United States National Residue Program Quarterly Report (Oct.–Dec. 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. The NRP is an interagency program between 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 detects 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 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.

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 Oct.–Dec. 2015. 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 first quarter (**Oct.–Dec. 2015**) by month, whereas the appendix will include previous three quarters' (**Oct. 2014–June 2015**) results for a quick comparison with current quarter report.

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.

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 Mar. 1, 2016**

Tables

Table 1a: NRP Domestic Scheduled Sampling Program Results by Month, Oct.–Dec. 2015

During the first quarter of FY 2016, **1,638** 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
Oct.	**566 / (57,605)**	N/A	**2 (Piperonyl Butoxide)**
Nov.	**515 / (53,658)**	1 / (1) Dairy Cows 1 / (1) Goat	**1 (Sulfadimethoxine)** **1 (Moxidectin)**
Dec.	**557 / (64,075)**	1 / (1) Lamb	**1 (Doramexting)**
Total	**1,638 / (175,338)**	**3 / (3)**	

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of Mar. 1, 2016**

Table 1b: NRP Domestic Scheduled Sampling Program collected by Month, Carcass Class, Oct.–Dec. 2015

Carcass Class	Oct.	Nov.	Dec.	Total
Beef Cows	62	63	51	176
Bob veal	43	43	50	136
Dairy Cows	65	51	63	179
Goats	21	19	25	65
Heifer	44	35	43	122
Lamb/sheep	21	18	29	68
Market Swine	68	66	63	197
Sows	61	57	68	186
Steers	38	39	41	118
Young Chickens	61	60	58	179
Young Turkeys	69	55	60	184
Older Breeder Turkeys	13	9	6	28
TOTAL	**566**	**515**	**557**	**1,638**

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

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

Carcass Class	Oct.	Nov.	Dec.	Total
Beef Cows	1,503 **(43)**	1,629 **(34)**	1,405 **(32)**	**4,537 (109)**
Boars/Stags	11 **(0)**	7 **(0)**	14 **(0)**	**32 (0)**
Bob Veal	1,660 **(31)**	2,133 **(30)**	2,049 **(60)**	**5,842 (121)**
Bulls	146 **(11)**	133 **(8)**	143 **(2)**	**422 (21)**
Dairy Cows	8,807 **(194)**	7,311 **(179)**	8,437 **(256)**	**24,555 (629)**
Formula Fed Veal	51 **(1)**	48 **(0)**	62 **(2)**	**161 (2)**
Goats	50 **(0)**	35 **(1)**	41 **(1)**	**126 (2)**
Heavy Calves	38 **(3)**	47 **(1)**	46 **(2)**	**131 (6)**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of Mar. 1, 2016**

Table 2 (Continued): NRP Domestic Inspector-Generated (in-plant) Screening Program (KIS™ Test) Performed by Month, Carcass Class, Oct.–Dec. 2015

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

Carcass Class	Oct.	Nov.	Dec.	Total
Heifers	202 **(7)**	181 **(2)**	179 **(5)**	**562** **(14)**
Lambs	86 **(0)**	40 **(1)**	44 **(0)**	**170** **(1)**
Market Hogs	1,427 **(8)**	1,201 **(7)**	1,469 **(8)**	**4,097** **(23)**
Mature Sheep	26 **(0)**	23 **(0)**	43 **(2)**	**92** **(2)**
Non Formula Fed Veal	22 **(2)**	6 **(0)**	8 **(0)**	**36** **(2)**
Roaster Pigs	68 **(0)**	95 **(0)**	78 **(2)**	**241** **(2)**
Sows	466 **(10)**	415 **(6)**	459 **(2)**	**1,340** **(18)**
Steers	704 **(16)**	554 **(11)**	681 **(21)**	**1,939** **(48)**
TOTAL	**15,267** **(326)**	**13,859** **(280)**	**15,158** **(394)**	**44,284** **(1,000)**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of Mar. 1, 2016**

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

1,000 in-plant screen positive values were identified from about 45,000 in-plant tests. Of these positive samples, 239 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 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
Oct.	15,267	326	316 / (**21,119**)	64	**87**	Penicillin (**25**) Ceftiofur (**14**) Florfenicol (**7**)	**14**
Nov.	13,859	280	273 / (**20,397**)	53	**67**	Ceftiofur (**15**) Penicillin (**13**) Flunixin (**9**)	**14**
Dec.	15,158	394	356 / (**37,336**)	70	**85**	Ceftiofur (**27**) Penicillin (**19**) Florfenicol (**10**)	**15**
Total	**44,284**	**1,000**	**945** / (**78,852**)	**187**	**239**	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 Mar. 1, 2016**

Table 4: Distribution of NRP Residue Violations Inspector-Generated (in-plant) Screening Program (KIS™ Test). Results by Carcass Class and Month, Oct.–Dec. 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	Oct.	Nov.	Dec.	Total
Beef Cows	8 **(16)**	6 **(10)**	7 **(10)**	**21** **(36)**
Boars/Stags	--	--	--	--
Bob Veal	5 **(5)**	9 **(10)**	9 **(10)**	**23** **(25)**
Bulls	3 **(6)**	1 **(3)**	--	**4** **(9)**
Dairy Cows	39 **(46)**	30 **(37)**	48 **(55)**	**117** **(138)**
Formula Fed Veal	--	--	--	--
Goats	--	--	--	--
Heavy Calves	1 **(3)**	--	2 **(3)**	**3** **(6)**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of Mar. 1, 2016**

Table 4 (Continued): Distribution of NRP Residue Violations Inspector-Generated (In-plant) Screening Program (KIS™ Test). Results by Carcass Class and Month, Oct.–Dec. 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	Oct.	Nov.	Dec.	Total
Heifers	--	2 **(2)**	--	**2** **(2)**
Lambs	--	--	--	--
Market Hogs	--	--	--	--
Mature Sheep	--	--	--	--
Non Formula Fed Veal	--	--	--	--
Roaster Pigs	--	--	1 **(1)**	1 **(1)**
Sows	6 **(6)**	1 **(1)**	--	**7** **(7)**
Steers	2 **(5)**	4 **(4)**	3 **(6)**	**9** **(15)**
TOTAL	**64** **(87)**	**53** **(67)**	**70** **(85)**	**187** **(239)**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of Mar. 1, 2016**

Table 5a: Overall Distribution of NRP Residue Violations Inspector-Generated (In-plant) Screening Program (KIS™ Test). Results by Carcass Class and Chemical Residue (Combined Oct.–Dec. 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	Heavy Calves	Heifers	Roaster Pigs	Sows	Steers	Total
Ampicillin	-	-	-	8	-	-	-	-	-	**8**
Ciprofloxacin	-	-	1	-	-	-	-	1	1	**3**
Desfuroylceftiofur	5	2	1	47	-	-	-	-	1	**56**
Dihydrostreptomycin	-	-	-	1	-	-	-	-	-	**1**
Florfenicol	9	1	2	4	4	-	-	-	4	**24**
Flunixin	2	1	1	9	1	2	-	-	1	**17**
Gentamycin Sulfate	1	-	-	-	-	-	-	-	1	**2**
Ketoprofen	-	-	-	1	-	-	-	-	-	**1**
Lincomycin	-	-	-	2	-	-	-	-	-	**2**
Neomycin	-	10	-	-	1	-	-	-	1	**12**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of Mar. 1, 2016**

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 Oct.–Dec. 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	Heavy Calves	Heifers	Roaster Pigs	Sows	Steers	Total
Oxyphenylbutazone	-	-	-	-	-	-	-	-	1	**1**
Oxytetracycline	1	-	1	1	-	-	-	-	-	**3**
Penicillin	9	-	-	40	-	-	1	6	1	**57**
Sulfadiazine	-	2	-	-	-	-	-	-	-	**2**
Sulfadimethoxine	-	2	-	15	-	-	-	-	-	**17**
Sulfadoxine	-	-	1	2	-	-	-	-	-	**3**
Sulfamethazine	4	3	1	5	-	-	-	-	2	**15**
Sulfamethoxazole	-	2	-	1	-	-	-	-	-	**3**
Tetracycline	-	-	-	1	-	-	-	-	-	**1**
Tilmicosin	5	2	1	1	-	-	-	-	2	**11**
Total	**36**	**25**	**9**	**138**	**6**	**2**	**1**	**7**	**15**	**239**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of Mar. 1, 2016**

Table 5b: Distribution of NRP Residue Violations Inspector-Generated (In-plant) Screening Program (KIS™ Test). Results by Carcass Class and Chemical Residue, Oct. 2015

Compound	Beef Cows	Bob Veal	Bulls	Dairy Cows	Heavy Calves	Sows	Steers	Total
Ampicillin	-	-	-	3	-	-	-	**3**
Ciprofloxacin	-	-	-	-	-	1	-	**1**
Desfuroylceftiofur	-	-	1	13	-	-	-	**14**
Florfenicol	7	-	2	2	2	-	-	**13**
Flunixin	-	-	-	5	1	-	-	**6**
Neomycin	-	4	-	-	-	-	-	**4**
Oxyphenylbutazone	-	-	-	-	-	-	1	**1**
Oxytetracycline	1	-	-	-	-	-	-	**1**
Penicillin	7	-	-	13	-	5	-	**25**
Sulfadimethoxine	-	1	-	3	-	-	-	**4**
Sulfadoxine	-	-	1	2	-	-	-	**3**
Sulfamethazine	1	-	1	3	-	-	2	**7**
Tetracycline	-	-	-	1	-	-	-	**1**
Tilmicosin	-	-	1	1	-	-	2	**4**
Total	**16**	**5**	**6**	**46**	**3**	**6**	**5**	**87**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of Mar. 1, 2016**

Table 5c: Distribution of NRP Residue Violations Inspector-Generated (In-plant) Screening Program (KIS™ Test). Results by Carcass Class and Chemical Residue, Nov. 2015

Compound	Beef Cows	Bob Veal	Bulls	Dairy Cows	Heifers	Sows	Steers	Total
Ampicillin	-	-	-	3	-	-	-	**3**
Ciprofloxacin	-	-	1	-	-	-	-	**1**
Desfuroylceftiofur	1	1	-	12	-	-	1	**15**
Florfenicol	-	1	-	-	-	-	-	**1**
Flunixin	1	1	1	3	2	-	1	**9**
Gentamycin Sulfate	1	-	-	-	-	-	1	**2**
Lincomycin	-	-	-	2	-	-	-	**2**
Neomycin	-	2	-	-	-	-	-	**2**
Oxytetracycline	-	-	1	1	-	-	-	**2**
Penicillin	1	-	-	10	-	1	1	**13**
Sulfadimethoxine	-	1	-	5	-	-	-	**6**
Sulfamethazine	2	-	-	1	-	-	-	**3**
Sulfamethoxazole	-	2	-	-	-	-	-	**2**
Tilmicosin	4	2	-	-	-	-	-	**6**
Total	**10**	**10**	**3**	**37**	**2**	**1**	**4**	**67**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of Mar. 1, 2016**

Table 5d: Distribution of NRP Residue Violations Inspector-Generated (In-plant) Screening Program (KIS™ Test). Results by Carcass Class and Chemical Residue, Dec. 2015

Compound	Beef Cows	Bob Veal	Dairy Cows	Heavy Calves	Roaster Pigs	Steers	Total
Ampicillin	-	-	2	-	-	-	**2**
Ciprofloxacin	-	-	-	-	-	1	**1**
Desfuroylceftiofur	4	1	22	-	-	-	**27**
Dihydrostreptomycin	-	-	1	-	-	-	**1**
Florfenicol	2	-	2	2	-	4	**10**
Flunixin	1	-	1	-	-	-	**2**
Ketoprofen	-	-	1	-	-	-	**1**
Neomycin	-	4	-	1	-	1	**6**
Penicillin	1	-	17	-	1	-	**19**
Sulfadiazine	-	2	-	-	-	-	**2**
Sulfadimethoxine	-	-	7	-	-	-	**7**
Sulfamethazine	1	3	1	-	-	-	**5**
Sulfamethoxazole	-	-	1	-	-	-	**1**
Tilmicosin	1	-	-	-	-	-	**1**
Total	**10**	**10**	**55**	**3**	**1**	**6**	**85**

Note: Results are based on sample collection date.
Data Source: FSIS Data Warehouse (DW)/ Public Health Information System (PHIS) **as of Mar. 1, 2016**

Table 6: NRP Import Samples Collected by Country, Oct.–Dec. 2015

Three violative residue import results (Abamectin, Arsenic, and Ivermectin) were found in 646 tested import samples. See Table 10 for more details.

Country	Oct.	Nov.	Dec.	Total
Canada	58	53	50	161
Uruguay	39	43	18	100
Australia	16	28	20	64
Mexico	17	17	11	45
New Zealand	19	16	8	43
Chile	9	14	14	37
Other**	88	53	55	196
Total	**246**	**224**	**176**	**646**

** Between Oct. to Dec. 2015, the following additional countries eligible to export meat and egg product to the United States did not produce a violation: Brazil, Costa Rica, Denmark, Iceland, Ireland, Israel, Italy, Japan, Nicaragua, Poland, Spain, and United Kingdom.

Table 7: NRP Import Samples Collected by Species, Oct.–Dec. 2015

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

Species	Oct.	Nov.	Dec.	Total
Beef	107	115	86	308
Chicken	34	33	18	85
Duck	1	-	-	1
Goat	9	1	8	18
Lamb	30	2	-	32
Mutton	2	-	4	6
Pork	32	34	29	95
Turkey	15	23	19	57
Veal	16	16	12	44
Total	**246**	**224**	**176**	**646**

Table 8: NRP Import Sample Analysis by Chemical Residue, Oct.–Dec. 2015

The number of import analyses based on 646 import residue samples collected and analyzed during the import reinspection program tested for different chemical residues.

Chemical Residue	Oct.	Nov.	Dec.	Total
Aminoglycosides	87	66	55	**208**
Analgesics/Anti-Inflammatory	89	65	56	**210**
Arsenic	69	55	52	**176**
Avermectins	53	34	42	**129**
Barium	1	-	-	**1**
Benzimidazoles	-	-	11	**11**
Beta Agonists	89	66	56	**211**
Beta Lactams	51	32	30	**113**
Beta Lactams/Cephalosporins	38	33	26	**97**
Doramectin	-	-	1	**1**
Drugs, General	64	42	44	**150**
Ethion	2	-	1	**3**
Ethion Metabolite	-	1	-	**1**
Fluoroquninolones	89	64	56	**209**
Hormones	108	81	69	**258**
Ivermectin	-	1	2	**3**
Macrolides	89	65	56	**210**
Manganese	3	5	5	**13**
Molybdenum	-	2	2	**4**
Nitroimidazoles	-	-	11	**11**
Pesticides	89	80	60	**229**
Phenicols	89	65	56	**210**
Strontium	1	1	-	**2**
Sulfas	95	77	62	**234**
Tetracyclines	86	65	56	**207**
Trace Elements	9	10	8	**27**
Tranquilizers/Sedatives	-	-	11	**11**
Zinc	9	11	4	**24**
Total	**1,210**	**921**	**832**	**2,963**

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

Table 9: NRP Import Sample Analyses by Species and Chemical Residue, Oct.–Dec. 2015

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

Chemical Residue	Beef	Chicken	Duck	Goat	Lamb	Mutton	Pork	Turkey	Veal	Total
Aminoglycosides	73	43	-	3	15	3	36	13	22	**208**
Analgesics/Anti-Inflammatory	73	43	-	5	16	3	35	13	22	**210**
Arsenic	60	34	1	4	16	2	30	20	9	**176**
Avermectins	59	1	-	4	16	3	34	3	9	**129**
Barium	-	-	-	-	-	-	1	-	-	**1**
Benzimidazoles	2	1	-	-	-	1	3	3	1	**11**
Beta Agonists	73	43	-	5	16	3	36	13	22	**211**
Beta Lactams	36	23	-	4	16	2	19	4	9	**113**
Beta Lactams/Cephalosporins	37	20	-	1	-	1	16	9	13	**97**
Doramectin	1	-	-	-	-	-	-	-	-	**1**
Drugs, General	38	43	-	5	16	3	22	13	10	**150**
Ethion	3	-	-	-	-	-	-	-	-	**3**
Ethion Metabolite	1	-	-	-	-	-	-	-	-	**1**
Fluoroquninolones	73	43	-	5	16	3	35	12	22	**209**
Hormones	121	43	-	5	16	3	35	13	22	**258**
Ivermectin	3	-	-	-	-	-	-	-	-	**3**
Macrolides	73	43	-	5	16	3	35	13	22	**210**

Note: Based on 646 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, Oct.–Dec. 2015

Chemical Residue	Beef	Chicken	Duck	Goat	Lamb	Mutton	Pork	Turkey	Veal	Total
Manganese	1	3	-	-	-	-	5	4	-	**13**
Molybdenum	-	2	-	-	-	-	2	-	-	**4**
Nitroimidazoles	2	1	-	-	-	1	3	3	1	**11**
Pesticides	132	22	-	12	16	3	22	9	13	**229**
Phenicols	73	43	-	5	16	3	35	13	22	**210**
Strontium	-	1	-	-	-	-	-	1	-	**2**
Sulfas	79	43	-	5	16	3	44	22	22	**234**
Tetracyclines	71	43	-	5	16	3	35	12	22	**207**
Trace Elements	2	6	-	-	-	-	7	5	7	**27**
Tranquilizers/Sedatives	2	1	-	-	-	1	3	3	1	**11**
Zinc	17	1	-	-	-	-	4	-	2	**24**
Total	**1,105**	**546**	**1**	**73**	**223**	**44**	**497**	**201**	**273**	**2,963**

Note: Based on 646 import residue samples. Multiple import residue results may be associated with the same sample.

Table 10: NRP Import Sample Analyses by Chemical Residue Results, Oct.–Dec. 2015

Number of import reinspection program analyses arranged by results of chemical residue. **Four** chemical residue violations were found.

Chemical Residue	Residue Detected - Not-Violative	Residue Not Detected	Residue Detected - Violative	Total
Aminoglycosides	-	208	-	**208**
Analgesics/Anti-Inflammatory	-	210	-	**210**
Arsenic	4	172	-	**176**
Avermectins	-	129	-	**129**
Barium	-	1	-	**1**
Benzimidazoles	-	11	-	**11**
Beta Agonists	-	211	-	**211**
Beta Lactams	-	113	-	**113**
Beta Lactams/Cephalosporins	-	97	-	**97**
Doramectin	1	-	-	**1**
Drugs, General	-	150	-	**150**
Ethion	-	-	3	**3**
Ethion Metabolite	-	-	1	**1**
Fluoroquninolones	-	209	-	**209**
Hormones	-	258	-	**258**
Ivermectin	3	-	-	**3**
Macrolides	-	210	-	**210**

Note: Based on 646 import residue samples. Multiple import residue results may be associated with the same sample.

Table 10 (Continued): NRP Import Sample Analyses by Chemical Residue Results, Oct.–Dec. 2015

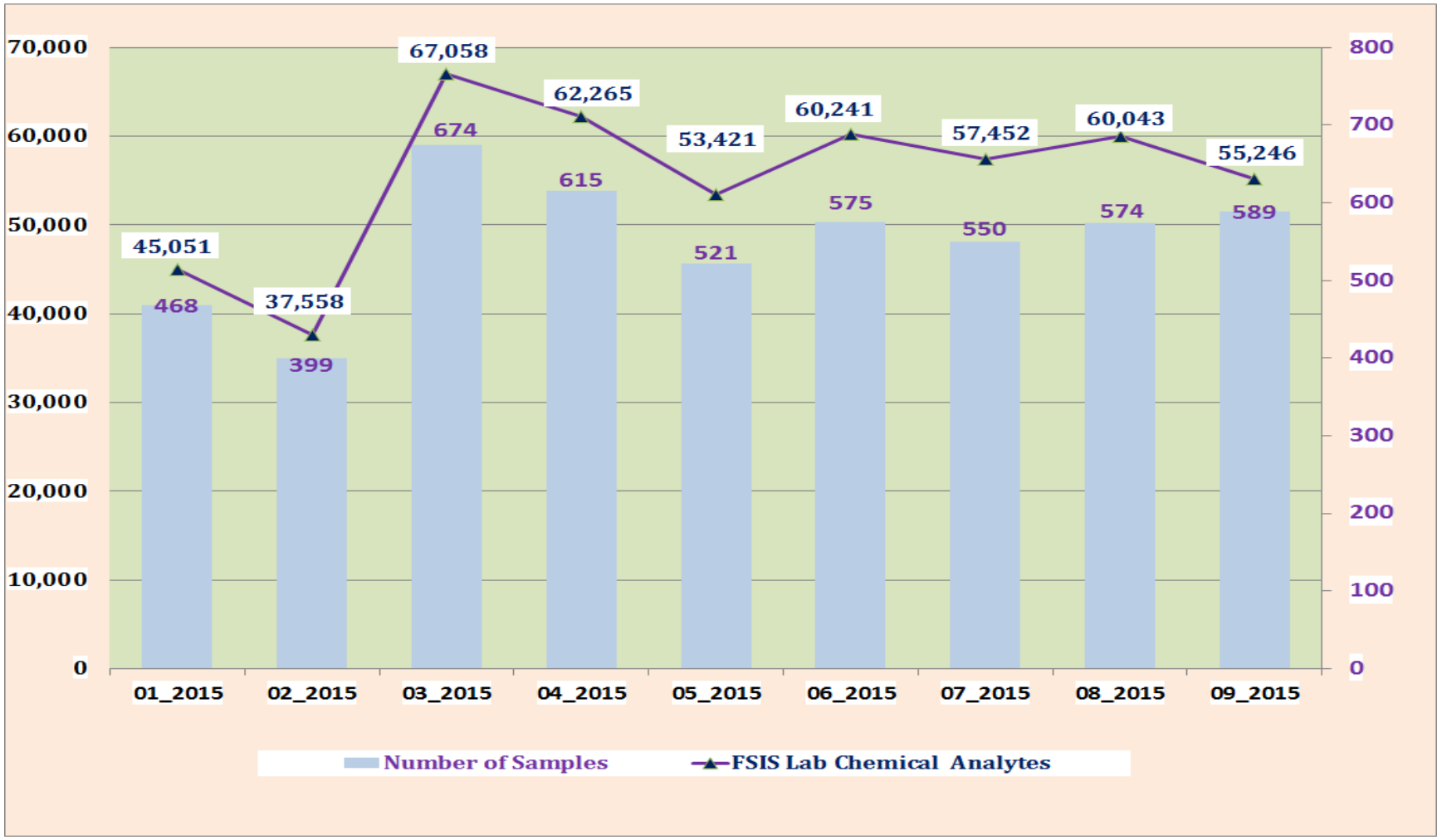
Chemical Residue	Residue Detected - Not-Violative	Residue Not Detected	Residue Detected - Violative	Total
Manganese	-	13	-	**13**
Molybdenum	-	4	-	**4**
Nitroimidazoles	-	11	-	**11**
Pesticides	-	229	-	**229**
Phenicols	-	210	-	**210**
Strontium	-	2	-	**2**
Sulfas	-	234	-	**234**
Tetracyclines	-	207	-	**207**
Trace Elements	-	27	-	**27**
Tranquilizers/Sedatives	-	11	-	**11**
Zinc	-	24	-	**24**
Total	**8**	**2,951**	**4**	**2,963**

Note: Based on 646 import residue samples. Multiple import residue results may be associated with the same sample.

Appendix

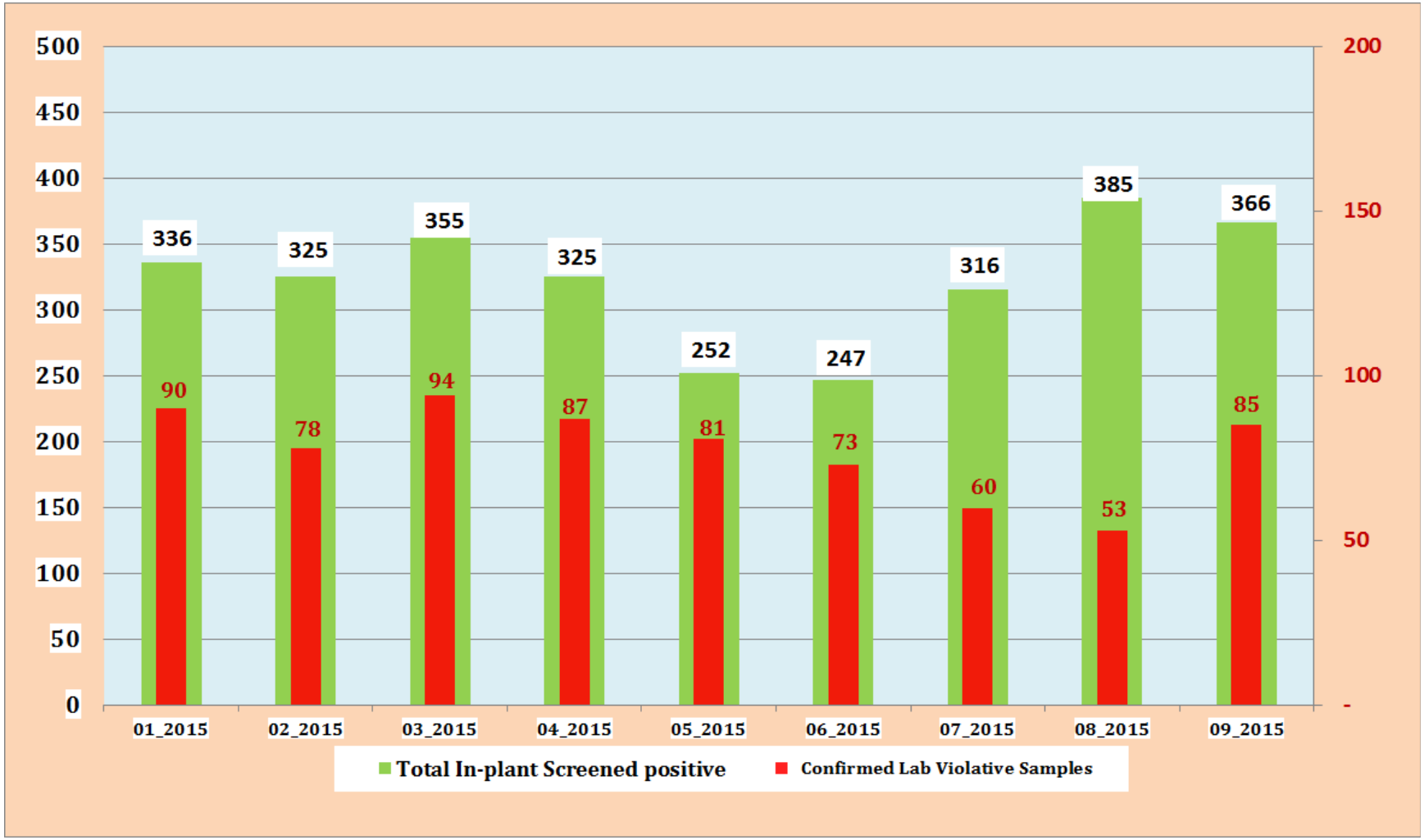
Summary of NRP Domestic Sample Data (Scheduled and Inspector-generated: KIS™ Test) (Jan. 2015–Sept. 2015)

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



[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, Jan. 2015–Sept. 2015



[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, Jan. 2015–Sept. 2015

Residue Name	Jan. 2015	Feb. 2015	Mar. 2015	Apr. 2015	May 2015	June 2015	July 2015	Aug. 2015	Sept. 2015	Total
Ampicillin	3	2	1	4	2	1	2	2	4	**21**
Apramycin	-	-	-	-	1	-	-	-	-	**1**
Cefazolin	-	-	-	-	-	-	1	-	-	**1**
Ciprofloxacin	1	4	4	1	1	1	1	-	-	**13**
Desethylene ciprofloxacin	-	-	2	-	-	-	-	-	-	**2**
Desfuroylceftiofur	30	20	25	19	21	23	13	20	22	**193**
Dihydrostreptomycin	-	1	-	-	-	-	-	-	-	**1**
Enrofloxacin	-	1	2	-	-	-	-	-	-	**3**
Erythromycin	-	-	-	-	-	-	-	-	1	**1**
Florfenicol	3	1	1	8	2	4	3	2	3	**27**
Flunixin	8	4	5	6	5	5	7	5	6	**51**
Gentamycin Sulfate	1	-	1	2	-	-	1	-	-	**5**
Lincomycin	-	2	3	-	1	1	-	-	-	**7**
Neomycin	6	3	4	3	4	5	1	-	-	**26**
Oxytetracycline	-	1	3	1	2	1	1	1	2	**12**

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, Jan. 2015–Sept. 2015

Residue Name	Jan. 2015	Feb. 2015	Mar. 2015	Apr. 2015	May 2015	June 2015	Jul. 2015	Aug. 2015	Sept. 2015	Total
Penicillin	17	17	18	22	20	10	16	8	19	**147**
Ractopamine	-	-	-	-	-	-	-	-	2	**2**
Salbutamol	-	-	1	-	-	-	-	-	-	**1**
Spectinomycin	-	2	-	-	-	1	-	-	-	**3**
Sulfadiazine	-	-	1	1	-	-	-	-	1	**3**
Sulfadimethoxine	4	8	4	5	8	4	4	7	5	**49**
Sulfadoxine	1	2	-	-	-	-	-	-	-	**3**
Sulfamethazine	10	7	7	12	6	13	6	6	10	**77**
Sulfamethoxazole	1	2	6	1	2	1	-	-	1	**14**
Sulfamethoxypyridazine	-	-	-	-	-	1	1	-	3	**5**
Tetracycline	-	-	-	-	-	-	-	1	1	**2**
Tilmicosin	4	-	5	2	4	3	3	1	5	**27**
Tulathromycin	1	-	-	-	-	-	-	-	-	**1**
Tylosin	-	1	1	-	2	-	-	-	-	**4**
Total	**90**	**78**	**94**	**87**	**81**	**74**	**60**	**53**	**85**	**702**

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, Jan. 2015–Sept. 2015

Compound	Beef Cows	Boar/ Stags	Bob Veal	Bulls	Dairy Cows	Formula-fed Veal	Goats	Heavy Calves	Heifer	Lamb	Market Swine	Mature Sheep	Roaster Swine	Sows	Steers	Total
Ampicillin	-	-	-	-	21	-	-	-	-	-	-	-	-	-	-	**21**
Apramycin	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	**1**
Cefazolin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	**1**
Ciprofloxacin	1	-	3	3	1	-	-	3	-	-	-	-	-	-	2	**13**
Desethylene ciprofloxacin	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	**2**
Desfuroylceftiofur	18	-	15	2	151	-	1	-	1	-	-	1	-	-	4	**193**
Dihydrostreptomycin	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	**1**
Enrofloxacin	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	**3**
Erythromycin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	**1**
Florfenicol	3	-	2	3	6	-	-	6	-	-	-	-	-	-	7	**27**
Flunixin	5	-	5	-	37	-	-	2	-	-	-	-	-	-	2	**51**
Gentamycin Sulfate	-	-	-	-	2	-	-	-	1	-	-	-	-	2	-	**5**
Lincomycin	-	-	-	-	2	-	3	2	-	-	-	-	-	-	-	**7**
Neomycin	-	-	25	-	-	-	-	-	-	-	-	-	-	-	1	**26**
Oxytetracycline	6	-	-	-	6	-	-	-	-	-	-	-	-	-	-	**12**

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, Jan. 2015–Sept. 2015

Compound	Beef Cows	Boar/ Stags	Bob Veal	Bulls	Dairy Cows	Formula-fed Veal	Goats	Heavy Calves	Heifer	Lamb	Market Swine	Mature Sheep	Roaster Swine	Sows	Steers	Total
Penicillin	17	1	3	2	99	-	-	3	3	1	1	-	-	15	2	**147**
Ractopamine	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	**2**
Salbutamol	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	**1**
Spectinomycin	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	**3**
Sulfadiazine	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	**3**
Sulfadimethoxine	2	-	5	-	39	-	-	-	1	-	1	-	-	-	1	**49**
Sulfadoxine	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	**3**
Sulfamethazine	14	-	13	1	24	-	-	11	-	-	5	-	-	-	9	**77**
Sulfamethoxazole	-	-	14	-	-	-	-	-	-	-	-	-	-	-	-	**14**
Sulfamethoxypyridazine	-	-	-	-	3	-	-	-	-	-	-	-	-	-	2	**5**
Tetracycline	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	**2**
Tilmicosin	10	-	4	1	4	-	-	-	3	-	-	-	-	-	5	**27**
Tulathromycin	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	**1**
Tylosin	2	-	-	-	1	-	-	-	-	-	-	-	1	-	-	**4**
Total	**78**	**1**	**99**	**12**	**402**	**1**	**7**	**27**	**9**	**1**	**9**	**1**	**1**	**17**	**37**	**702**

Note: Multiple violations may be associated with one carcass.