United States National Residue Program Quarterly Report (Jan–Mar 2016)

Science Staff
Office of Public Health Science
Food Safety and Inspection Service
U.S. Department of Agriculture

Contact:
Naser Abdelmajid
naser.abdelmajid@fsis.usda.gov
(202) 690-6492

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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. The NRP is an interagency program between the FSIS, Food and Drug Administration and the Environmental Protection Agency that was established 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.

Beginning in 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)

A violation occurs when an FSIS laboratory confirms the presence of a chemical compound in excess of an established tolerance or action level. When a violation is identified, 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 inspectors test twelve 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 by FSIS inspectors through the Port-of-Entry Reinspection Program. This program is a chemical residue-monitoring program conducted to verify the 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.

Purpose of Quarterly Report

The Quarterly Report summarizes the chemical residue results for the domestic (Scheduled and Inspector-generated) and import sampling programs analyzed in **Jan–Mar 2016**. 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 FY2016 **second** quarter (**Jan–Mar 2016**) by month, whereas the appendix will include previous three quarters' (**Apr–Dec 2015**) results for a quick comparison with current quarter report.

Note: Tables in this report provide results based on the number of unique violative carcasses, and 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.

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 01/02/2017**

Tables

Table 1a: NRP Domestic Scheduled Sampling Program Results by Month, Jan–Mar 2016

During the **second** quarter of FY 2016, **1,846** samples were collected from beef cows, bob veal calves, dairy cows, steers, heifers, goats, lamb/sheep, market hogs, sows, young chickens, young turkeys, and older breeder turkey. 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)	Number Violative Chemical Residues Detected
Jan	**567 / (69,480)**	N/A	N/A
Feb	**587 / (78,803)**	1 / (1) Dairy Cows 1 / (1) Goat (1) 1 / (1) Roster Pigs	**1 Carbadox** **1 (Ivermectin)** **1 (Permethrin (Cis and Trans)-**
Mar	**692 / (96,825)**	1 / (2) Roaster Pigs	**2 (Salfamethazine)**
Total	**1,846 / (245,108)**	**4 / (5)**	

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 01/02/2017**

Table 1b: NRP Domestic Scheduled Sampling Program collected by Month, Carcass Class, Jan–Mar 2016

Carcass Class	Jan	Feb	Mar	Total
Beef Cows	60	64	76	200
Bob veal	44	51	51	146
Dairy Cows	56	61	72	189
Goats	25	29	36	90
Heifer	43	36	49	128
Lamb/sheep	25	31	31	87
Market Swine	3	31	48	82
Sows	64	62	68	194
Steers	40	48	50	138
Young Chickens	67	59	67	193
Young Turkeys	63	52	62	177
Older Breeder Turkeys	8	6	8	22
TOTAL	**567**	**587**	**692**	**1,846**

Table 2: NRP Domestic Inspector-Generated (In-plant) Screening Program (KIS™ Test) Performed by Month, Carcass Class, Jan–Mar 2016

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	1,105 **(34)**	1,216 **(43)**	1,477 **(30)**	**3,798 (107)**
Boars/Stags	10 **(0)**	7 **(0)**	9 **(0)**	**26 (0)**
Bob Veal	2.233 **(38)**	2,058 **(27)**	1,729 **(46)**	**6,020 (111)**
Bulls	146 **(11)**	130 **(3)**	148 **(10)**	**385 (16)**
Dairy Cows	8,545 **(209)**	8,628 **(193)**	9,535 **(210)**	**26,708 (629)**
Formula Fed Veal	47 **(0)**	68 **(3)**	54 **(0)**	**169 (3)**
Goats	35 **(0)**	35 **(0)**	41 **(0)**	**116 (0)**
Heavy Calves	59 **(1)**	25 **(1)**	28 **(0)**	**112 (2)**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 01/02/2017**

Table 2 (Continued): NRP Domestic Inspector-Generated (in-plant) Screening Program (KIS™ Test) Performed by Month, Carcass Class, Jan–Mar 2016

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	239 **(5)**	202 **(3)**	261 **(7)**	**702** **(15)**
Lambs	56 **(1)**	48 **(1)**	55 **(1)**	**159** **(3)**
Market Hogs	1,374 **(17)**	1,248 **(12)**	1,399 **(12)**	**4,021** **(41)**
Mature Sheep	28 **(1)**	51 **(2)**	29 **(0)**	**108** **(3)**
Non Formula Fed Veal	11 **(0)**	8 **(0)**	8 **(0)**	**27** **(0)**
Roaster Pigs	73 **(0)**	84 **(0)**	94 **(2)**	**251** **(2)**
Sows	400 **(2)**	527 **(9)**	488 **(21)**	**1,415** **(18)**
Steers	671 **(16)**	635 **(16)**	833 **(17)**	**2,139** **(49)**
TOTAL	**14,993** **(327)**	**14,969** **(315)**	**16,194** **(356)**	**46,156** **(998)**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 01/02/2017**

Table 3: NRP Domestic Inspector-Generated (In-plant) Screening Program (KIS™ Test), Results by Month, Jan–Mar 2016

998 in-plant screen positive values were identified from about 45,000 in-plant tests. Of these positive samples, **242** were lab-confirmed violative samples in **202** violative carcasses. Several of the violative samples were associated with the same carcass.

Sample Collection Month	Number of In-plant Screen Tests	Number of Positive In-plant Screens Sent to FSIS 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 DISTINCT Violative Chemical Residues
Jan	14,993	327	314 / (32,903)	62	74	Penicillin (25) Ceftiofur (14) Florfenicol (7)	**14**
Feb	14,969	315	305 / (31,737)	65	79	Ceftiofur (15) Penicillin (13) Flunixin (9)	**14**
Mar	16,194	356	345 / (36,261)	75	89	Ceftiofur (27) Penicillin (19) Florfenicol (10)	**15**
Total	**46,156**	**998**	**945** / (100,901)	**202**	**242**	Penicillin (57) Ceftiofur (56) Florfenicol (24)	**20**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 01/02/2017**

Table 4: Distribution of NRP Residue Violations, Inspector-Generated (in-plant) Screening Program (KIS™ Test), Results by Carcass Class and Month, Jan–Mar 2016

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 results associated with the same sample.

Carcass Class	Jan	Feb	Mar	Total
Beef Cows	3 **(4)**	5 **(8)**	7 **(8)**	**15** **(20)**
Boars/Stags	--	--	--	--
Bob Veal	7 **(8)**	11 **(12)**	18 **(20)**	**36** **(40)**
Bulls	2 **(2)**	1 **(2)**	2 **(3)**	**5** **(7)**
Dairy Cows	46 **(56)**	39 **(48)**	41 **(50)**	**126** **(154)**
Formula Fed Veal	--	--	--	--
Goats	--	--	--	--
Heavy Calves	1 **(1)**	--	--	**1** **(1)**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 01/02/2017**

Table 4 (Continued): Distribution of NRP Residue Violations, Inspector-Generated (in-plant) Screening Program (KIS™ Test), Results by Carcass Class and Month, Jan–Mar 2016

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 results associated with the same sample.

Carcass Class	Jan	Feb	Mar	Total
Heifers	--	2 **(2)**	1 **(1)**	**3** **(3)**
Lambs	--	--	1 **(1)**	1 **(1)**
Market Hogs	1 **(1)**	--	--	1 **(1)**
Mature Sheep	--	--	--	--
Non Formula Fed Veal	--	--	--	--
Roaster Pigs	--	--	--	--
Sows	1 **(1)**	2 **(2)**	1 **(1)**	**4** **(4)**
Steers	1 **(1)**	5 **(5)**	4 **(5)**	**10** **(11)**
TOTAL	**62** **(74)**	**65** **(79)**	**75** **(89)**	**202** **(242)**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 01/02/2017**

Table 5a: Overall Distribution of NRP Residue Violations, Inspector-Generated (In-plant) Screening Program (KIS™ Test), Results by Carcass Class and Chemical Residue (Combined Jan–Mar 2016)

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.

Chemical Residue	Beef Cows	Bob Veal	Bulls	Dairy Cows	Heavy Calves	Heifers	Lamb	Market Hogs	Sows	Steers	Total
Ampicillin	-	-	-	9	-	-	-	-	-	-	**9**
Desfuroylceftiofur	5	4	2	54	-	2	-	-	-	2	**69**
Dihydrostreptomycin	-	1	-	-	-	-	-	-	-	-	**1**
Florfenicol	4	-	4	-	-	-	-	-	-	-	**8**
Flunixin	2	2	-	16	-	-	-	-	1	-	**21**
Gentamycin Sulfate	-	-	-	-	-	-	-	-	-	1	**1**
Meloxicam	-	-	-	1	-	-	-	-	-	-	**1**
Moxidectin	1	-	-	-	-	-	-	-	-	-	**1**
Neomycin	-	18	-	1	-	-	-	-	-	1	**20**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 01/02/2017**

Table 5a (Continued): Overall Distribution of NRP Residue Violations, Inspector-Generated (In-plant) Screening Program (KIS™ Test), Results by Carcass Class and Chemical Residue (Combined Jan–Mar 2016)
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.

Violative Results include multiple violative samples associated with the same carcass.

Chemical Residue	Beef Cows	Bob Veal	Bulls	Dairy Cows	Heavy Calves	Heifers	Lamb	Market Hogs	Sows	Steers	Total
Oxytetracycline	-	-	-	2	-	-	-	-	-	-	**2**
Penicillin	4	4	-	40	-	-	1	-	2	4	**55**
Phenylbutazone	1	-	-	-	-	-	-	-	-	-	**1**
Sulfadimethoxine	1	2	-	20	-	-	-	-	-	-	**23**
Sulfamethazine	1	8	1	10	1	-	-	1	1	2	**25**
Sulfamethoxypyridazine	-	-	-	1	-	-	-	-	-	-	**1**
Tilmicosin	-	1	-	-	-	1	-	-	-	1	**3**
Tylosin	1	-	-	-	-	-	-	-	-	-	**1**
Total	**20**	**40**	**7**	**154**	**1**	**3**	**1**	**1**	**4**	**11**	**242**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 01/02/2017**

Table 5b: Distribution of NRP Residue Violations, Inspector-Generated (In-plant) Screening Program (KIS™ Test), Results by Carcass Class and Chemical Residue (Jan 2016)

Chemical Residue	Beef Cow	Bob Veal	Bull	Dairy Cow	Heavy Calf	Market Swine	Sow	Steer	*Total*
Ampicillin	-	-	-	2	-	-	-	-	**2**
Desfuroylceftiofur	1	-	2	24	-	-	-	-	**27**
Florfenicol	2	-	-	-	-	-	-	-	**2**
Flunixin	-	1	-	5	-	-	-	-	**6**
Gentamycin Sulfate	-	-	-	-	-	-	-	1	**1**
Neomycin	-	5	-	-	-	-	-	-	**5**
Penicillin	1	-	-	10	-	-	1	-	**12**
Sulfadimethoxine	-	-	-	9	-	-	-	-	**9**
Sulfamethazine	-	2	-	5	1	1	-	-	**9**
Sulfamethoxypyridazine	-	-	-	1	-	-	-	-	**1**
Total	4	8	2	56	1	1	1	1	**74**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 01/02/2017**

Table 5c: Distribution of NRP Residue Violations, Inspector-Generated (In-plant) Screening Program (KIS™ Test), Results by Carcass Class and Chemical Residue (Feb 2016)

Chemical Residue	Beef Cow	Bob Veal	Bull	Dairy Cow	Heifer	Sow	Steer	Total
Ampicillin	-	-	-	2	-	-	-	**2**
Desfuroylceftiofur	3	2	-	15	1	-	1	**22**
Florfenicol	2	-	1	-	-	-	-	**3**
Flunixin	2	1	-	4	-	1	-	**8**
Meloxicam	-	-	-	1	-	-	-	**1**
Neomycin	-	3	-	1	-	-	-	**4**
Oxytetracycline	-	-	-	1	-	-	-	**1**
Penicillin	1	2	-	14	-	1	2	**20**
Sulfadimethoxine	-	2	-	8	-	-	-	**10**
Sulfamethazine	-	2	1	2	-	-	1	**6**
Tilmicosin	-	-	-	-	1	-	1	**2**
Total	**8**	**12**	**2**	**48**	**2**	**2**	**5**	**79**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 01/02/2017**

Table 5d: Distribution of NRP Residue Violations, Inspector-Generated (In-plant) Screening Program (KIS™ Test), Results by Carcass Class and Chemical Residue (Mar 2016)

Chemical Residue	Beef Cow	Bob Veal	Bull	Dairy Cow	Heifer	Lamb	Sow	Steer	Total
Ampicillin	-	-	-	5	-	-	-	-	**5**
Desfuroylceftiofur	1	2	-	15	1	-	-	1	**20**
Dihydrostreptomycin	-	1	-	-	-	-	-	-	**1**
Florfenicol	-	-	3	-	-	-	-	-	**3**
Flunixin	-	-	-	7	-	-	-	-	**7**
Moxidectin	1	-	-	-	-	-	-	-	**1**
Neomycin	-	10	-	-	-	-	-	1	**11**
Oxytetracycline	-	-	-	1	-	-	-	-	**1**
Penicillin	2	2	-	16	-	1	-	2	**23**
Phenylbutazone	1	-	-	-	-	-	-	-	**1**
Sulfadimethoxine	1	-	-	3	-	-	-	-	**4**
Sulfamethazine	1	4	-	3	-	-	1	1	**10**
Tilmicosin	-	1	-	-	-	-	-	-	**1**
Tylosin	1	-	-	-	-	-	-	-	**1**
Total	**8**	**20**	**3**	**50**	**1**	**1**	**1**	**5**	**89**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of 01/02/2017**

Table 6: NRP Import Sample Collected by Country, Jan–Mar 2016

Five violative residue import results (Abamectin, Arsenic, and Ivermectin) were found in 601 tested import samples. See Table 10 for more details.

Country	Jan	Feb	Mar	Total
Canada	43	19	52	**114**
Nicaragua	39	32	8	**79**
Chile	12	25	12	**49**
Australia	13	2	18	**33**
Brazil	10	13	9	**32**
Mexico	8	16	8	**32**
Israel	9	18	4	**31**
New Zealand	10	6	3	**19**
Other**	52	44	116	**212**
Total	**196**	**175**	**230**	**601**

Between Jan to Mar 2016, the following additional countries eligible to export meat and egg product to the United States: Denmark, Finland, France, Germany Ireland, Italy, Japan, Netherland, Northern Ireland, Poland, Spain, United Kingdom, and Uruguay.

Table 7: NRP Import Sample Collected by Species, Jan–Mar 2016

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

Species	Jan	Feb	Mar	Total
Beef	88	90	149	**327**
Chicken	14	17	27	**58**
Goat	3	4	3	**10**
Lamb	1	2	2	**5**
Mutton	5	0	2	**7**
Pork	45	30	28	**103**
Turkey	20	28	16	**64**
Veal	20	4	3	**27**
Total	**196**	**175**	**230**	**601**

Table 8: NRP Import Sample Analysis by Chemical Residue, Jan–Mar 2016

The number of import analyses based on 601 import residue samples collected and analyzed during the import reinspection program tested for different chemical residues.

Chemical Residue	Jan	Feb	Mar	Total
Aminoglycosides	62	42	47	**151**
Analgesic/Anti-inflammatory	1	-	-	**1**
Analgesics/Anti-Inflammatory	62	42	45	**149**
Arsenic	58	46	42	**146**
Avermectins	58	39	39	**136**
Benzimidazoles	34	42	45	**121**
Beta Agonists	64	42	42	**148**
Beta Lactams	31	21	23	**75**
Beta Lactams/Cephalosporins	32	21	22	**75**
Cadmium	-	-	2	**2**
Canceled-Avermectin	1	-	-	**1**
Cobalt	1	1	-	**2**
Drugs, General	63	41	45	**149**
Ethion	1	2	2	**5**
Fluoroquinolones	1	37	45	**83**
Fluoroquninolones	62	5	-	**67**
Hormones	76	50	58	**184**
Iron	-	1	1	**2**
Ivermectin	1	-	1	**2**

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

Table 8 (Continued): NRP Import Sample Analysis by Chemical Residue, Jan–Mar 2016

The number of import analyses based on 601 import residue samples collected and analyzed during the import reinspection program tested for different chemical residues.

Chemical Residue	Jan	Feb	Mar	Total
Levamisole	**-**	**1**	**-**	**1**
Macrolides	61	21	22	**104**
Macrolides/Lincosamides/Streptogramins	2	21	23	**46**
Manganese	2	5	5	**12**
Molybdenum	-	4	2	**6**
Nitrofurans	-	-	1	**1**
Nitroimidazoles	34	42	45	**121**
Pesticides	59	73	121	**253**
Phenicols	63	42	45	**150**
Sulfamethazine	-	1	-	**1**
Sulfas	69	48	51	**168**
Tetracyclines	62	42	45	**149**
Trace Elements	18	10	13	**41**
Tranquilizers/Sedatives	34	42	45	**121**
Zinc	5	6	5	**16**
Total	**1,017**	**790**	**882**	**2,689**

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

Table 9: NRP Import Sample Analyses by Species and Chemical Residue, Jan–Mar 2016

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

Chemical Residue	Beef	Chicken	Goat	Lamb	Mutton	Pork	Turkey	Veal	Total
Aminoglycosides	54	17	4	1	4	41	18	12	**151**
Analgesic/Anti-inflammatory	1	-	-	-	-	-	-	-	**1**
Analgesics/Anti-Inflammatory	52	16	4	1	4	41	19	12	**149**
Arsenic	58	22	4	2	3	30	24	3	**146**
Avermectins	55	7	4	2	4	49	12	3	**136**
Benzimidazoles	44	13	3	1	2	31	18	9	**121**
Beta Agonists	50	16	4	1	4	41	19	13	**148**
Beta Lactams	27	9	4	1	3	21	7	3	**75**
Beta Lactams/Cephalosporins	26	7	-	-	1	20	12	9	**75**
Cadmium	-	1	-	-	-	-	1	-	**2**
Canceled-Avermectin	1	-	-	-	-	-	-	-	**1**
Cobalt	2	-	-	-	-	-	-	-	**2**
Drugs, General	52	16	4	1	4	41	19	12	**149**
Ethion	5	-	-	-	-	-	-	-	**5**
Fluoroquinolones	31	10	3	1	1	20	14	3	**83**
Fluoroquninolones	22	6	1	-	3	21	5	9	**67**
Hormones	87	16	4	1	4	41	19	12	**184**
Iron	2	-	-	-	-	-	-	-	**2**
Ivermectin	2	-	-	-	-	-	-	-	**2**

Note: Based on 601 import residue samples. Multiple import residue results may be associated with the same sample.

Table 9 (Continued): NRP Import Sample Analyses by Species and Chemical Residue, Jan–Mar 2016

Chemical Residue	Beef	Chicken	Goat	Lamb	Mutton	Pork	Turkey	Veal	Total
Levamisole	1	-	-	-	-	-	-	-	**1**
Macrolides	35	10	1	-	3	30	13	12	**104**
Macrolides/Lincosamides/Streptogramins	18	6	3	1	1	11	6	-	**46**
Manganese	2	4	-	-	-	2	4	-	**12**
Molybdenum	-	3	-	-	-	-	3	-	**6**
Nitrofurans	-	-	-	-	-	-	1	-	**1**
Nitroimidazoles	44	13	3	1	2	31	18	9	**121**
Pesticides	176	10	6	3	3	31	13	11	**253**
Phenicols	53	16	4	1	4	41	19	12	**150**
Sulfamethazine	-	-	-	-	-	-	-	1	**1**
Sulfas	61	17	4	1	4	47	23	11	**168**
Tetracyclines	53	15	4	1	4	41	19	12	**149**
Trace Elements	4	12	-	-	-	14	8	3	**41**
Tranquilizers/Sedatives	44	13	3	1	2	31	18	9	**121**
Zinc	14	1	-	-	-	-	1	-	**16**
Total	**1,076**	**276**	**67**	**21**	**60**	**676**	**333**	**180**	**2,689**

Note: Based on 601 import residue samples. Multiple import residue results may be associated with the same sample.

Table 10: NRP Import Sample Analyses by Chemical Residue Results Jan–Mar 2016

Number of import reinspection program analyses based on 601 import residue sample, arranged by results of chemical residue. **Five** chemical residue violations were found.

Chemical Residue	Residue Detected - Not-Violative	Residue Not Detected	Residue Detected - Violative	Total
Aminoglycosides	2	149	-	**151**
Analgesic/Anti-inflammatory	-	1	-	**1**
Analgesics/Anti-Inflammatory	2	147	-	**149**
Arsenic	2	144	-	**146**
Avermectins	-	136	-	**136**
Benzimidazoles	2	119	-	**121**
Beta Agonists	2	146	-	**148**
Beta Lactams	-	75	-	**75**
Beta Lactams/Cephalosporins	2	73	-	**75**
Cadmium	-	2	-	**2**
Canceled-Avermectin	-	1	-	**1**
Cobalt	-	2	-	**2**
Drugs, General	1	148	-	**149**
Ethion	-	-	**5**	**5**
Fluoroquinolones	2	81	-	**83**
Fluoroquninolones	-	67	-	**67**
Hormones	2	182	-	**184**
Iron	-	2	-	**2**
Ivermectin	2	-	-	**2**

Note: Based on 601 import residue samples. Multiple import residue results may be associated with the same

Table 10 (Continued): NRP Import Sample Analyses by Chemical Residue Results, Jan–Mar 2016

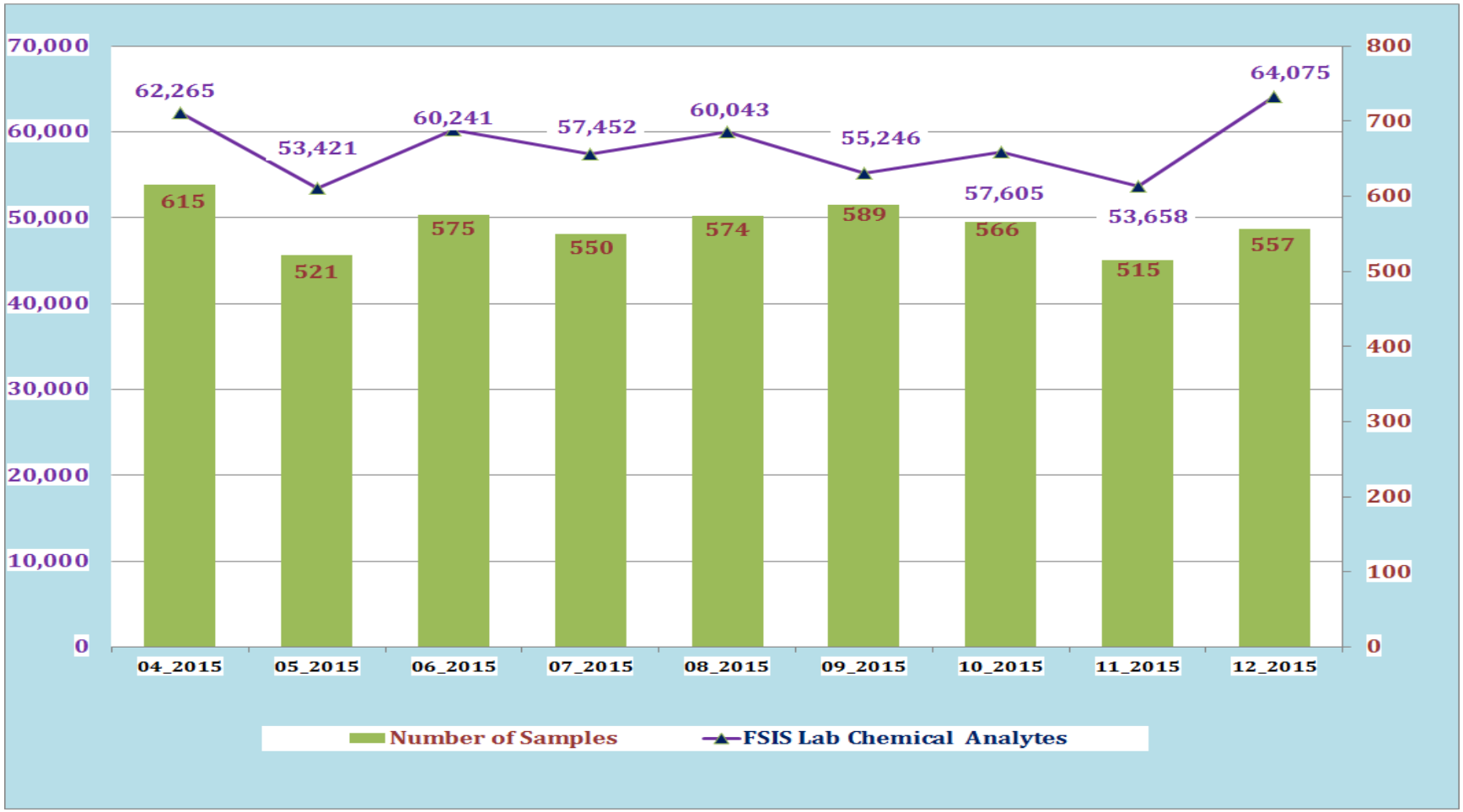
Chemical Residue	Residue Detected - Not-Violative	Residue Not Detected	Residue Detected - Violative	Total
Levamisole	1	-	-	**1**
Macrolides	2	102	-	**104**
Macrolides/Lincosamides/Streptogramins	-	46	-	**46**
Manganese	-	12	-	**12**
Molybdenum	-	6	-	**6**
Nitrofurans	-	1	-	**1**
Nitroimidazoles	2	119	-	**121**
Pesticides	-	253	-	**253**
Phenicols	2	148	-	**150**
Sulfamethazine	1	-	-	**1**
Sulfas	1	167	-	**168**
Tetracyclines	2	147	-	**149**
Trace Elements	-	41	-	**41**
Tranquilizers/Sedatives	2	119	-	**121**
Zinc	-	16	-	**16**
Total	**32**	**2,652**	**5**	**2,689**

Note: Based on 601 import residue samples. Multiple import residue results may be associated with the same

Appendix

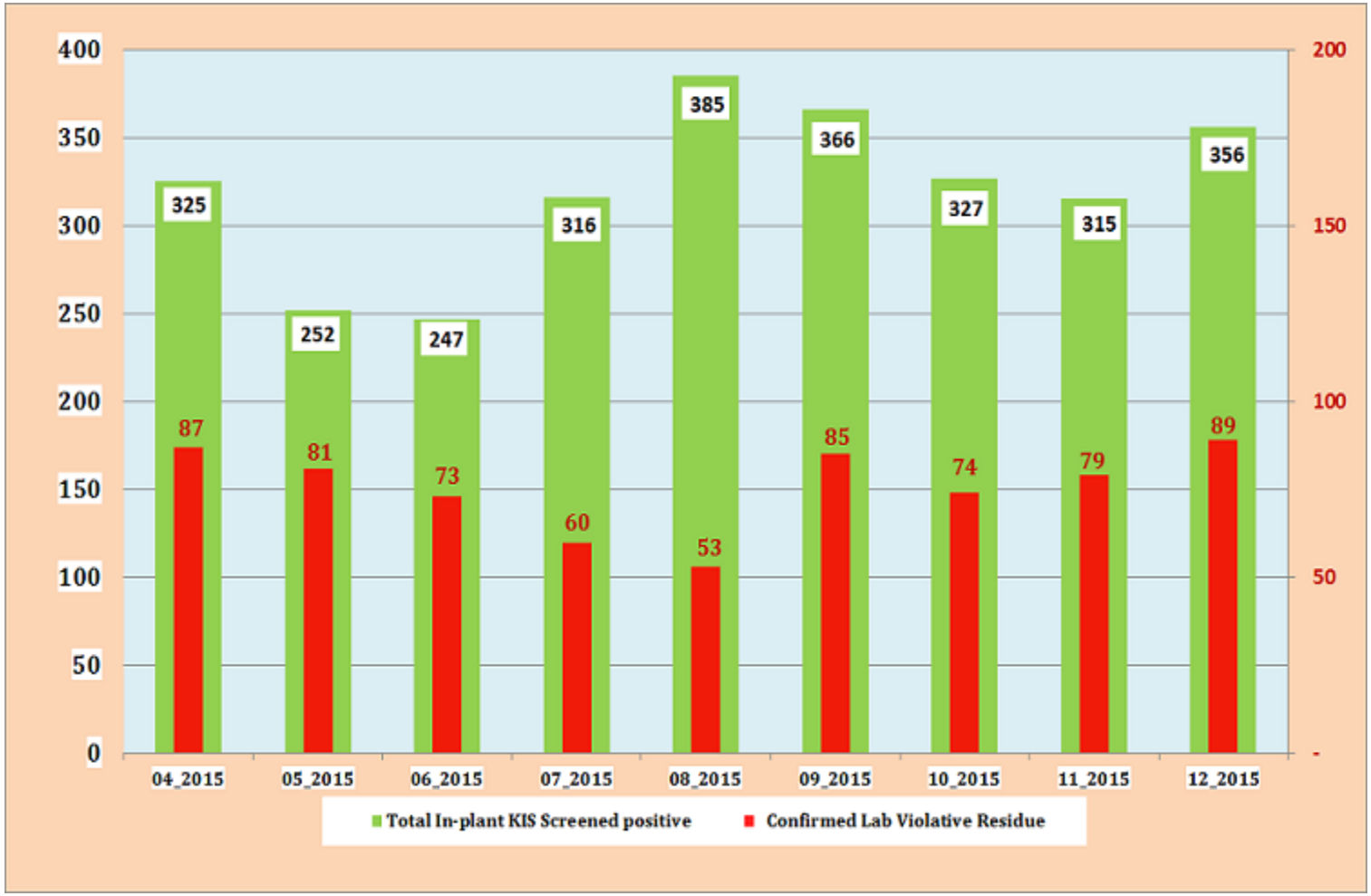
Summary of NRP Domestic Sample Data (Scheduled and Inspector-Generated: KIS™ Test) (Apr–Dec 2015)

Figure A:[1] **Distribution of NRP Domestic Scheduled Samples by Month. Includes FSIS Lab Chemical Analytes by Month, Apr–Dec 2015**



[1] Number of residue domestic scheduled sample in **RED**.
Multiple lab chemical analytes results may be associated with the same carcass sample.

Figure B[2]: Distribution of NRP Inspector-Generated (In-plant) Positive Screenings (KIS™ Test) and Confirmed Lab Violative Results by Month, Apr–Dec 2015



[2] Number of confirmed violative samples in **RED**.
Multiple labs confirmed violative residue 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 2015

Residue Name	Apr 2015	May 2015	Jun 2015	Jul 2015	Aug 2015	Sep 2015	Oct 2015	Nov 2015	Dec 2015	Total
Ampicillin	4	2	1	2	2	4	3	3	3	**24**
Apramycin	-	1	-	-	-	-	-	-	-	**1**
Cefazolin	-	-	-	1	-	-	-	-	-	**1**
Ciprofloxacin	1	1	1	1	-	-	1	1	1	**7**
Desfuroylceftiofur	19	21	23	13	20	22	14	15	28	**175**
Dihydrostreptomycin	-	-	-	-	-	-	-	-	1	**1**
Erythromycin	-	-	-	-	-	1	-	-	-	**1**
Florfenicol	8	2	4	3	2	3	13	1	10	**46**
Flunixin	6	5	5	7	5	6	6	9	2	**51**
Gentamycin Sulfate	2	-	-	1	-	-	-	2	-	**5**
Ketoprofen	-	-	-	-	-	-	-	-	1	**1**
Lincomycin	-	1	1	-	-	-	-	2	-	**4**
Neomycin	3	4	5	1	-	-	4	2	6	**25**
Oxyphenylbutazone	-	-	-	-	-	-	1	-	-	**1**
Oxytetracycline	1	2	1	1	1	2	1	2	-	**11**

Note: Multiple violations may be associated with one carcass.

Table 11 (Continued): Distribution of NRP Inspector-Generated Program (In-plant) Screenings (KIS™ Test), Residue Violative Samples, Apr–Dec 2015

Residue Name	Apr 2015	May 2015	Jun 2015	Jul 2015	Aug 2015	Sep 2015	Oct 2015	Nov 2015	Dec 2015	Total
Penicillin	22	20	10	16	8	19	25	13	19	**152**
Ractopamine	-	-	-	-	-	2	-	-	-	**2**
Spectinomycin	-	-	1	-	-	-	-	-	-	**1**
Sulfadiazine	1	-	-	-	-	1	-	-	2	**4**
Sulfadimethoxine	5	8	4	4	7	5	4	6	7	**50**
Sulfadoxine	-	-	-	-	-	-	3	-	1	**4**
Sulfamethazine	12	6	13	6	6	10	7	3	5	**68**
Sulfamethoxazole	1	2	1	-	-	1	-	2	1	**8**
Sulfamethoxypyridazine	-	-	1	1	-	3	-	-	-	**5**
Tetracycline	-	-	-	-	1	1	1	-	-	**3**
Tilmicosin	2	4	3	3	1	5	4	6	2	**30**
Tylosin	-	2	-	-	-	-	-	-	-	**2**
Total	**87**	**81**	**74**	**60**	**53**	**85**	**87**	**67**	**89**	**683**

Note: Multiple violations may be associated with one carcass.

Table 12: Distribution of NRP Inspector-Generated Program (In-plant) Screenings (KIS™ Test), Residue Violative Samples by Animal Class, Apr–Dec 2015

Compound	Beef Cows	Boar/ Stags	Bob Veal	Bulls	Dairy Cows	Formula-fed Veal	Goats	Heavy Calves	Heifer	Lamb	Market Swine	Mature Sheep	Sows	Steers	Total
Ampicillin	-	-	-	-	24	-	-	-	-	-	-	-	-	-	**24**
Apramycin	-	-	-	-	-	1	-	-	-	-	-	-	-	-	**1**
Cefazolin	-	-	-	-	-	-	-	-	-	-	-	-	-	1	**1**
Ciprofloxacin	1	-	-	3	-	-	-	-	-	-	-	-	1	2	**7**
Desfuroylceftiofur	16	-	9	3	141	-	1	-	1	-	-	-	-	4	**175**
Dihydrostreptomycin	-	-	-	-	1	-	-	-	-	-	-	-	-	-	**1**
Erythromycin	-	-	-	-	-	-	-	-	-	-	-	-	-	1	**1**
Florfenicol	10	-	3	4	8	-	-	10	-	-	-	-	-	11	**46**
Flunixin	4	-	4	1	35	-	-	2	2	-	-	-	-	3	**51**
Gentamycin Sulfate	1	-	-	-	-	-	-	-	1	-	-	-	2	1	**5**
Ketoprofen	-	-	-	-	1	-	-	-	-	-	-	-	-	-	**1**
Lincomycin	-	-	-	-	3	-	1	-	-	-	-	-	-	-	**4**
Neomycin	-	-	23	-	-	-	-	1	-	-	-	-	-	1	**25**
Oxyphenylbutazone	-	-	-	-	-	-	-	-	-	-	-	-	-	1	**1**
Oxytetracycline	4	-	-	1	6	-	-	-	-	-	-	-	-	-	**11**

Note: Multiple violations may be associated with one carcass.

Table 12 (Continued): Distribution of NRP Inspector-Generated Program (In-plant) Screenings (KIS™ Test), Residue Violative Samples by Animal Class, Apr–Dec 2015

Compound	Beef Cows	Boar/ Stags	Bob Veal	Bulls	Dairy Cows	Formula-fed Veal	Goats	Heavy Calves	Heifer	Lamb	Market Swine	Roaster Swine	Sows	Steers	Total
Penicillin	21	1	2	-	100	-	-	3	2	1	1	1	17	3	**152**
Ractopamine	-	-	-	-	-	-	-	-	-	-	2	-	-	-	**2**
Spectinomycin	-	-	-	-	-	-	1	-	-	-	-	-	-	-	**1**
Sulfadiazine	-	-	4	-	-	-	-	-	-	-	-	-	-	-	**4**
Sulfadimethoxine	2	-	7	-	40	-	-	-	-	-	1	-	-	-	**50**
Sulfadoxine	-	-	-	1	3	-	-	-	-	-	-	-	-	-	**4**
Sulfamethazine	11	-	13	2	22	-	-	6	-	-	3	-	-	11	**68**
Sulfamethoxazole	-	-	7	-	1	-	-	-	-	-	-	-	-	-	**8**
Sulfamethoxypyridazine	-	-	-	-	3	-	-	-	-	-	-	-	-	2	**5**
Tetracycline	-	-	-	-	3	-	-	-	-	-	-	-	-	-	**3**
Tilmicosin	10	-	6	2	6	-	-	-	2	-	-	-	-	4	**30**
Tylosin	1	-	-	-	1	-	-	-	-	-	-	-	-	-	**2**
Total	**81**	**1**	**78**	**17**	**398**	**1**	**3**	**22**	**8**	**1**	**7**	**1**	**20**	**45**	**683**

Note: Multiple violations may be associated with one carcass.