National Residue Program Quarterly Report (October – December 2024)

National Residue Program

In FY 2025 Q1, seven analytical methods were used by FSIS to test for approximately 260 different veterinary drugs, pesticides and environmental contaminants. An Excel spreadsheet with results from those tests from FSIS' domestic scheduled (surveillance sampling), domestic inspector-generated and import residue sampling programs accompanies this report. The Excel sheet also includes quarterly metals and per- and polyfluorinated alkyl substances (PFAS) results. Key observations are below.

Surveillance Sampling Plan

Specified slaughter subclasses are sampled during slaughter after a carcass has passed antemortem inspection. FSIS analyzed samples from 1,437 (carcasses) (1,391 from U.S. Federal plants and 46 from U.S. State inspected plants), two samples contained violative chemical residues. In total, more than 361,000 chemical residue analyses were conducted on the 1,437 samples collected under the surveillance sampling plan. Results from the surveillance sampling are presented in Tables 1, 2 and 3.

Table 1: FY 2025 Q1 Surveillance Sampling Results¹

		Total Number of		Number of Sample	s Analyzed in Quarter	1
Animal Category	Animal Class	Samples Planned for FY 2025	Total Samples ²	Number of Non- Detect Samples	Number of Non- Violative Positives Samples	Number of Violative Samples
	Beef Cows	752	195	195	-	-
	Bob Veal	400	69	65	4	-
	Dairy Cows	788	192	190	-	1
Bovine	Formula-Fed Veal	75	20	20	-	-
	Heifers	340	104	104	-	-
	Non-Formula-Fed Veal	75	13	11	1	1
	Steers	328	102	102	-	-
	Feral Swine	75	18	18	-	-
Porcine	Market Swine	728	199	197	2	-
	Sows	788	157	156	1	-
Doultm	Young Chickens	388	94	94	-	-
Poultry	Young Turkeys	388	82	82	-	-
	Goats	300	66	66	-	-
Other	Lambs	100	26	26	-	-
Young Chickens 388 94 94 Young Turkeys 388 82 82 Goats 300 66 66 Lambs 100 26 26 Species Sheep 100 19 19	-	-				
Species	Siluriformes (Catfish)	200	62	62	-	-
	Egg Products	100	19	19	-	-
C	uarter Total	5,925	1,437	1,426	8	2

¹ FY 2025 Q1 summary of surveillance sampling results from muscle, kidney and liver tissue samples collected by FSIS inspectors is shown.

² For raw product, a sample is a representative portion of a meat, poultry or egg product collected to identify potential microbiological, chemical or pathological hazards.

		Number of Samples Analyzed per Chemical Method							
Animal Category	Animal Class	Aminoglycosides	Antifungal Dyes	Metals	MEGA ²	Pesticides	PFAS ³		
	Beef Cows	195	-	4	195	195	-		
	Bob Veal	69	-	29	69	69	-		
	Dairy Cows	191	-	42	191	191	-		
Bovine	Formula-Fed Veal	20	-	-	20	20	-		
	Heifers	104	-	21	104	104	-		
	Non-Formula-Fed Veal	13	-	-	13	13	-		
	Steers	102	-	26	102	102	-		
	Feral Swine	-	-	-	18	18	15		
Porcine	Market Swine	199	-	29	199	199	-		
	Sows	157	-	19	157	157	-		
Doultry	Young Chickens	94	-	35	94	94	-		
Poultry	Young Turkeys	82	-	28	82	82	-		
	Goats	54	-	-	66	66	-		
Other	Lambs	25	-	-	26	26	-		
Species	Mature Sheep	19	-	-	19	19	-		
	Siluriformes (Catfish)	-	44	39	62	62	46		
	Egg Products	-	-	-	19	19	-		
	Quarter Total	1,324	44	272	1,436	1,436	61		

Table 2: Number of Samples Analyzed per Chemical Method and Slaughter Class¹

¹ FY 2025 Q1 number collected surveillance sampling residue sampling summary is shown reflecting the number of samples (carcasses) analyzed per chemical method per animal class.

² MEGA: multiresidue method

³ PFAS: polyfluoroalkyl substances

Table 3. Detailed Results for FY 2025 Q1 Surveillance Sampling Residue Violations¹

Animal Class	Tissue	Compound	Concentration	Units	Tolerance Level Value	Authority (CFR Citation)	
Dairy Cow	Liver	Flunixin	0.621	ppm	0.125 ppm	21 CFR 556.286	
Non-Formula-Fed Veal	Muscle	Piperonyl Butoxide	0.149	ppm	0.1 ppm	40 CFR 180.127	

ppm – parts per million (mg/kg)

CFR – Code of Federal Regulations

¹ List of FY 2025 Q1 surveillance sampling residue violations, including specific compound, concentration, tolerance and regulatory citation by animal class is shown.

Inspector-Generated Sampling Plan

FSIS inspectors conduct inspector-generated sampling when they suspect that animals presented for slaughter may have violative levels of chemical residues. These samples are reported under the Inspector-Generated program. If an inspector suspects that there is misuse of drugs that cannot be detected by the Kidney Inhibition Swab (KIS[™]) test, the samples are sent directly to the laboratory for appropriate analysis. These samples are reported under the Collector-Generated program.

In FY 2025 Q1, FSIS inspectors conducted 25,974 KIS[™] tests on animals they selected (Table 4). Of those samples, FSIS laboratories have currently analyzed 312 KIS test-positive samples for further analysis. From those 312 samples, a total of 69 chemical residue violations were reported in 59 samples (Table 5). Due to multiple analyses per sample submitted, multiple residue violations may be found in the same sample. The predominant violative residues in the inspector-generated samples were Desfuroylceftiofur (22), Penicillin (16) and Sulfadimethoxine (8), which account for 32%, 23% and 12% of total violative residues, respectively.

Table 4.	Results of FY 2	2025 Q1 Inspect	or-Generated In-	Plant (KIS [™])	and Laboratory	y Tests
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		KIS ™ Test						
Animal Category	Animal Class	Total Number of Carcasses Tested In-plant	Number of Carcasses Negative In-plant	Number of Samples Analyzed in FSIS Laboratory	Number of Laboratory- Confirmed Violations			
	Beef cows	2335	2286	46	5			
	Bob Veal	980	975	4	-			
	Bulls	363	353	9	-			
	Dairy Cows	16354	16145	185	41			
Bovine	Formula-fed Veal	4	4	-	-			
	Heavy Calves	40	39	1	-			
	Heifers	836	812	22	3			
	Non-Formula-fed Veal	27	25	2	2			
	Steers	1386	1352	30	4			
	Steers Boar/Stag Swine	20	20	-	-			
Dersine	Market Swine	2057	2054	3	-			
Portine	Roaster Swine	410	410	-	-			
	Sows	731	721	8	3			
	Adult Goats	12	12	-	-			
	Goats	1	1	-	-			
Other Species	Young Goats	50	49	1	1			
	Mature Sheep	80	80	-	-			
	Lambs	166	166	-	-			
	Quarter Total	25,852	25,504	311	59			

				Non-				
Chemical Residue	Beef Cow	Dairy Cow	Heifer	Formula-fed Veal	Sow	Steer	Young Goat	Quarter Total
Ampicillin	-	3	-	-	-	-	-	3
Ciprofloxacin	-	1	1	-	1	1	-	4
Desfuroylceftiofur	-	20	2	-	-	-	-	22
Doramectin	-	-	-	1	-	-	-	1
Florfenicol	-	1	-	-	-	2	-	3
Flunixin	2	4	-	-	-	1	-	7
Gentamycin Sulfate	1	-	-	-	-	-	-	1
Lincomycin	-	-	-	-	-	1	-	1
Penicillin	4	8	-	1	2	1	-	16
Sulfadimethoxine	-	8	-	-	-	-	-	8
Sulfamethazine	-	-	1	-	-	-	-	1
Tilmicosin	-	-	-	-	-	1	-	1
Tulathromycin	-	-	-	-	-	-	1	1
Quarter Total	7	45	4	2	3	7	1	69

 Table 5. FY 2025 Q1 Inspector-Generated Sampling Residue Violation Results by Chemical Residue and Animal Class

Table 6. Summary of FY 2025 Q1 Collector-Generated Sampling

FY 2025 Q1 summary of suspect animal samples sent directly to FSIS laboratory (collector-generated sampling) for appropriate analysis.

Animal Category	Animal Class	Total Samples	Number of Non-Detect Samples	Number of Non- Violative Positives Samples	Number of Violative Samples
	Beef Cow	4	2	2	-
Povino	Dairy Cow	10	7	2	1
Bovine	Heifer	2	1	-	1
	Steer	12	10	2	-
Porcino	Market Swine	16	15	1	-
Forcine	Sow	1	1	-	-
Poultry	Young Chicken	2	2	-	-
	Mature Sheep	1	1	-	-
Other	Lamb	8	8	-	-
	Young Goat	2	2	-	-

In addition to the publication of the quarterly FY 2025 Sampling Summary NRP results, FSIS posts a <u>spreadsheet</u> detailing each positive nonviolative and positive violative residue result associated with the NRP sampling program in a spreadsheet format on the FSIS Residue Chemistry website.

This spreadsheet includes detailed information regarding samples collected and analyzed by FSIS under both the "scheduled" sampling and the "inspector-generated" sampling programs. FSIS plans to update this spreadsheet on an ongoing basis to increase program transparency for all stakeholders. The spreadsheet includes the following data fields: sample collection and reviewed date, the project code, the animal class, tissue type, chemical residue name, concentration values, sample results (whether positive non-violative or positive violative), chemical concentration values (if any) and the CFR reference for each chemical listed.

Import Residue Sampling

Imported meat, poultry and egg products are sampled through the point-of-entry Import Reinspection Sampling Plan. This helps to verify that foreign inspection systems in exporting countries remain equivalent to U.S. standards. A total of 368 samples were analyzed under this program in FY 2025 Q1. During FY 2025 Q1, there were zero violative import samples. The results are summarized in **Table 7**.

Table 7. FY 2025 Q1 Residue Results for Imported Product Samples by Inspection Level and Production Type

		Normal		Increased ^{/1/}		Intensified ^{/2/}			
Product Name and Project Code	Analytical Method	Number of Samples Analyzed	Non-Violative Positives Samples	Violative Positive Samples	Number of Samples Analyzed	Non-Violative Positive Samples	Number of Samples Analyzed	Non-Violative Positive Samples	Quarter Total
Imported - Metals IMPMETALS	Metals	139	-	-	-	-	-	-	139
Imported - Pesticide IMPPESTICIDE	Pesticides	193	-	-	-	-	-	-	193
Imported Egg Products - Chemistry IMPRESEGG	Pesticides	6	2	-	-	-	13	8	19
Imported Processed Products - Residue Eastern Lab IMPRESPR_EL	Avermectins	2	-	-	-	-	-	-	2
Imported Processed Products - Residue Midwestern Lab IMPRESPR_MWL	Sulfonamides	15	-	-	-	-	-	-	15
Quarter T	otal	355	2	0	0	0	13	8	368

^{/1/}Increased is a level of reinspection above the normal level that is directed by a FSIS management decision. Under increased reinspection, FSIS may hold, on a case-by-case basis, lots of imported meat, poultry or egg products pending receipt of a laboratory analysis. If FSIS does not place the product on hold, the importer of record is still required to hold product tested for adulterants by FSIS and is not to allow such product to enter commerce unless and until negative results are received.

^{/2/}Intensified is a level of reinspection that is implemented automatically by the Public Health Information System (PHIS) when a Type of Inspection PHIS task is reported as "Fail." Under intensified reinspection, FSIS holds the sampled lot at the official import inspection establishment pending receipt of laboratory analysis. The sampled lot is not allowed to move off-site to be held. Intensified is a level of reinspection that is implemented automatically by the Public Health Information System (PHIS) when a Type of Inspection PHIS task is reported as "Fail." Under intensified reinspection, FSIS holds the sampled lot at the official import inspection establishment pending receipt of laboratory analysis. The sampled lot is not allowed to move off-site to be held.