



United States Food Safety  
Department of and Inspection  
Agriculture Service

## Quarterly Progress Report on *Salmonella* and *Campylobacter* Testing of Selected Raw Meat and Poultry Products: Preliminary Results, April 2013 to June 2013.

### Executive Summary

During the last quarter:

- There were 8,601 samples collected and analyzed for the PR/HACCP Verification program.
- There were only 165 total PR/HACCP samples collected for ground poultry because sampling of these products was suspended at the start of the NRTE Comminuted Poultry Exploratory Sampling project.
- The *Salmonella* percent positive for each product were as follows:
  - Young Chicken – 2.6% (2955 samples)
  - Ground Beef – 1.3% (4844 samples)
  - Ground Chicken – 15.0% (140 samples)
  - Ground Turkey – 16.0% (25 samples)
  - Turkey – 3.0% (637 samples)
- There were 3,592 samples co-analyzed for *Campylobacter*, with the following percent positive results:
  - Young Chicken – 5.7% (2955 samples)
  - Turkeys – 3.1% (637 samples)
- 80.6% of all establishments are in Category 1, while 3.3% are in Category 3. The remaining plants are in some version of Category 2.
- From the previous quarter, the percentage of plants in Category 3:
  - Decreased for Young Chicken plants (8.5% to 6.3%)
  - Decreased for Turkey plants (5.8% to 2.9%)
  - Increase for Ground beef plants (1.0% to 1.3%)
  - Remained the same for Ground Chicken plants (25%) and Ground Turkey plants (0%)

This report discusses the *Salmonella* verification sampling results for the second quarter CY2013 as presented in Tables 1-7, Chart 1, and Figures 1-7. This data is presented in the format discussed in the *Salmonella* second quarterly report CY2008 which can be accessed on the FSIS website at [http://www.fsis.usda.gov/wps/portal/fsis/topics/data-collection-and-reports/microbiology/quarterly-reports-salmonella/q2-2008/ct\\_index](http://www.fsis.usda.gov/wps/portal/fsis/topics/data-collection-and-reports/microbiology/quarterly-reports-salmonella/q2-2008/ct_index).

#### **Tables 1a and 1b**

Tables 1a and 1b describe the performance standards/guidance for 5 product classes and allowed positives for category 1, 2T, 2 and 3.

#### **Tables 2a, 2b and 2c**

Table 2a summarizes *Salmonella* verification samples including *Salmonella* positive results, based on sample collection date, from April - June 2013 for all five product classes. Table 2b summarizes **quantitative (1 ml—regulatory) *Campylobacter*** verification samples including *Campylobacter* positive results, based on sample collection date, from April - June 2013 for young chicken and turkey carcasses. Table 2c summarizes **qualitative (30 ml—non-regulatory) *Campylobacter*** verification samples including *Campylobacter* positive results, based on sample collection date, from April - June 2013 for young chicken and turkey carcasses.

#### **Tables 3-7**

Tables 3-7 report the proportion of establishments by categories that have completed at least two recent *Salmonella* verification-sampling sets. New establishments are not identified in any category until FSIS has documented the results from two sets. An establishment with its last set  $\leq$  50% of the performance standard or guidance and the prior set at  $>$  50% of the performance standard or guidance is sub-categorized as 2T, with T standing for transitioning to Category 1. Young chicken and young turkey set results are classified using the performance standards that were in place at the time the set was initiated.

**Table 5** (ground beef) continues to report only those establishments eligible for traditional *Salmonella* verification sampling sets and that have completed two sets.

A total of 1155 samples in the low volume ground beef sampling program (MT43S) were collected and analyzed from April - June 2013, and 3 samples were positive for *Salmonella*.

#### **Chart 1**

This chart represents the total percentage of establishments within product classes classified by category and sub-category. This chart indicates that as of June 30, 2013, 80.6% of establishments are in Category 1, 7.5% are in Category 2T, 8.4% are in Category 2, and 3.3% are in Category 3.

#### **Figures 1-5**

Figures 1-5 summarize *Salmonella* positive results by product classes for the most recent five quarters.

## Figures 6-7

Figures 6-7 summarize *Campylobacter* positive results by product classes for the most recent five quarters.

**NOTE:** While earlier quarterly reports included individual sample results from “A” sets only, the current report format summarizes data from all sets. This change was discussed in the 2006-second quarterly report, which can be accessed on the FSIS website: [http://www.fsis.usda.gov/wps/portal/fsis/topics/data-collection-and-reports/microbiology/quarterly-reports-salmonella/q2-cy-2006/ct\\_index](http://www.fsis.usda.gov/wps/portal/fsis/topics/data-collection-and-reports/microbiology/quarterly-reports-salmonella/q2-cy-2006/ct_index).

### Additional information regarding this report

In order to handle sample scheduling more efficiently and to update information on actively producing establishments, the Agency continues to automate the sampling algorithm process. Therefore, the total number of active operating establishments can change quarter to quarter as establishments exit or enter the industry. This change does not apply to intermittently producing establishments. The Agency will continue to categorize them because they are considered to be operating at some level.

Given the revised sampling strategy, the percentage of positive samples is no longer useful as an indicator of trends. As described above, FSIS has implemented placing establishments into Category 1, 2T, 2, or 3 as an alternative trend indicator for the *Salmonella* verification sampling program. While the Agency does not expect the category trend indicator to vary greatly on a quarterly basis, it should facilitate tracking of overall industry performance when examined over multiple years. Other trend indicators continue to be considered.

Beginning March 28, 2008, FSIS posted completed *Salmonella* sample set results from young chicken slaughter establishments with variable (Category 2) and highly variable (Category 3) process control. Currently only Category 3 young chicken slaughter establishments are posted on the FSIS website. In April 2013, there were 14 establishments in Category 3. In May, there were 12 establishments in Category 3, and in June, there were 12 establishments in Category 3. FSIS continues to update this information on or about the 15th of each month. The current posting can be accessed at: <http://www.fsis.usda.gov/wps/portal/fsis/topics/data-collection-and-reports/microbiology/salmonella-verification-testing-program/salmonella-verification-testing-program>.

As announced in the January 2008 Federal Register Notice: *Salmonella* Verification Sampling Program: Response to Comments and New Agency Policies (<http://www.fsis.usda.gov/OPPDE/rdad/FRPubs/2006-0034.pdf>), turkey establishments in Category 2 and 3 were eligible for posting to the FSIS website beginning May 15, 2008. However, because > 90% of all turkey establishments eligible for *Salmonella* testing are in Category 1, and no establishments are in Category 3, turkey establishments are currently not being posted. The Agency is still considering publishing category results for establishments in additional product classes. Annual reports summarizing results for calendar years are available on the FSIS Web site as well as previous quarterly reports. The restructuring of *Salmonella* set scheduling, however, means that it is inappropriate to compare results from 2006 onwards to previous years. Similarly, the changes to the *Salmonella* verification-sampling program prevent valid comparisons of testing results over time (e.g., quarter-to-quarter or year-to-year trends).

**Table 1a: *Salmonella* Product classes, performance standards/guidance, and allowed positives for Category 1, 2T, 2 and 3.**

Product class	Performance standard (percent positive for <i>Salmonella</i> ) (%)	Number of samples tested	Maximum number of positives to achieve standard $\diamond$	Category 1 <sup>s</sup>	Category 2T (letter T standing for transitioning) <sup>§</sup>	Category 2 <sup>s</sup>	Category 3 <sup>s</sup>
Young Chicken*	7.5	51	5	recent two set results $\leq 2$	last set $\leq 2$ and prior set $>2$ w/o failing	either last one or two sets $\geq 2$ w/o failing	most recent set $\geq 6$
Ground Beef <sup>Φ</sup>	7.5	53	5	most recent two set results set $\leq 2$	last set $\leq 2$ and the prior set $>2$ w/o failing	either the last one or two set results $\geq 2$ w/o failing	most recent set $\geq 6$
Ground Chicken	44.6	53	26	most recent two set results set $\leq 13$	last set $\leq 13$ and the prior set $>13$ w/o failing	either the last one or two set results $\geq 13$ w/o failing	Most recent set $\geq 27$
Ground Turkey <sup>Φ</sup>	49.9	53	29	most recent two set results set $\leq 14$	last set $\leq 14$ and the prior set $>14$ w/o failing	either the last one or two set results $\geq 14$ w/o failing	Most recent set $\geq 30$
Turkey*	1.7	56	4	most recent two set results set $\leq 2$	last set $\leq 2$ and the prior set $>2$ w/o failing	either the last one or two set results $\geq 2$ w/o failing	Most recent set $\geq 5$

$\diamond$ Maximum number of positives is set at the number which would provide 80% likelihood of an establishment passing the sample set, if it were operating at exactly the performance standard (e.g. there is an 80% chance that a young chicken plant that has *Salmonella* in exactly 7.5% of its product getting 5 or fewer positive samples out of a set of 51).

\*New performance standards for young chicken and turkey carcasses were implemented July 1, 2011

§Establishment category, which is based on the most recent two sets completed

ΦFSIS is now rounding down the allowable positives for Category 1 status for those product classes having odd numbered standards or guidelines. Therefore the current performance standards will be: Young Chicken (Category 1:  $\leq 2$  vs.  $\leq 3$  *Salmonella* positive results), Ground Beef (Category 1:  $\leq 2$  vs.  $\leq 3$  *Salmonella* positive results), and Ground Turkey (Category 1:  $\leq 14$  vs.  $\leq 15$  *Salmonella* positive results).

**Table 1b: *Campylobacter* Product classes, performance standards/guidance, and allowed positives for Category 1, 2T, 2 and 3.**

Product class	Performance standard (percent positive for <i>Campylobacter</i> ) (%)	Number of samples tested	Maximum number of positives to achieve standard	Category 1	Category 2T (letter T standing for transitioning)	Category 2	Category 3
Young Chicken	10.4	51	8	T.B.D.	T.B.D.	T.B.D.	T.B.D.
Turkey	0.79	56	3	T.B.D.	T.B.D.	T.B.D.	T.B.D.

Categories for *Campylobacter* To Be Determined (T.B.D.)

**Table 2a: Percent Positive *Salmonella* Tests (All Samples) in the PR/HACCP Verification Testing Program by Product Class and Establishment Size - Second Quarter CY2013 (April 1, 2013 to June 30, 2013).**

All Sets	Establishment Size											
	Large			Small			Very Small			All Sizes		
Product ID	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive
Young Chicken	2191	30	1.4%	509	21	4.1%	255	27	10.6%	2955	78	2.6%
Ground Beef	809	15	1.9%	2910	28	1.0%	1125	19	1.7%	4844	62	1.3%
Ground Chicken	30	2	6.7%	100	15	15.0%	10	4	40.0%	140	21	15.0%
Ground Turkey	0	0	0	14	1	7.1%	11	3	27.3%	25	4	16.0%
Turkeys	348	6	1.7%	282	12	4.3%	7	1	14.3%	637	19	3.0%

**Table 2b: Percent Positive Quantitative (1 ml--regulatory) *Campylobacter* Tests (All Samples) in the PR/HACCP Verification Testing Program by Product Class and Establishment Size - Second Quarter CY2013 (April 1, 2013 to June 30, 2013).**

All Sets	Establishment Size											
	Large			Small			Very Small			All Sizes		
Product ID	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive
Young Chicken	2191	50	2.3%	509	74	14.5%	255	44	17.3%	2955	168	5.7%
Turkeys	348	4	1.1%	282	16	5.7%	7	0	0.0%	637	20	3.1%

**Table 2c: Percent Positive Qualitative (30 ml—non-regulatory) *Campylobacter* Tests (All Samples) in the PR/HACCP Verification Testing Program by Product Class and Establishment Size - Second Quarter CY2013 (April 1, 2013 to June 30, 2013).**

All Sets	Establishment Size											
	Large			Small			Very Small			All Sizes		
Product ID	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive
Young Chicken	1516	123	8.1%	336	63	18.8%	177	49	27.7%	2029	235	11.6%
Turkeys	221	5	2.3%	174	22	12.6%	6	0	0.0%	401	27	6.7%

**Table 3: Young Chicken Establishments by Category, 2nd Quarter CY2013**

Young Chicken Establishments, by Category, Quarter 2 CY2013				
Category	Quarter 1		Quarter 2	
	Count	Percent of TOTAL	Count	Percent of TOTAL
1	119	67.6%	122	70.1%
2T	18	10.2%	17	9.7%
2	24	13.6%	24	13.7%
3	15	8.5%	11	6.3%
<b>TOTAL *</b>	<b>176</b>	<b>100.0%</b>	<b>174</b>	<b>100.0%</b>

\*Total Number of Establishments Currently Operating And Subject To Sampling That Have At Least Two Completed Sets

**Table 4: Turkey Establishments by Category, 2nd Quarter CY2013**

Turkey Establishments, by Category, Quarter 2 CY2013				
Category	Quarter 1	Percent of TOTAL	Quarter 2	Percent of TOTAL
1	28	82.3%	28	82.3%
2T	4	11.7%	5	14.7%
2	0	0	0	0
3	2	5.8%	1	2.9%
<b>TOTAL *</b>	<b>34</b>	<b>100.0%</b>	<b>34</b>	<b>100.0%</b>

\*Total Number Of Establishments Currently Operating And Subject To Sampling That Have At Least Two Completed Sets.

**Table 5: Ground Beef Establishments by Category, 2nd Quarter CY2013**

Ground Beef Establishments, by Category, Quarter 2 CY2013				
Category	Quarter 1	Percent of TOTAL	Quarter 2	Percent of TOTAL
1	244	83.2%	262	86.1%
2T	23	7.8%	17	5.5%
2	23	7.8%	21	6.9%
3	3	1.0%	4	1.3%
<b>TOTAL *</b>	<b>293</b>	<b>100.0%</b>	<b>304</b>	<b>100.0%</b>

\*Total Number of Establishments Currently Operating and Subject to Sampling That Have At Least Two Completed Sets.

**Table 6: Ground Chicken Establishments by Category, 2nd Quarter CY2013**

Ground Chicken Establishments, by Category, Quarter 2 CY2013				
Category	Quarter 1	Percent of TOTAL	Quarter 2	Percent of TOTAL
1	5	62.5%	5	62.5%
2T	1	12.5%	1	12.5%
2	0	0	0	0
3	2	25.0%	2	25.0%
<b>TOTAL *</b>	<b>8</b>	<b>100.0%</b>	<b>8</b>	<b>100.0%</b>

\*Total Number of Establishments Currently Operating And Subject To Sampling That Have At Least Two Completed Sets

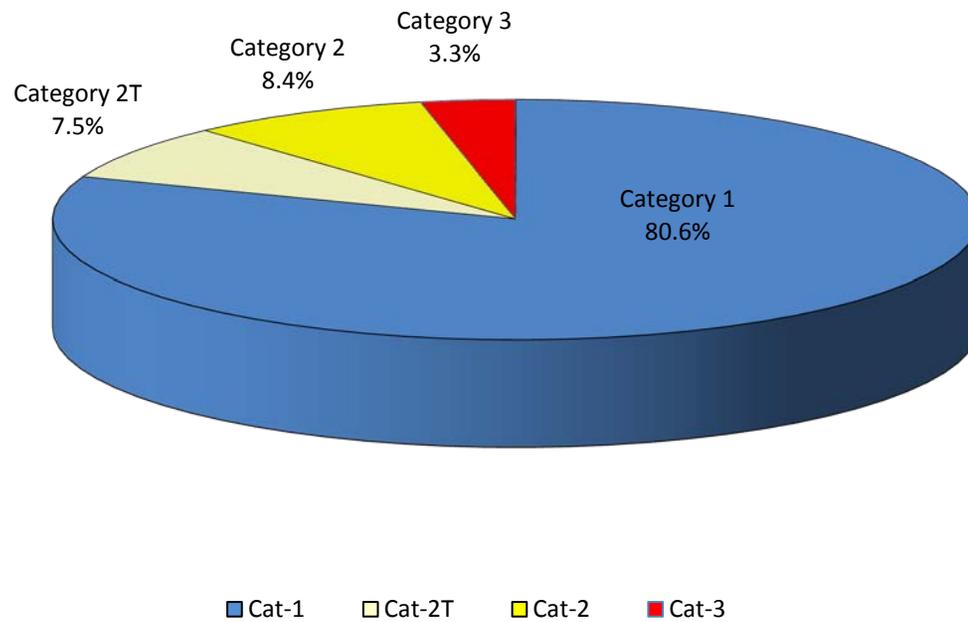
**Table 7: Ground Turkey Establishments by Category, 2nd Quarter CY2013**

<b>Ground Turkey Establishments, by Category, Quarter 2 CY2013</b>				
<b>Category</b>	<b>Quarter 1</b>	<b>Percent of TOTAL</b>	<b>Quarter 2</b>	<b>Percent of TOTAL</b>
<b>1</b>	<b>20</b>	<b>90.9%</b>	<b>20</b>	<b>90.9%</b>
<b>2T</b>	<b>1</b>	<b>4.5%</b>	<b>1</b>	<b>4.5%</b>
<b>2</b>	<b>1</b>	<b>4.5%</b>	<b>1</b>	<b>4.5%</b>
<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL *</b>	<b>22</b>	<b>100.0%</b>	<b>22</b>	<b>100.0%</b>

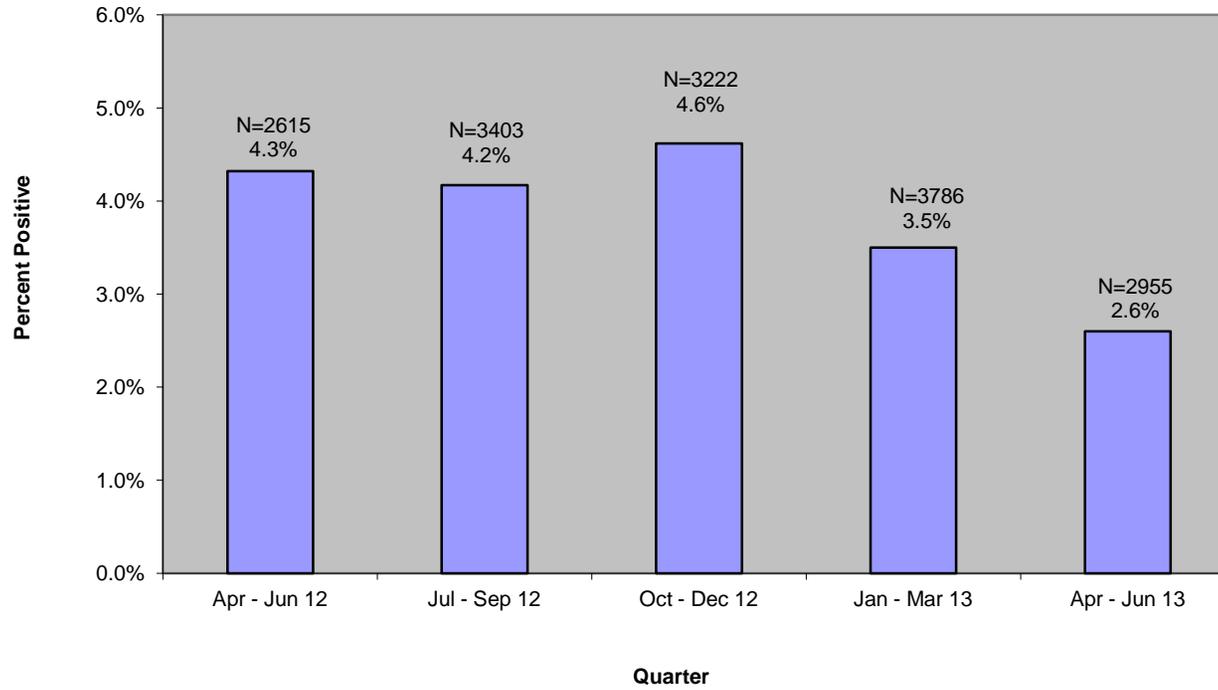
\*Total Number Of Establishments Currently Operating And Subject To Sampling That Have At Least Two Completed Sets.

*Data Source: FSIS Data Warehouse Christopher Aston*

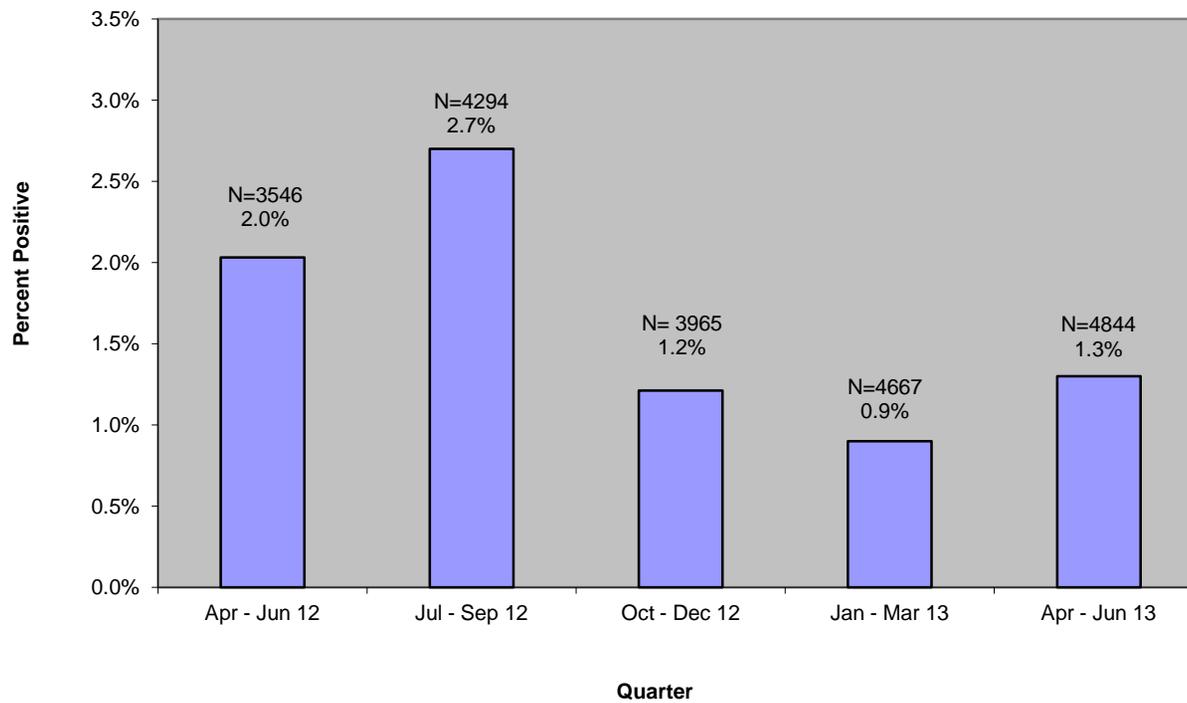
**Chart 1: Establishment Categories for All Product Classes:  
April 2013 to June 2013**



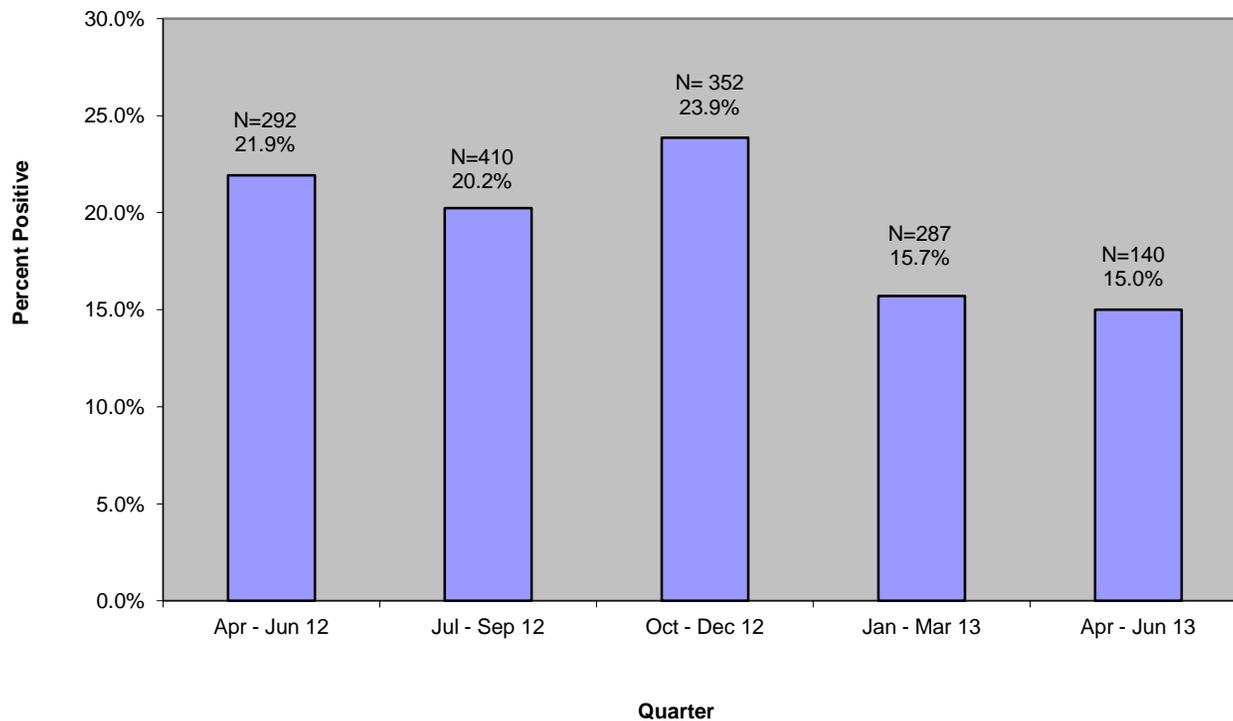
**Figure 1**  
**Microbiological Results of Young Chicken Carcasses (All Samples) Analyzed for *Salmonella* in the PR/HACCP Verification Testing Program Summarized by Quarter from April 2013 to June 2013**



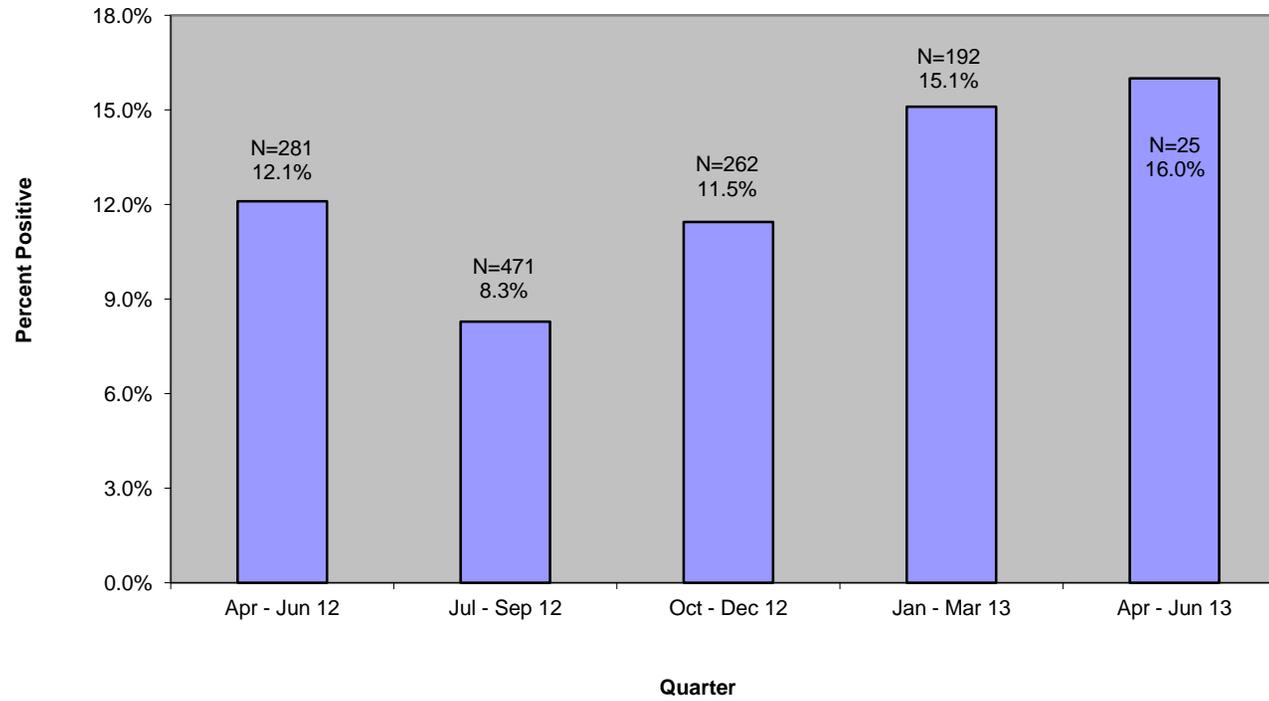
**Figure 2**  
**Microbiological Results of Ground Beef (All Samples) Analyzed for *Salmonella* in the PR/HACCP**  
**Verification Testing Program Summarized by Quarter**  
**from April 2013 to June 2013**



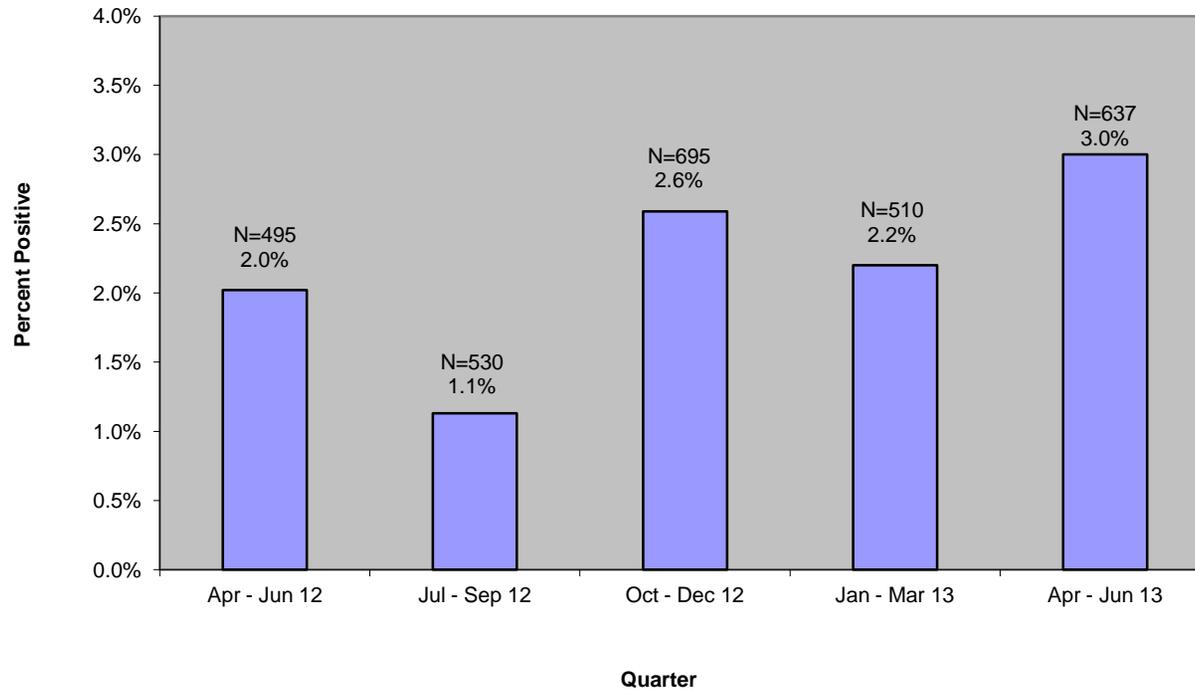
**Figure 3**  
**Microbiological Results of Ground Chicken (All Samples) Analyzed for *Salmonella* in the PR/HACCP**  
**Verification Testing Program Summarized by Quarter**  
**from April 2013 to June 2013**



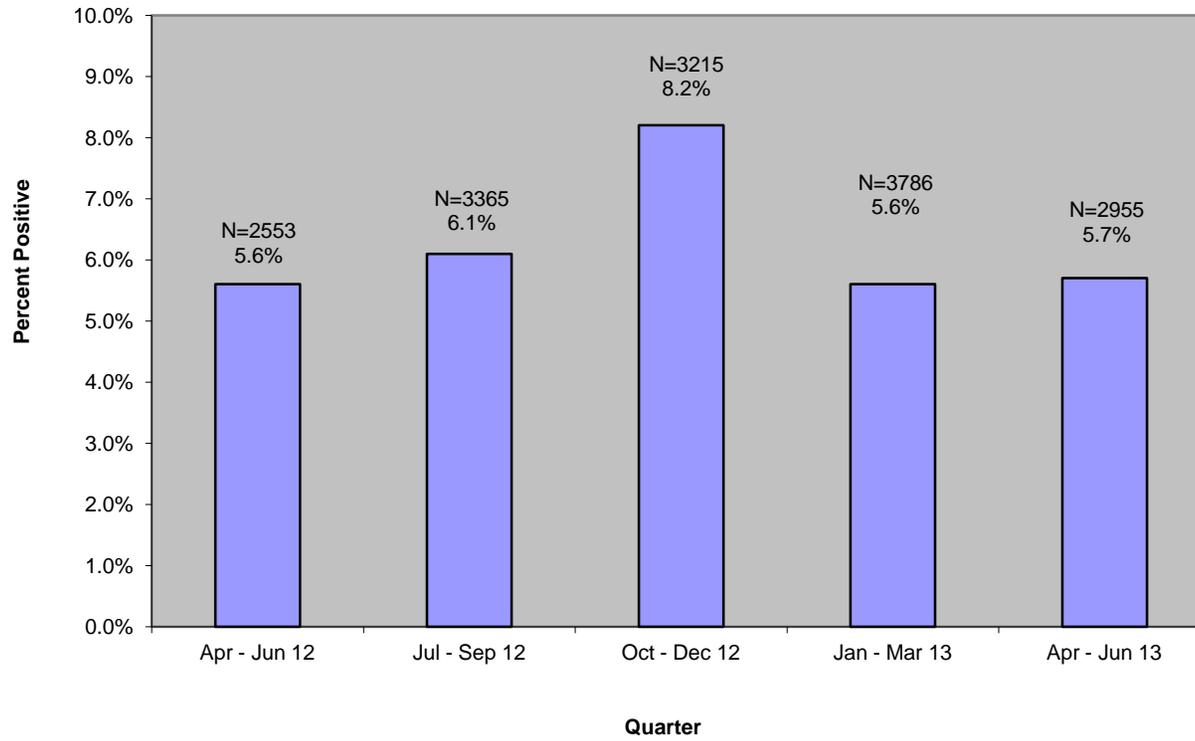
**Figure 4**  
**Microbiological Results of Ground Turkey (All Samples) Analyzed for *Salmonella* in the PR/HACCP Verification Testing Program Summarized by Quarter from April 2013 to June 2013**



**Figure 5**  
**Microbiological Results of Turkey (All Samples) Analyzed for *Salmonella* in the PR/HACCP**  
**Verification Testing Program Summarized by Quarter**  
**from April 2013 to June 2013**



**Figure 6**  
**Microbiological Results of Young Chicken Carcasses (All Samples) Analyzed for *Campylobacter* in the PR/HACCP Verification Testing Program Summarized by Quarter from April 2013 to June 2013**



**Figure 7**  
**Microbiological Results of Turkeys Carcasses (All Samples) Analyzed for *Campylobacter* in the PR/HACCP Verification Testing Program Summarized by Quarter from April 2013 to June 2013**

