Fresh	Sulfonamides	8
Hungary	Pork Fresh	CHC/COP/Phenylbutazone	8
Iceland	Mutton/Lamb, Fresh	Antibiotics	8
Iceland	Mutton/Lamb, Fresh	Avermectins	8
Iceland	Mutton/Lamb, Fresh	Sulfonamides	8
Iceland	Mutton/Lamb Fresh	CHC/COP/Phenylbutazone	8

Table 51 - Continued
Summary
2005 FSIS NRP, Import Scheduled Sampling

COUNTRY	PRODUCT	COMPOUND	NUMBER OF SAMPLES
Ireland	Pork Processed	Sulfonamides	0
Ireland	Pork, Fresh	Antibiotics	8
Ireland	Pork, Fresh	Avermectins	8
Ireland	Pork, Fresh	Sulfonamides	8
Ireland	Pork Fresh	CHC/COP/Phenylbutazone	8
Israel	Turkey, Processed	Sulfonamides	8
Israel	Chicken Processed	Sulfonamides	8
Israel	Turkey processed	CHC/COP/Phenylbutazone	8
Israel	Chicken Processed	CHC/COP/Phenylbutazone	8
Italy	Pork, Fresh	Antibiotics	8
Italy	Pork, Fresh	Avermectins	8
Italy	Pork, Fresh	Sulfonamides	8
Italy	Pork Fresh	CHC/COP/Phenylbutazone	8
Mexico	Goat, Fresh	Antibiotics	8
Mexico	Goat, Fresh	Sulfonamides	8
Mexico	Turkey, Processed	Sulfonamides	8
Mexico	Varied Combination, Processed	Sulfonamides	8
Mexico	Varied Combination, Processed	Antibiotics	8
Mexico	Beef, Fresh	Antibiotics	8
Mexico	Beef, Fresh	Avermectins	8
Mexico	Beef, Fresh	Sulfonamides	8
Mexico	Beef, Fresh	Chloramphenicol	8
Mexico	Beef, Processed	Sulfonamides	0
Mexico	Pork, Fresh	Antibiotics	8
Mexico	Pork, Fresh	Avermectins	8
Mexico	Pork, Fresh	Sulfonamides	8
Mexico	Veal Fresh	Antibiotics	8
Mexico	Veal Fresh	Avermectins	8
Mexico	Veal Fresh	Sulfonamides	8
Mexico	Veal Fresh	Chloramphenicol	8
Mexico	Chicken Processed	Sulfonamides	8
Mexico	Goat Fresh	CHC/COP/Phenylbutazone	8
Mexico	Turkey processed	CHC/COP/Phenylbutazone	8
Mexico	Varied combination Processed	CHC/COP/Phenylbutazone	8
Mexico	Beef Fresh	CHC/COP/Phenylbutazone	8
Mexico	Beef Processed	CHC/COP/Phenylbutazone	0
Mexico	Pork Fresh	CHC/COP/Phenylbutazone	8
Mexico	Veal Fresh	CHC/COP/Phenylbutazone	8

Table 51 - Continued
Summary
2005 FSIS NRP, Import Scheduled Sampling

COUNTRY	PRODUCT	COMPOUND	NUMBER OF SAMPLES
Mexico	Chicken Processed	CHC/COP/Phenylbutazone	8
N. Ireland	Pork, Fresh	Antibiotics	8
N. Ireland	Pork, Fresh	Avermectins	8
N. Ireland	Pork, Fresh	Sulfonamides	8
N. Ireland	Pork Fresh	CHC/COP/Phenylbutazone	8
Netherlands	Varied Combination, Processed	Sulfonamides	8
Netherlands	Varied Combination, Processed	Antibiotics	8
Netherlands	Pork, Fresh	Antibiotics	8
Netherlands	Pork, Fresh	Avermectins	8
Netherlands	Pork, Fresh	Sulfonamides	8
Netherlands	Varied combination Processed	CHC/COP/Phenylbutazone	8
Netherlands	Pork Fresh	CHC/COP/Phenylbutazone	8
New Zealand	Mutton/Lamb, Processed	Antibiotics	0
New Zealand	Mutton/Lamb, Processed	Avermectins	0
New Zealand	Mutton/Lamb, Processed	Sulfonamides	0
New Zealand	Goat, Fresh	Antibiotics	8
New Zealand	Goat, Fresh	Sulfonamides	8
New Zealand	Beef, Fresh	Antibiotics	64
New Zealand	Beef, Fresh	Avermectins	64
New Zealand	Beef, Fresh	Sulfonamides	64
New Zealand	Beef, Fresh	Chloramphenicol	13
New Zealand	Beef, Processed	Sulfonamides	0
New Zealand	Pork, Fresh	Antibiotics	8
New Zealand	Pork, Fresh	Avermectins	8
New Zealand	Pork, Fresh	Sulfonamides	8
New Zealand	Veal Fresh	Antibiotics	39
New Zealand	Veal Fresh	Avermectins	39
New Zealand	Veal Fresh	Sulfonamides	39
New Zealand	Veal Fresh	Chloramphenicol	39
New Zealand	Mutton/Lamb, Fresh	Avermectins	24
New Zealand	Mutton/Lamb, Fresh	Avermectins	24
New Zealand	Mutton/Lamb, Fresh	Sulfonamides	24
New Zealand	Mutton/Lamb Processed	CHC/COP/Phenylbutazone	0
New Zealand	Goat Fresh	CHC/COP/Phenylbutazone	8
New Zealand	Beef Fresh	CHC/COP/Phenylbutazone	64
New Zealand	Beef Processed	CHC/COP/Phenylbutazone	0
New Zealand	Pork Fresh	CHC/COP/Phenylbutazone	8
New Zealand	Veal Fresh	CHC/COP/Phenylbutazone	39

Table 51 - Continued
Summary
2005 FSIS NRP, Import Scheduled Sampling

COUNTRY	PRODUCT	COMPOUND	NUMBER OF SAMPLES
New Zealand	Mutton/Lamb Fresh	CHC/COP/Phenylbutazone	24
Nicaragua	Beef, Fresh	Antibiotics	8
Nicaragua	Beef, Fresh	Avermectins	8
Nicaragua	Beef, Fresh	Sulfonamides	8
Nicaragua	Beef, Fresh	Chloramphenicol	8
Nicaragua	Beef Fresh	CHC/COP/Phenylbutazone	8
Poland	Pork, Fresh	Antibiotics	8
Poland	Pork, Fresh	Avermectins	8
Poland	Pork, Fresh	Sulfonamides	8
Poland	Pork Fresh	CHC/COP/Phenylbutazone	8
Spain	Pork, Fresh	Antibiotics	8
Spain	Pork, Fresh	Avermectins	8
Spain	Pork, Fresh	Sulfonamides	8
Spain	Pork Fresh	CHC/COP/Phenylbutazone	8
Sweden	Pork, Fresh	Antibiotics	8
Sweden	Pork, Fresh	Avermectins	8
Sweden	Pork, Fresh	Sulfonamides	8
Sweden	Pork Fresh	CHC/COP/Phenylbutazone	8
Switzerland	Pork, Fresh	Antibiotics	8
Switzerland	Pork, Fresh	Avermectins	8
Switzerland	Pork, Fresh	Sulfonamides	8
Switzerland	Pork Fresh	CHC/COP/Phenylbutazone	8
Uruguay	Beef, Fresh	Antibiotics	14
Uruguay	Beef, Fresh	Avermectins	14
Uruguay	Beef, Fresh	Sulfonamides	14
Uruguay	Beef, Fresh	Chloramphenicol	8
Uruguay	Beef, Processed	Sulfonamides	0
Uruguay	Beef Fresh	CHC/COP/Phenylbutazone	14
Uruguay	Beef Processed	CHC/COP/Phenylbutazone	0
			3954

Table 52
Number of Compounds per Production Class
2005 FSIS NRP, Import Scheduled Sampling

COMPOUND/ PRODUCTION CLASS	AB	AVM	CAP	SULFAs	CHC/COP/PHB	Total
Beef, fresh	302	302	93	302	302	1301
Beef, processed				121	121	242
Pork, fresh	303	303		303	303	1212
Veal, processed				8	8	16
Veal, fresh	91	91	91	91	91	455
Lamb/Mutton, fresh	90	90		90	90	360
Lamb/Mutton, processed	8	8		8	8	32
Goat, fresh	24			24	24	72
Chicken, fresh	8			8	8	24
Chicken, processed				24	24	48
Turkey, fresh	8			8	8	24
Turkey, processed				24	24	48
Varied combination, fresh	8			8	8	24
Varied combination, processed	32			32	32	96
Total/Country	874	794	184	1051	1051	3954

AB=Antibiotics; AVM=Avermectins; CAP=Chloramphenicol; SULFAs=Sulfonamides; CHC/COP/PHB=Chlorinated hydrocarbons/Organophosphates/Phenylbutazone

Table 52
Number of Compounds per Production Class
2005 FSIS NRP, Import Scheduled Sampling

	Beef, Fresh	Beef, Processed	Pork, Fresh	Veal, Fresh	Veal, Processed	Lamb/Mutton, Fresh	Lamb/Mutton, Processed	Goat, Fresh	Turkey, Fresh	Chicken, Fresh	Chicken, Processed	Turkey, Processed	Varied combination, Fresh	Varied combination, Processed	Total
Argentina		68													68
Australia	467		32	95		168		24						24	810
Belgium			32												32
Brazil		158													158
Canada	341	0	576	125		32			24	24			24		1146
Costa Rica	40														40
Croatia			32												32
Czechoslovakia			32												32
Denmark			60			32									92
Finland			32												32
France		16	32		16		32			16		16		24	152
Germany			32												32
Honduras	40														40
Hungary			32												32
Iceland						32									32
Ireland			32												32
Israel											16	16			32
Italy			32												32
Mexico	40		32	40				24			16	16		24	192
Netherlands			32											24	56
New Zealand	269		32	195		96		24							616
Nicaragua	40														40
N. Ireland			32												32
Poland			32												32
Spain			32												32
Sweden			32												32
Switzerland			32												32
Uruguay	64														64
Total	1301	242	1212	455	16	360	32	72	24	40	32	48	24	96	3954

Table 53
Number of Samples/Country/Product Class
2005 FSIS NRP, Import Scheduled Sampling

	Beef, Fresh	Beef, Processed	Pork, Fresh	Veal, Fresh	Veal, Processed	Lamb/Mutton, Fresh	Lamb/Mutton, Processed	Goat, Fresh	Turkey, Fresh	Chicken, Fresh	Chicken, Processed	Turkey, Processed	Varied combination, Fresh	Varied combination, Processed	Total
Argentina		68													68
Australia	467		32	95		168		24						24	810
Belgium			32												32
Brazil		158													158
Canada	341	0	576	125		32			24	24			24		1146
Costa Rica	40														40
Croatia			32												32
Czechoslovakia			32												32
Denmark			60			32									92
Finland			32												32
France		16	32		16		32			16		16		24	152
Germany			32												32
Honduras	40														40
Hungary			32												32
Iceland						32									32
Ireland			32												32
Israel											16	16			32
Italy			32												32
Mexico	40		32	40				24			16	16		24	192
Netherlands			32											24	56
New Zealand	269		32	195		96		24							616
Nicaragua	40														40
N. Ireland			32												32
Poland			32												32
Spain			32												32
Sweden			32												32
Switzerland			32												32
Uruguay	64														64
Total	1301	242	1212	455	16	360	32	72	24	40	32	48	24	96	3954

Table 54 - Continued
Combined Summary
2005 FSIS NRP Domestic and Import Scheduled Sampling, and Specifically Designed Surveys

Lab	Analysis	Number of Scheduled Domestic Samples	Number of Scheduled Imported Samples	Number of Scheduled Samples for Specifically Designed Surveys	Total Number of Samples	NOTES
MWL	Antibiotics	2,580	874	300	3,754	Domestic: 300, 300, 90, 460, 300, 300, 300, 230, and 300 samples are scheduled for market hogs, dairy cows, formula-fed veal, heifers, bob veal, beef cows, sows, heavy calves, and non-formula-fed veal, respectively; Imported: All fresh product classes
EL	Arsenicals					Domestic: No samples are scheduled for 2005 Imported: No samples are scheduled for 2005
EL	Avermectins	2,240	794		3,034	Domestic: 1,000, 300, 230, 300, 230, 90, and 90 samples are scheduled for steers, bulls, lambs, goats, heavy calves, non-formula fed veal, and sheep production classes, respectively Imported: Scheduled for beef, pork, veal, lamb/mutton fresh and lamb/mutton processed
WL	beta-Agonists (clenbuterol, cimaterol, and salbutamol)	1,000			1,000	Domestic: 1,000 samples are scheduled for steers. Confirmation done by FDA-NCTR Import: No samples are scheduled for 2005 due to unavailability of tissue (eye balls)
WL	Carbadox			300	300	Domestic: 300 samples are scheduled for market hogs Import: No samples are scheduled for 2005
EL	Chloramphenicol	910	184		1,094	Domestic: 230, 90, 90, 230, 90, 90, and 90 samples are scheduled for dairy cows, formula-fed veal, non-formula-fed veal, young chickens, mature chickens, young turkeys and mature turkeys, respectively. Import: 93 samples for fresh beef and 91 samples are scheduled for fresh veal
WL	CHCs/COPs/ Phenylbutazone	5,380	1,051		6,431	Domestic: All domestic production classes except: minor species (rabbits, ratites, squab, geese, ducks, and bison) and bob-veal; Import: All import production classes
EL	Florfenicol	410			410	Domestic: 230, 90, and 90 samples are scheduled for dairy cows, formula-fed veal, and non-formula-fed veal, respectively. Import: No samples are scheduled for 2005, due to

Table 54 - Continued
Combined Summary
2005 FSIS NRP Domestic and Import Scheduled Sampling, and Specifically Designed Surveys

Lab	Analysis	Number of Scheduled Domestic Samples	Number of Scheduled Imported Samples	Number of Scheduled Samples for Specifically Designed Surveys	Total Number of Samples	NOTES
						unavailability of liver tissue.
MWL	Flunixin					Domestic: No samples are scheduled for 2005 Import: No samples are scheduled for 2005
EL	Lead and Cadmium	300			300	Domestic: 300 samples are scheduled for steers Import: No samples are scheduled for 2005, due to unavailability of kidney tissue.
WL	Melengestrol Acetate (MGA)	300			300	Domestic: 300 samples are scheduled for heifers. Import: No samples are scheduled for 2005, due to unavailability of tissue (fat)
WL	Nitrofurans					Domestic: No samples are scheduled for 2005 Import: No samples are scheduled for 2005
WL	Phenylbutazone by Immunoassay	1,000			1,000	Domestic: 1,000 samples are scheduled for steers Import: No samples are scheduled for 2005, due to unavailability of tissue (kidney)
WL	Ractopamine	410			410	Domestic: 230, 90, and 90 samples are scheduled for steers, formula-fed veal, and market hogs Import: No samples are scheduled for 2005, due to unavailability of tissue (kidney)
EL	Sulfonamides	3,680	1,051	300	5,031	Domestic: All production classes are scheduled except egg products, sows, mature chickens, bison, ducks, goats, ratites, geese, and squab Import: All product classes are scheduled
EL	Thyreostats	600			600	Domestic: 600 samples are scheduled for steers and for heifers. Import: No samples are scheduled for 2005
MWL	Trenbolone	1,000			1,000	Domestic: 1,000 samples are scheduled for formula-fed veal Import: No samples are scheduled for 2005, due to unavailability of tissue (fat)
MWL	Zeranol	1,000			1,000	Domestic: 1,000 samples are scheduled for formula-fed veal Import: No samples are scheduled for 2005, due to unavailability of liver tissue

Table 54 - Continued
Combined Summary
2005 FSIS NRP Domestic and Import Scheduled Sampling, and Specifically Designed Surveys

Lab	Analysis	Number of Scheduled Domestic Samples	Number of Scheduled Imported Samples	Number of Scheduled Samples for Specifically Designed Surveys	Total Number of Samples	NOTES
Total		21,098	3,954	900	26,024	

Key:

CHC = Chlorinated hydrocarbon; COP = Chlorinated organophosphate

EL = FSIS Eastern Laboratory, Athens, GA

MWL = FSIS Midwestern Laboratory, St. Louis, MO

WL = FSIS Western Laboratory, Alameda, CA

ARS-RRVARC = Agricultural Research Service, Red River Valley Agricultural Research Center, Fargo, ND

Adjustments to the 2004 NRP Sampling Plan

The following adjustments were made to the 2004 FSIS NRP:

1. Carbadox was added to the 2004 domestic scheduled sampling plan for the period April through December. A total of 300 samples were collected for the nine month period.
2. Florfenicol was added to the 2004 residue plan as a specifically designed survey for the period July through December. A total of 150 samples were collected for the six month period.
3. The non-steroidal anti-inflammatory drugs (NSAIDs), flunixin, dipyron, and phenylbutazone were scheduled for the period 25 October 2004 through December 2004. A total of 14 samples per week (3 analyses per sample) were collected.
4. Thyreostats were scheduled for November and December of 2004. A total of 70 samples were scheduled for the two month period.