United States National Residue Program Quarterly Report (Jan–Mar. 2015)

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Introduction

Background

The USDA Food Safety and Inspection Service (FSIS) administers the United States National Residue Program (hereafter, NRP) for meat, poultry, and egg products; this interagency program was designed to identify, rank, and test for chemical residues in FSIS regulated products.

The NRP is designed to: (1) provide a structured process for identifying and evaluating chemical compounds of concern in food animals; (2) analyze chemical compounds of concern; (3) report results; and, (4) identify the need for regulatory follow-up subsequent to the identification of violative levels of chemical residues.

FSIS administers this regulatory program under the Federal Meat Inspection Act (FMIA) (21 U.S.C. 601 et seq.), the Poultry Products Inspection Act (PPIA) (21 U.S.C. 453 et seq.), and the Egg Products Inspection Act (EPIA) (21 U.S.C. 1031 et seq.). The NRP is designed to protect the health and welfare of consumers by regulating the meat, poultry, and egg products produced in federally inspected establishments and to prevent the distribution in commerce of any such products that are adulterated or misbranded.

FSIS has administered the NRP by collecting meat, poultry, and egg product samples and analyzing the samples for specific chemical compounds at FSIS laboratories. The program has analyzed meat and poultry samples since 1967. The program began sampling egg products in 1995.

A violation occurs when an FSIS laboratory detects a chemical compound in excess of an established tolerance or action level. When a violation is established, FSIS informs the establishment electronically and the producer via certified letter. Under best practices, the establishment also should notify the producer that an animal from that business had a violative chemical level. FSIS shares the violation data with the Environmental Protection Agency (EPA) and the Food and Drug Administration (FDA), which establish violative levels for chemical residues. The FDA has on-farm jurisdiction and works with cooperating State agencies to investigate producers linked to residue violations and enforce legal action if conditions leading to the residue violations are not corrected.

The NRP sampling plans focus on chemical residues in domestic meat, poultry, and egg products. The domestic sampling plan includes scheduled sampling (headquarters-directed) and inspector-generated (targeted) sampling. Scheduled sampling plans involve random tissue sampling from food animals that have passed ante-mortem inspection.

Domestic Scheduled Sampling

Under the current scheduled sampling program, FSIS tests 12 production classes (beef cows, bob veal calves, dairy cows, lamb, steers, heifers, goats, sheep, market hogs, sows, young chickens, and young turkeys) representing 96 percent of domestic meat and poultry consumption.

Domestic Inspector-generated Sampling

Inspector-generated sampling is conducted by the Office of Field Operations' in-plant personnel (IPP), overseen by the Public Health Veterinarians (PHVs). Currently, IPP inspector-generated sampling targets individual suspect animals, suspect populations of animals, and special sampling for bob veal calves per 9 CFR 310.21 (c) and (d).

When an inspector-generated sample is collected, the carcass is held pending the results of laboratory testing. If a carcass is found to contain violative levels of residues, FSIS condemns the carcass.

Port-of-Entry Reinspection Sampling

Under the import reinspection plan, imported meat, poultry, and egg products are sampled through the Port-of-Entry Reinspection Program. This program is a chemical residue-monitoring program conducted to verify the equivalence of inspection systems in exporting countries.

All imported products are subject to reinspection and one or more types of inspection (TOI). These procedures ensure that every lot of product is inspected before it enters the United States. Chemical residue sampling is included in the reinspection of imported products.

In addition to publishing chemical residue results on a timely manner, this quarterly report compliments the weekly residue violative tables from the Residue Repeat Violator Lists (http://www.fsis.usda.gov/wps/portal/fsis/topics/data-collection-and-reports/chemistry/residue-chemistry.

Note: Some tables in this report provide results based on the number of unique violative carcasses, while other tables provide results as individual chemical in carcasses regardless of number of violative results per carcass. Multiple chemical residue violations may be associated with the same carcass.

Purpose

This Quarterly Report summarizes the chemical residue results for the domestic (Scheduled and Inspector-generated) and import sampling programs respectively.

Beginning August 2012, FSIS implemented several new multi-residue chemical methods for both of the domestic sampling programs. By incorporating the multi-residue method, the agency discontinued the use of testing production classes for single chemical or chemical classes ("pairing").

The new methods allows for the analysis of hundreds of chemicals in a single sample. These changes are detailed in the July 6, 2012 Federal Register Notice. (http://www.fsis.usda.gov/wps/wcm/connect/96433e1b-d3b6-42b0-93a8-f0beee77e520/2012-0012.pdf?MOD=AJPERES)

FSIS has changed NRP reporting from a calendar year to a fiscal year reporting period to coincide with agency planning, provide results in a timely manner, and increase program transparency for stakeholders. This report contains data for the second quarter of fiscal year 2015: **Jan–Mar., 2015**. The FSIS continues to publish National Residue Program Data (also known as the Red Book) on an annual basis, as the final analysis of the NRP.

The report here is divided into tables and an appendix. The tables summarize the current quarter by month, whereas the appendix will include previous three quarters' results for a quick comparison with current quarter report. Figure C reports the most frequently identified antibiotics in bob veal and dairy cows samples identified as violations.

Comments are welcome. Please submit your comment to Naser Abdelmajid at Naser.abdelmajid@fsis.usda.gov

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 05/15/2015**

Tables

Table 1: NRP Domestic Scheduled Sampling Program Results by Month, Jan.–Mar. 2015

During the second quarter of FY 2015, **1,541** samples were collected from beef cows, bob veal calves, dairy cows, steers, heifers, lamb, goats, sheep, market hogs, sows, young chickens, and young turkeys. Tissues analyzed include muscle, kidney, and liver. The program identified four chemical residues at violative level.

Sample Collection Month	Number of Samples / (FSIS Lab Chemical Analytes)	Number of Violative Carcasses/(Number of Lab Confirmed Violative Samples)	Violative Chemical Residues
Jan.	468/ **(45,051)**	**1/ (2) Bob Veal**	2 (Sulfamethazine)
Feb.	399 / **(37,558)**	**1 / (1) beef cows**	1 (Sulfamethazine)
Mar.	674 / **(67,058)**	**1/ (2) bob veal** **1/ (1) steers**	2 (Ampicillin) 1 Melengestrol Acetate
Total	**1,541 / (149,667)**	**4/ (6)**	

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 05/15/2015**

Table 2: NRP Domestic Inspector-Generated (In-plant) Screening Program (KIS™ Test) by Month, Carcass Class Jan.–Mar. 2015

The numbers in parentheses represents the number of in-plant screen positives that were sent to FSIS labs.

Carcass Class	Jan.	Feb.	Mar.	Total
Beef Cows	1,700 **(45)**	1,231 **(35)**	1,227 **(44)**	**4,158 (124)**
Boars/Stags	25 **(0)**	18 **(0)**	13 **(0)**	**56 (0)**
Bob Veal	1,522 **(39)**	2,424 **(33)**	1,827 **(27)**	**5,773 (99)**
Bulls	150 **(5)**	118 **(5)**	145 **(3)**	**413 (13)**
Dairy Cows	9,567 **(196)**	8,505 **(204)**	9,631 **(221)**	**27,703 (621)**
Formula Fed Veal	54 **(0)**	35 **(0)**	32 **(0)**	**121 (0)**
Goats	31 **(0)**	36 **(2)**	46 **(0)**	**113 (2)**
Heavy Calves	77 **(7)**	58 **(11)**	79 **(13)**	**214 (31)**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 05/15/2015**

Table 2 (cont.): NRP Domestic Inspector-Generated (in-plant) Screening Program (KIS™ Test) by Month, Carcass Class Jan.–Mar. 2015

The numbers in parentheses represents the number of in-plant screen positives that was sent to FSIS labs.

Carcass Class	Jan.	Feb.	Mar.	Total
Heifers	332 **(9)**	273 **(3)**	280 **(3)**	**885** **(15)**
Lambs	68 **(0)**	53 **(1)**	33 **(0)**	**154** **(1)**
Market Hogs	1,173 **(4)**	1,367 **(4)**	1,522 **(10)**	**4,062** **(18)**
Mature Sheep	29 **(1)**	14 **(0)**	31 **(1)**	**74** **(2)**
Non Formula Fed Veal	9 **(2)**	12 **(0)**	10 **(0)**	**31** **(2)**
Roaster Pigs	136 **(0)**	193 **(5)**	153 **(0)**	**482** **(5)**
Sows	905 **(5)**	870 **(9)**	939 **(12)**	**2,714** **(26)**
Steers	857 **(23)**	710 **(13)**	782 **(21)**	**2,349** **(57)**
TOTAL	**16,635** **(336)**	**15,917** **(325)**	**16,750** **(355)**	**49,302** **(1,016)**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 05/15/2015**

Table 3: NRP Domestic Inspector-Generated (In-plant) Screening Program (KIS™ Test). Results by Month, Jan.–Mar. 2015

About 1000 positive values were identified from over 49,000 in-plant tests. Of these positive samples, 316 were lab-confirmed violative samples. Several of the violative tissue samples were associated with the same carcass.

Sample Collection Month	Number of In-plant Screen Tests	Number of Positive In-plant Screens Sent to Labs	Number of Positive In-plant Screens Tested in FSIS Labs (FSIS Lab Chemical Analytes screened for)	Number of Carcasses with Violative Samples	Number of Lab-confirmed Violative Samples	Three Most Commonly Reported Chemical Violations (Number of Violative Samples for 3 Most Reported Violations)	Total Number of Violative Chemical Residues
Jan.	16,635	336	329/(**22,081**)	77	**90**	Ceftiofur **(30)** Penicillin **(17)** Sulfamethzine **(10)**	**14**
Feb.	15,917	325	320/(**27,053**)	65	**78**	Ceftiofur **(20)** Penicillin **(17)** Sulfadimethoxine **(8)**	**17**
Mar.	16,750	355	350/(**23,000**)	73	**94**	Ceftiofur **(25)** Penicillin **(18)** Sulfamethzine **(7)**	**19**
Total	**49,302**	**1,016**	**999** /(**72,134**)	**215**	**262**	Ceftiofur **(75)** Penicillin **(52)** Sulfamethzine **(24)**	**23**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 05/15/2015**

Table 4: Distribution of NRP Residue Violations Inspector-Generated (in-plant) Screening Program (KIS™ Test). Results by Carcass Class and Month Jan.–Mar. 2015

Violations reported for inspector-generated samples by production class. Samples include in-plant screened samples (KIS™ Test). The number of laboratory confirmed violations appear in **parentheses**. Results include multiple violative tissues associated with the same sample.

Carcass Class	Jan.	Feb.	Mar.	Total
Beef Cows	9 (13)	6 (6)	10 (14)	**25 (33)**
Boars/Stags	--	--	--	--
Bob Veal	10 (12)	11 (14)	12 (20)	**33 (46)**
Bulls	--	3 (4)	--	**3 (4)**
Dairy Cows	44 (51)	35 (38)	39 (43)	**132 (146)**
Formula Fed Veal	--	--	--	--
Goats	--	2 (4)	--	**2 (4)**
Heavy Calves	--	3 (6)	2 (5)	**5 (11)**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 05/15/2015**

Table 4 (cont.): Distribution of NRP Residue Violations Inspector-Generated (in-plant) Screening Program (KIS™ Test). Results by Carcass Class and Month Jan.–Sep. 2015

Violations reported for inspector-generated samples by production class. Samples include in-plant screened samples (KIS™ Test). The number of laboratory confirmed violations appear in **parentheses**. Results include multiple violative tissues associated with the same sample.

Carcass Class	Jan.	Feb.	Mar.	Total
Heifers	3 (3)	--	--	**3** **(3)**
Lambs	--	--	--	**--**
Market Hogs	--	--	2 (2)	**2** **(2)**
Mature Sheep	1 (1)	--	--	**1** **(1)**
Non Formula Fed Veal	--	--	--	**--**
Roaster Pigs	--	1 (1)	--	**1** **(1)**
Sows	1 (1)	1 (2)	1 (1)	**3** **(4)**
Steers	2 (4)	--	3 (3)	**5** **(7)**
TOTAL	**77** **(90)**	**65** **(78)**	**73** **(94)**	**215** **(262)**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 05/15/2015**

Table 5: Distribution of NRP Residue Violations Inspector-Generated (In-plant) Screening Program (KIS™ Test). Results by Carcass class and Chemical Residue Jan.–Mar. 2015

Violations reported for inspector-generated sampling for each production by specific chemical residue. The results include in-plant screened samples (KIS™ Test) sent to lab. Results include multiple violative tissues samples associated with the same Carcass.

Note: The three most commonly reported chemical violations are highlighted.

Compound	Beef Cows	Bob Veal	Bulls	Dairy Cows	Goats	Heavy Calves	Heifers	Market Hogs	Mature Sheep	Roaster Pigs	Sows	Steers	Total
Ampicillin	-	-	-	6	-	-	-	-	-	-	-	-	**6**
Ciprofloxacin	-	3	1	1	-	3	-	-	-	-	-	1	**9**
Desethylene ciprofloxacin	-	2	-	-	-	-	-	-	-	-	-	-	**2**
Ceftiofur	7	8	-	58	-	-	-	-	1	-	-	1	**75**
Dihydrostreptomycin	-	-	-	1	-	-	-	-	-	-	-	-	**1**
Enrofloxacin	-	3	-	-	-	-	-	-	-	-	-	-	**3**
Florfenicol	2	-	1	2	-	-	-	-	-	-	-	-	**5**
Flunixin	3	2	-	11	-	1	-	-	-	-	-	-	**17**
Gentamycin Sulfate	-	-	-	2	-	-	-	-	-	-	-	-	**2**
Lincomycin	-	-	-	1	2	2	-	-	-	-	-	-	**5**
Neomycin	-	12	-	-	-	-	-	-	-	-	-	1	**13**
Oxytetracycline	3	-	-	1	-	-	-	-	-	-	-	-	**4**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 05/15/2015**

Table 5 (cont.): Distribution of NRP Residue Violations Inspector-Generated (In-plant) Screening Program (KIS™ Test). Results by Carcass class and Chemical Residue Jan.–Mar. 2015

Violations reported for inspector-generated sampling for each production by specific chemical residue. The results include in-plant screened positive samples (KIS™ Test) tested in FSIS labs. Results include multiple violative tissues samples associated with the same carcass.

Compound	Beef Cows	Bob Veal	Bulls	Dairy Cows	Goats	Heavy Calves	Heifers	Market Hogs	Mature Sheep	Roaster Pigs	Sows	Steers	Total
Penicillin	5	1	2	39	-	-	1	-	-	-	4	-	**52**
Salbutamol	-	1	-	-	-	-	-	-	-	-	-	-	**1**
Spectinomycin	-	-	-	-	2	-	-	-	-	-	-	-	**2**
Sulfadiazine	-	1	-	-	-	-	-	-	-	-	-	-	**1**
Sulfadimethoxine	-	-	-	14	-	-	1	-	-	-	-	1	**16**
Sulfadoxine	-	-	-	3	-	-	-	-	-	-	-	-	**3**
Sulfamethazine	7	3	-	7	-	5	-	2	-	-	-	-	**24**
Sulfamethoxazole	-	9	-	-	-	-	-	-	-	-	-	-	**9**
Tilmicosin	5	-	-	-	-	-	1	-	-	-	-	3	**9**
Tulathromycin	-	1	-	-	-	-	-	-	-	-	-	-	**1**
Tylosin	1	-	-	-	-	-	-	-	-	1	-	-	**2**
Total	**33**	**46**	**4**	**146**	**4**	**11**	**3**	**2**	**1**	**1**	**4**	**7**	**262**

Note: Results are based on sample collection date. **Data Source:**
FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 05/15/2015**

Table 6: NRP Import Collected Samples by Country Jan.–Mar. 2015

No violative import sample was found. See Table 10 for details.

Country	Jan.	Feb.	Mar.	Total
Mexico	5	14	202	221
Canada	39	46	130	215
Brazil	19	33	15	67
Chile	17	27	12	56
Australia	14	18	19	51
Ireland	7	-	35	42
Other**	67	41	56	164
Total	**168**	**179**	**493**	**816**

** The following additional countries eligible to export meat and egg product to the United States did not produce a violation: Argentina, Denmark, Finland, Honduras, Israel, Republic of Korea, Netherland, New Zealand, Nicaragua, Northern Ireland, Poland, Spain, United Kingdom, and Uruguay.

Table 7: NRP Import Sample Analysis by Species Jan.–Mar. 2015

The number of sample analyses under the import reinspection program by production class.

Species	Jan.	Feb.	Mar.	Total
Beef	331	272	1,222	**1,825**
Chicken	79	115	542	**736**
Goat	-	13	15	**28**
Lamb	14	14	-	**28**
Pork	327	194	677	**1,198**
Turkey	33	44	23	**100**
Veal	85	154	47	**286**
Total	**869**	**806**	**2,526**	**4,201**

Note: Multiple import residue results may be associated with the same sample.

Table 8: NRP Import Sample Analysis by Chemical Residue Jan.–Mar. 2015

The number of import analyses based on samples collected and analyzed during the import reinspection program tested for different chemical residues.

Chemical Residue	Jan.	Feb.	Mar.	Total
Aminoglycosides	67	56	194	**317**
Analgesics/Anti-Inflammatory	64	56	193	**313**
Arsenic	67	76	123	**266**
Avermectins	45	46	90	**181**
Beta Agonists	64	56	193	**313**
Beta Lactams	32	28	95	**155**
Beta Lactams/Cephalosporins	32	28	95	**155**
Cadmium	1	-	5	**6**
Canceled-Avermectin	1	-	3	**4**
Cobalt	-	-	1	**1**
Copper	-	-	1	**1**
Doramectin	-	3	-	**3**
Drugs, General	37	33	118	**188**
Fluoroquninolones	64	56	193	**313**
Hormones	77	66	239	**382**
Iron	-	-	1	**1**
Ivermectin	7	11	2	**20**
Lead	-	-	1	**1**
Macrolides	64	56	193	**313**
Manganese	2	7	7	**16**
Molybdenum	2	2	3	**7**
Pesticides	28	21	108	**157**
Phenicols	64	56	193	**313**
Sulfas	68	70	205	**343**
Tetracyclines	64	56	193	**313**
Trace Elements	14	17	37	**68**
Zinc	5	6	40	**51**
Total	**869**	**806**	**2,526**	**4,201**

Note: Multiple import residue results may be associated with the same sample. No violative results were found.

Table 9: NRP Import Sample Analyses by Species and Chemical Residue Jan.–Mar. 2015

Number of import reinspection program analyses arranged by product class tested for chemical residue.

Chemical Residue	Beef	Chicken	Goat	Lamb	Pork	Turkey	Veal	Total
Aminoglycosides	131	59	2	2	94	5	24	**317**
Analgesics/Anti-Inflammatory	129	59	2	2	92	5	24	**313**
Arsenic	128	40	2	2	65	20	9	**266**
Avermectins	105	-	2	2	63	-	9	**181**
Beta Agonists	129	59	2	2	92	5	24	**313**
Beta Lactams	64	30	2	2	47	1	9	**155**
Beta Lactams/Cephalosporins	65	26	-	-	45	4	15	**155**
Cadmium	4	1	-	-	-	1	-	**6**
Canceled-Avermectin	2	-	-	-	2	-	-	**4**
Cobalt	1	-	-	-	-	-	-	**1**
Copper	1	-	-	-	-	-	-	**1**
Doramectin	3	-	-	-	-	-	-	**3**
Drugs, General	64	59	2	2	47	5	9	**188**
Fluoroquninolones	129	59	2	2	92	5	24	**313**
Hormones	198	59	2	2	92	5	24	**382**
Iron	-	1	-	-	-	-	-	**1**
Ivermectin	20	-	-	-	-	-	-	**20**
Lead	-	1	-	-	-	-	-	**1**
Macrolides	129	59	2	2	92	5	24	**313**
Manganese	3	4	-	-	4	5	-	**16**
Molybdenum	-	4	-	-	-	3	-	**7**
Pesticides	69	28	2	2	42	4	10	**157**
Phenicols	129	59	2	2	92	5	24	**313**
Sulfas	139	59	2	2	104	13	24	**343**
Tetracyclines	129	59	2	2	92	5	24	**313**
Trace Elements	6	11	-	-	39	4	8	**68**
Zinc	48	-	-	-	2	-	1	**51**
Total	**1,825**	**736**	**28**	**28**	**1,198**	**100**	**286**	**4,201**

Note: Multiple import residue results may be associated with the same sample.

Table 10: NRP Import Sample Analyses by Chemical Residue Results Jan.–Mar. 2015

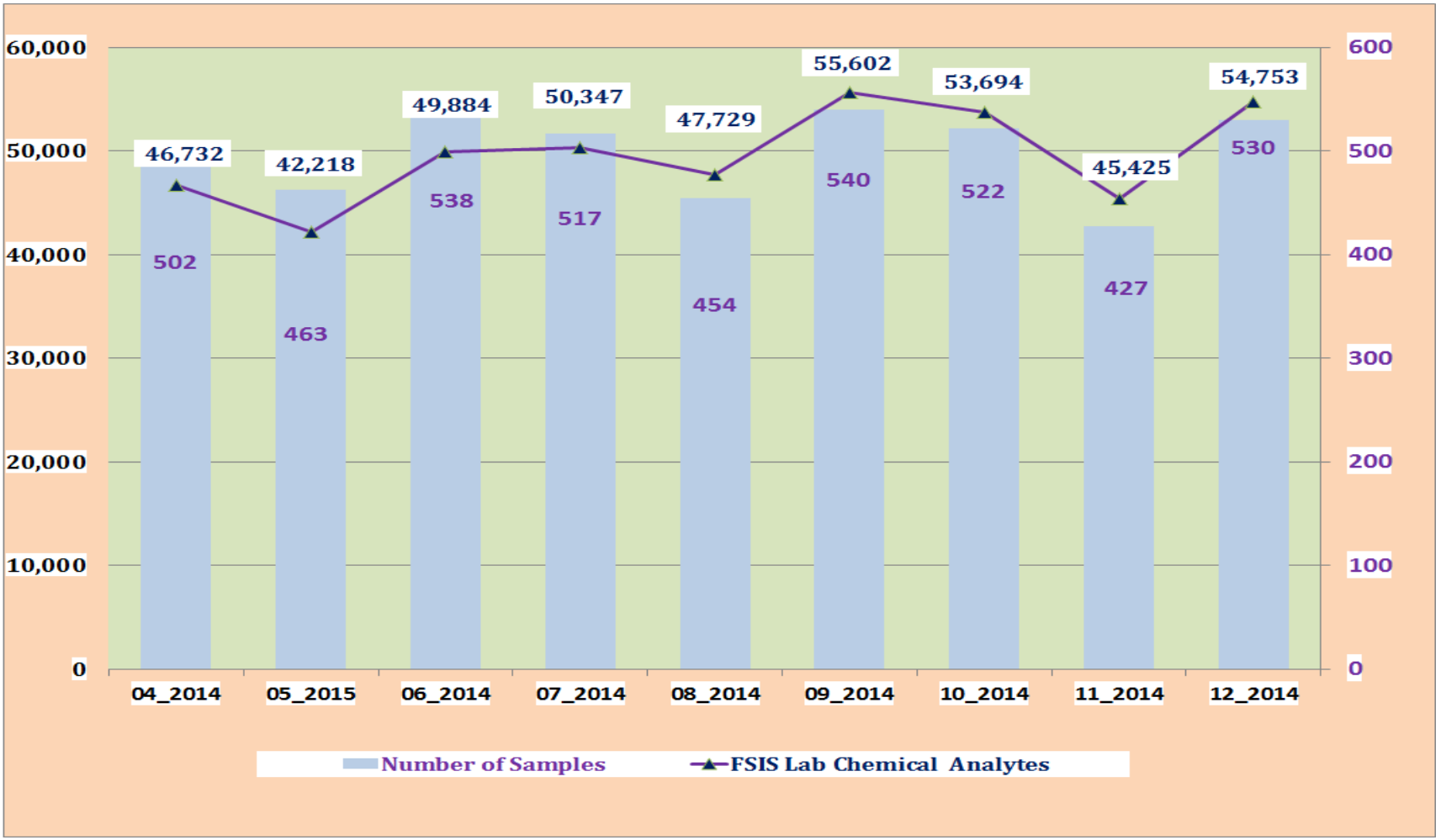
Number of import reinspection program analyses arranged by results of chemical residue. Multiple import residue results may be associated with the same sample. Note: No Import sampling chemical violations were found.

Chemical Residue	Residue Detected - Not-Violative	Residue Not Detected	Total
Aminoglycosides	4	313	**317**
Analgesics/Anti-Inflammatory	-	313	**313**
Arsenic	-	266	**266**
Avermectins	-	181	**181**
Beta Agonists	-	313	**313**
Beta Lactams	-	155	**155**
Beta Lactams/Cephalosporins	-	155	**155**
Cadmium	6	-	**6**
Canceled-Avermectin	-	4	**4**
Cobalt	1	-	**1**
Copper	1	-	**1**
Doramectin	3	-	**3**
Drugs, General	-	188	**188**
Fluoroquninolones	-	313	**313**
Hormones	-	382	**382**
Iron	1	-	**1**
Ivermectin	20	-	**20**
Lead	1	-	**1**
Macrolides	-	313	**313**
Manganese	16	-	**16**
Molybdenum	7	-	**7**
Pesticides	-	157	**157**
Phenicols	-	313	**313**
Sulfas	-	343	**343**
Tetracyclines	-	313	**313**
Trace Elements	68	-	**68**
Zinc	51	-	**51**
Total	**179**	**4,022**	**4,201**

Appendix

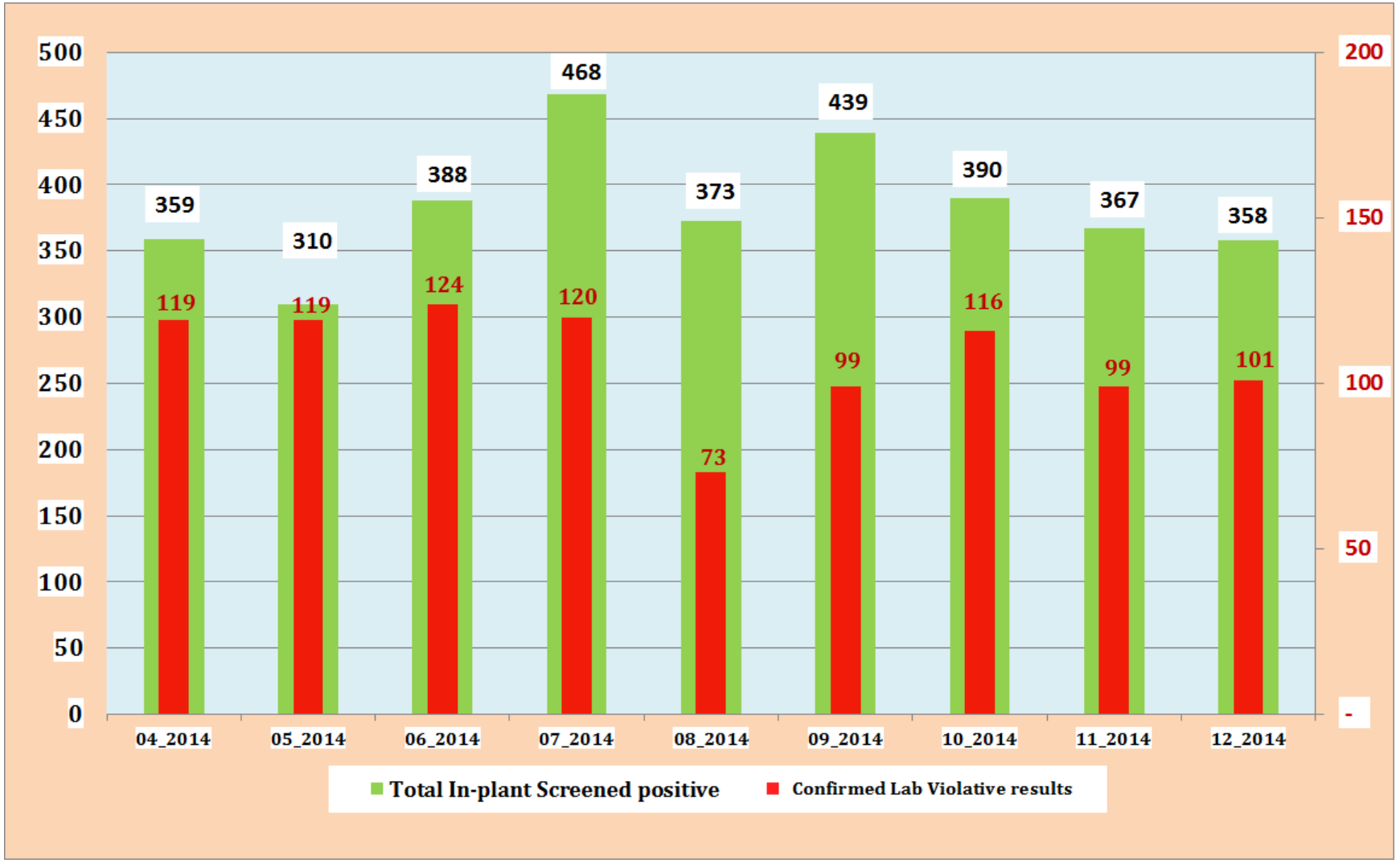
Summary of NRP Domestic Sample Data (Scheduled and Inspector-generated: KIS™ Test) (Apr- Dec. 2014)

Figure A:[1] **Distribution of NRP Domestic Scheduled Samples by month, Includes FSIS Lab Chemical Analytes by Month Apr.–Dec. 2014**



[1] Number of residue domestic scheduled sample in **PURPLE**.

Figure B [2]: Distribution of NRP Inspector Generated (In-plant) Positive Screenings (KIS™ Test) and Confirmed Lab Violative Results by Month Apr.–Dec. 2014



[2] Number of confirmed violative samples in **RED**. Multiple violative samples results may be associated with the same carcass sample.

Table 11: Distribution of NRP Inspector Generated Program (In-plant) Screenings (KIS™ Test)Residue Violative Samples, Apr.–Dec. 2014

Note: Multiple violations may be associated with one carcass.

Residue Name	Apr. 2014	May 2014	June 2014	July 2014	Aug. 2014	Sept. 2014	Oct. 2014	Nov. 2014	Dec. 2014	Total
Amikacin	-	-	-	-	-	-	1	-	-	**1**
Ampicillin	3	4	2	2	1	1	1	1	-	**15**
Cefazolin	-	1	-	-	1	-	-	-	-	**2**
Chloramphenicol	1	-	-	-	-	-	-	-	-	**1**
Ciprofloxacin	1	6	-	3	2	1	1	-	-	**14**
Desethylene ciprofloxacin	-	1	-	-	-	-	-	-	-	**1**
Cceftiofur	24	22	29	27	9	33	20	17	26	**207**
Dihydrostreptomycin	2	-	-	-	-	-	-	-	-	**2**
Enrofloxacin	1	1	-	-	-	-	-	-	-	**2**
Florfenicol	6	15	5	5	4	5	10	17	6	**73**
Flunixin	4	7	13	8	4	9	8	7	9	**69**
Gamithromycin	-	-	-	-	-	-	-	-	1	**1**
Gentamycin Sulfate	1	1	1	3	2	2	4	8	2	**24**
Lincomycin	1	-	1	-	-	1	-	-	-	**3**
Neomycin	12	18	22	9	6	9	6	2	6	**90**

Table 11 (cont.): Distribution of NRP Inspector Generated Program (In-plant) Screenings (KIS™ Test) Residue Violative Samples Apr.–Dec. 2014

Note: Multiple violations may be associated with one carcass.

Residue Name	Apr. 2014	May 2014	June 2014	July 2014	Aug. 2014	Sept. 2014	Oct. 2014	Nov. 2014	Dec. 2014	Total
Oxyphenylbutazone	-	-	-	-	-	1	-	-	-	**1**
Oxytetracycline	2	-	2	1	3	1	1	-	5	**15**
Penicillin	43	18	29	24	24	20	24	17	24	**223**
Ractopamine	-	1	-	-	-	-	-	-	-	**1**
Spectinomycin	1	-	-	-	-	-	-	-	-	**1**
Sulfadiazine	-	-	1	-	1	-	-	-	-	**2**
Sulfadimethoxine	3	2	8	17	7	5	8	14	5	**69**
Sulfadoxine	1	1	-	1	-	-	2	-	-	**5**
Sulfamethazine	6	14	6	15	7	6	27	8	7	**96**
Sulfamethoxazole	4	2	1	-	-	-	-	1	-	**8**
Tilmicosin	2	4	1	4	2	4	3	6	5	**31**
Tulathromycin	1	1	2	1	-	1	-	-	3	**9**
Tylosin	-	-	-	-	-	-	-	1	1	**2**
Zeranol	-	-	1	-	-	-	-	-	1	**2**
Total	**119**	**119**	**124**	**120**	**73**	**99**	**116**	**99**	**101**	**970**

Table 12: Distribution of NRP Inspector Generated Program (In-plant) Screenings (KIS™ Test) Residue Violative Samples By Animal Class, Apr.–Dec. 2014

Note: Multiple violations may be associated with one carcass.

Compound	Beef Cows	Bob Veal	Bulls	Dairy Cows	Heavy Calves	Heifers	Lamb	Market Swine	Non Formula-fed Veal	Roaster Swine	Sows	Steers	Total
Amikacin	-	-	-	-	-	-	-	1	-	-	-	-	**1**
Ampicillin	-	2	-	13	-	-	-	-	-	-	-	-	**15**
Cefazolin	-	-	-	2	-	-	-	-	-	-	-	-	**2**
Chloramphenicol	-	-	-	1	-	-	-	-	-	-	-	-	**1**
Ciprofloxacin	1	4	-	5	1	-	-	-	1	-	1	1	**14**
Desethylene ciprofloxacin	-	1	-	-	-	-	-	-	-	-	-	-	**1**
Ceftiofur	11	13	1	171	1	2	-	-	-	-	-	8	**207**
Dihydrostreptomycin	-	2	-	-	-	-	-	-	-	-	-	-	**2**
Enrofloxacin	-	2	-	-	-	-	-	-	-	-	-	-	**2**
Florfenicol	19	4	4	15	11	-	-	-	11	-	-	9	**73**
Flunixin	9	3	2	41	7	2	-	-	1	-	1	3	**69**
Gamithromycin	-	1	-	-	-	-	-	-	-	-	-	-	**1**
Gentamycin Sulfate	2	2	1	12	1	1	-	-	1	1	-	3	**24**
Lincomycin	-	1	-	2	-	-	-	-	-	-	-	-	**3**
Neomycin	1	80	-	7	1	-	-	-	-	-	-	1	**90**

Table 12: Distribution of NRP Inspector Generated Program (In-plant) Screenings (KIS™ Test) Residue Violative Samples By Animals Class, Apr.–Dec. 2014

Note: Multiple violations may be associated with one carcass.

Compound	Beef Cows	Bob Veal	Bulls	Dairy Cows	Heavy Calves	Heifers	Lamb	Market Swine	Non Formula-fed Veal	Roaster Swine	Sows	Steers	Total
Oxyphenylbutazone	-	-	-	1	-	-	-	-	-	-	-	-	**1**
Oxytetracycline	4	2	1	7	-	-	-	-	-	-	-	1	**15**
Penicillin	15	7	3	146	5	5	-	-	3	2	31	6	**223**
Ractopamine	-	-	-	-	-	-	-	-	-	-	-	1	**1**
Spectinomycin	-	-	-	-	-	-	-	-	-	1	-	-	**1**
Sulfadiazine	-	-	-	2	-	-	-	-	-	-	-	-	**2**
Sulfadimethoxine	4	1	-	50	1	-	2	-	6	1	-	4	**69**
Sulfadoxine	-	-	-	5	-	-	-	-	-	-	-	-	**5**
Sulfamethazine	6	22	4	16	4	1	1	6	24	1	5	6	**96**
Sulfamethoxazole	-	8	-	-	-	-	-	-	-	-	-	-	**8**
Tilmicosin	5	2	1	14	4	3	-	-	-	-	-	2	**31**
Tulathromycin	-	9	-	-	-	-	-	-	-	-	-	-	**9**
Tylosin	-	2	-	-	-	-	-	-	-	-	-	-	**2**
Zeranol	-	-	-	-	-	-	-	-	-	-	2	-	**2**
Total	**77**	**168**	**17**	**510**	**36**	**14**	**3**	**7**	**47**	**6**	**40**	**45**	**970**

Figure C: Comparison of Selected NRP Bob Veal and Dairy Cows Chemical Residue Violations Inspector-Generated Program (In-plant) Screenings (KIS™ Test) Residue Violative Samples by Quarter - Apr.–Dec. 2014

Note: Multiple violations may be associated with one carcass.