



United States  
Department of  
Agriculture

Food Safety  
and Inspection  
Service

## **Quarterly Progress Report on *Salmonella* and *Campylobacter* Testing of Selected Raw Meat and Poultry Products: Preliminary Results, October 2012 to December 2012**

This report discusses the *Salmonella* verification sampling results for the fourth quarter CY 2012 as presented in Tables 1-7, Chart 1, and Figures 1-5. This data is presented in the format discussed in the *Salmonella* second quarterly report CY 2008 which can be accessed on the FSIS website at [http://www.fsis.usda.gov/science/Q2\\_2008\\_Salmonella\\_Testing/index.asp](http://www.fsis.usda.gov/science/Q2_2008_Salmonella_Testing/index.asp).

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

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

### **Tables 2a and 2b**

Table 2a summarizes *Salmonella* verification samples including *Salmonella* positive results, based on sample collection date, from October to December 2012 for all five product classes. Table 2b summarizes *Campylobacter* verification samples including *Campylobacter* positive results, based on sample collection date, from October to December 2012 for broiler 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 1061 samples in the low volume ground beef sampling program were collected and analyzed from October to December 2012, and 9 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 December 31, 2012, 79.8% of establishments are in Category 1, 7.8% are in Category 2T, 8.2% are in Category 2, and 4.2% 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/science/Q2\\_2006\\_Salmonella\\_Testing/index.asp](http://www.fsis.usda.gov/science/Q2_2006_Salmonella_Testing/index.asp).

### **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. In October 2012, there were 8 establishments in Category 3. In November, there were 10 establishments in Category 3, and in December, there were 13 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/Science/Salmonella\\_Verification\\_Testing\\_Program/index.asp](http://www.fsis.usda.gov/Science/Salmonella_Verification_Testing_Program/index.asp).

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 website 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>§</sup>	Category 2T (letter T standing for transitioning) <sup>§</sup>	Category 2 <sup>§</sup>	Category 3 <sup>§</sup>
Broiler*	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 set results $\geq 2$ 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 broiler 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 broiler 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: Broiler (Category1:  $\leq 2$  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
Broiler	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 – 4th Quarter CY 2012 (October 1, 2012 to December 31, 2012).**

All Sets	Establishment Size														
	Unknown			Large			Small			Very Small			All Sizes		
Product ID	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive
Broilers	0	0	0%	2390	52	2.2%	648	76	11.7%	184	21	11.4%	3222	149	4.6%
Ground Beef	81	0	0%	488	9	1.8%	2520	31	1.2%	876	8	0.9%	3965	48	1.2%
Ground Chicken	29	4	13.8%	92	19	20.7%	201	52	25.9%	30	9	30.0%	352	84	23.9%
Ground Turkey	14	1	7.1%	124	14	11.3%	117	13	11.1%	7	2	28.6%	262	30	11.5%
Turkeys	43	0	0%	385	4	1.0%	199	6	3.0%	68	8	11.8%	695	18	2.6%

**Table 2b: Percent Positive *Campylobacter* Tests (All Samples) in the PR/HACCP Verification Testing Program by Product Class and Establishment Size – 4th Quarter CY2012 (October 1, 2012 to December 31, 2012).**

All Sets	Establishment Size														
	Unknown			Large			Small			Very Small			All Sizes		
Product ID	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive	Samples	Positive	Percent Positive
Broilers	0	0	0%	2390	54	2.3%	641	129	20.1%	184	79	42.9%	3215	262	8.2%
Turkeys	43	0	0%	385	2	0.5%	199	6	3.0%	50	10	20.0%	677	18	2.7%

**Table 3: Broiler Establishments by Category, 4th Quarter CY 2012**

Broiler Establishments, by Category, Quarter 4 CY 2012								
Category	Quarter 1	Percent of TOTAL	Quarter 2	Percent of TOTAL	Quarter 3	Percent of TOTAL	Quarter 4	Percent of TOTAL
1	143	85%	142	86%	131	78%	128	73%
2T	7	4%	7	4%	7	4%	13	7%
2	15	9%	14	8%	21	13%	19	11%
3	3	2%	3	2%	8	5%	15	9%
TOTAL *	168	100%	166	100%	167	100%	175	100%

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

**Table 4: Turkey Establishments by Category, 4th Quarter CY 2012**

Turkey Establishments, by Category, Quarter 4 CY 2012								
Category	Quarter 1	Percent of TOTAL	Quarter 2	Percent of TOTAL	Quarter 3	Percent of TOTAL	Quarter 4	Percent of TOTAL
1	27	82%	28	82%	28	80%	28	82%
2T	4	12%	4	12%	4	11%	4	12%
2	1	3%	1	3%	1	3%	1	3%
3	1	3%	1	3%	2	6%	1	3%
TOTAL *	33	100%	34	100%	35	100%	34	100%

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

**Table 5: Ground Beef Establishments by Category, 4th Quarter CY 2012**

Ground Beef Establishments, by Category, Quarter 4 CY 2012								
Category	Quarter 1	Percent of TOTAL	Quarter 2	Percent of TOTAL	Quarter 3	Percent of TOTAL	Quarter 4	Percent of TOTAL
1	246	82%	217	82%	222	81%	237	83%
2T	20	7%	16	6%	21	8%	22	8%
2	26	9%	25	9%	24	9%	22	8%
3	7	2%	7	3%	6	2%	5	2%
<b>TOTAL *</b>	<b>299</b>	<b>100%</b>	<b>265</b>	<b>100%</b>	<b>273</b>	<b>100%</b>	<b>286</b>	<b>100%</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, 4th Quarter CY 2012**

Ground Chicken Establishments, by Category, Quarter 4 CY 2012								
Category	Quarter 1	Percent of TOTAL	Quarter 2	Percent of TOTAL	Quarter 3	Percent of TOTAL	Quarter 4	Percent of TOTAL
1	3	75%	3	75%	3	75%	5	72%
2T	0	0	0	0	0	0	1	14%
2	0	0	0	0	0	0	0	0
3	1	25%	1	25%	1	25%	1	14%
<b>TOTAL *</b>	<b>4</b>	<b>100%</b>	<b>4</b>	<b>100%</b>	<b>4</b>	<b>100%</b>	<b>7</b>	<b>100%</b>

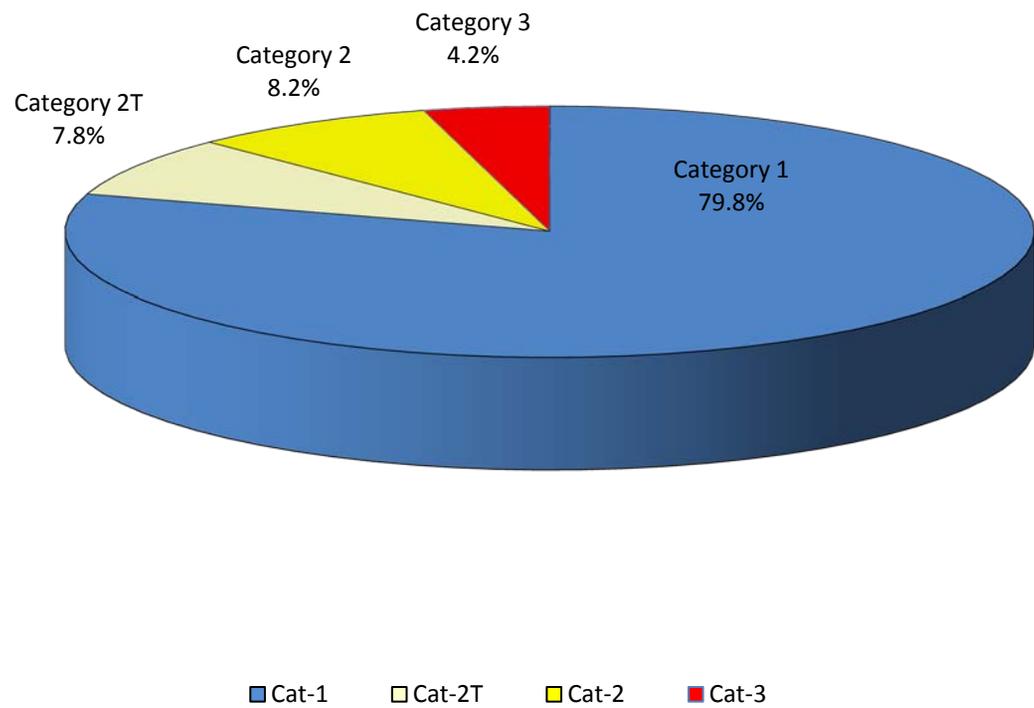
\*Total Number of Establishments Currently Operating And Subject To Sampling That Have At Least Two Completed Sets

**Table 7: Ground Turkey Establishments by Category, 4th Quarter CY 2012**

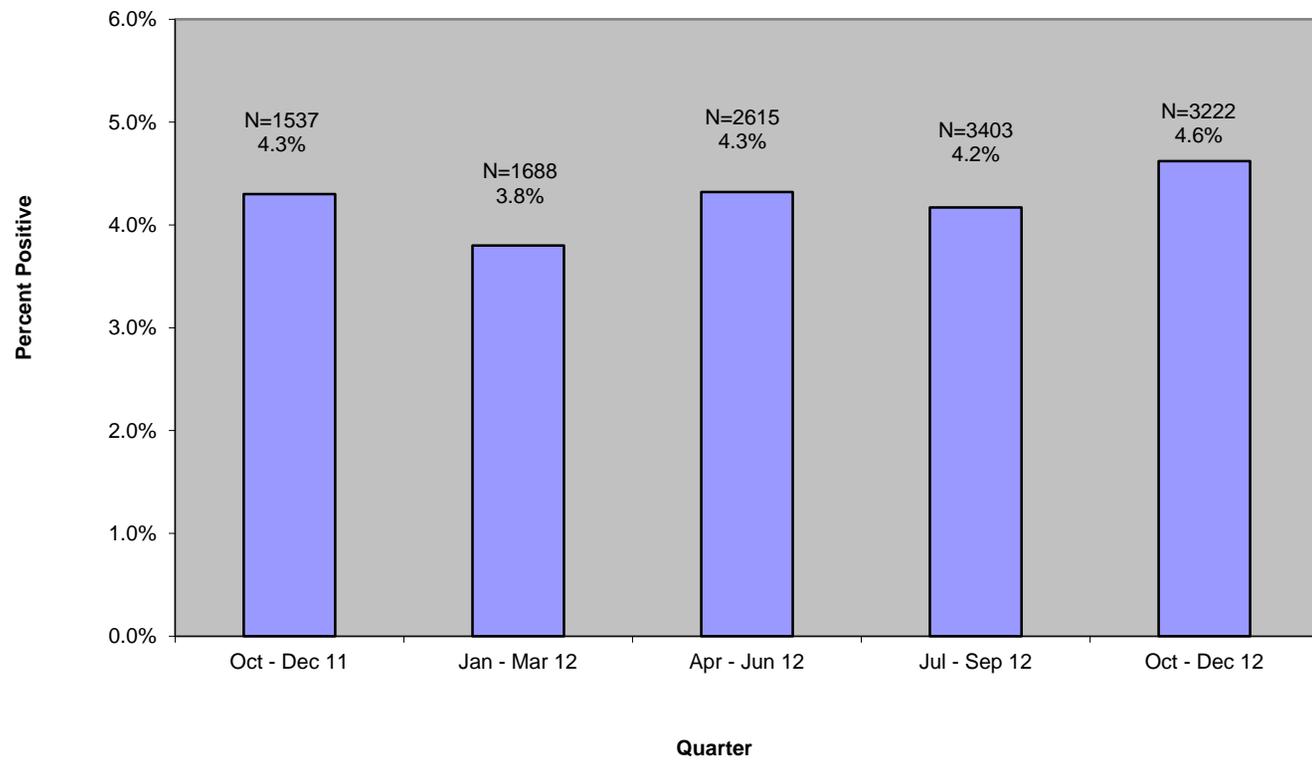
Ground Turkey Establishments, by Category, Quarter 4 CY 2012								
Category	Quarter 1	Percent of TOTAL	Quarter 2	Percent of TOTAL	Quarter 3	Percent of TOTAL	Quarter 4	Percent of TOTAL
1	17	100%	17	100%	16	100%	20	91%
2T	0	0	0	0	0	0	1	4.5%
2	0	0	0	0	0	0	1	4.5%
3	0	0	0	0	0	0	0	0
<b>TOTAL *</b>	<b>17</b>	<b>100%</b>	<b>17</b>	<b>100%</b>	<b>16</b>	<b>100%</b>	<b>22</b>	<b>100%</b>

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

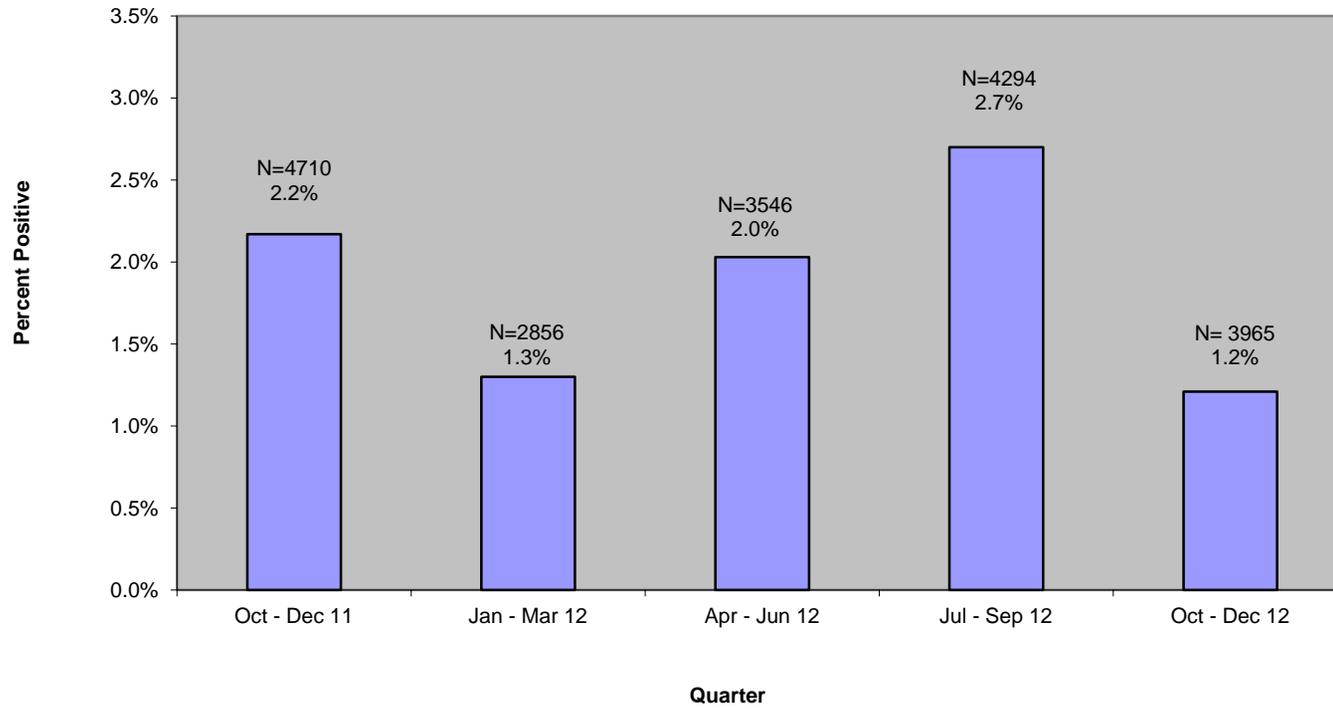
**Chart 1: Establishment Categories for All Product Classes:  
October 2012 to December 2012**



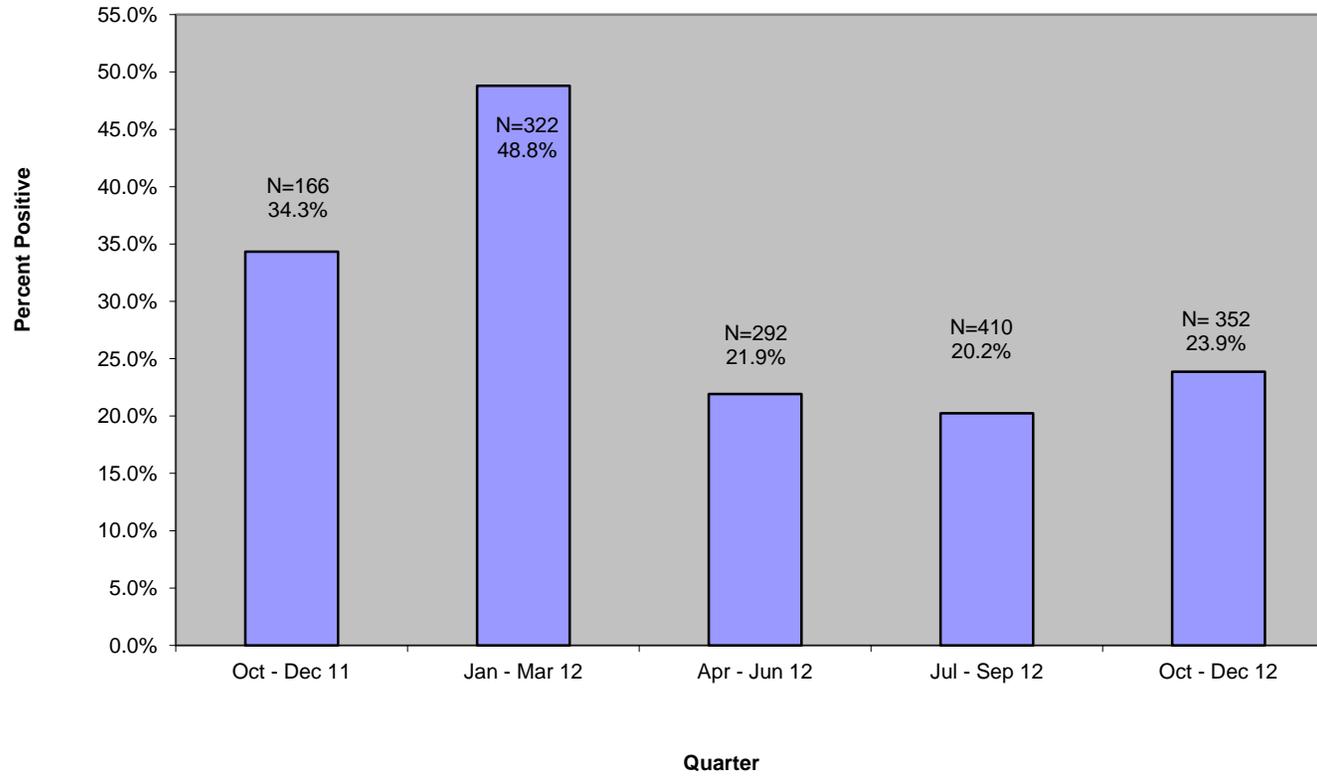
**Figure 1**  
**Microbiological Results of Broilers (Young Chicken) Carcasses (All Samples) Analyzed for Salmonella in the PR/HACCP Verification Testing Program Summarized by Quarter from October 2012 to December 2012**



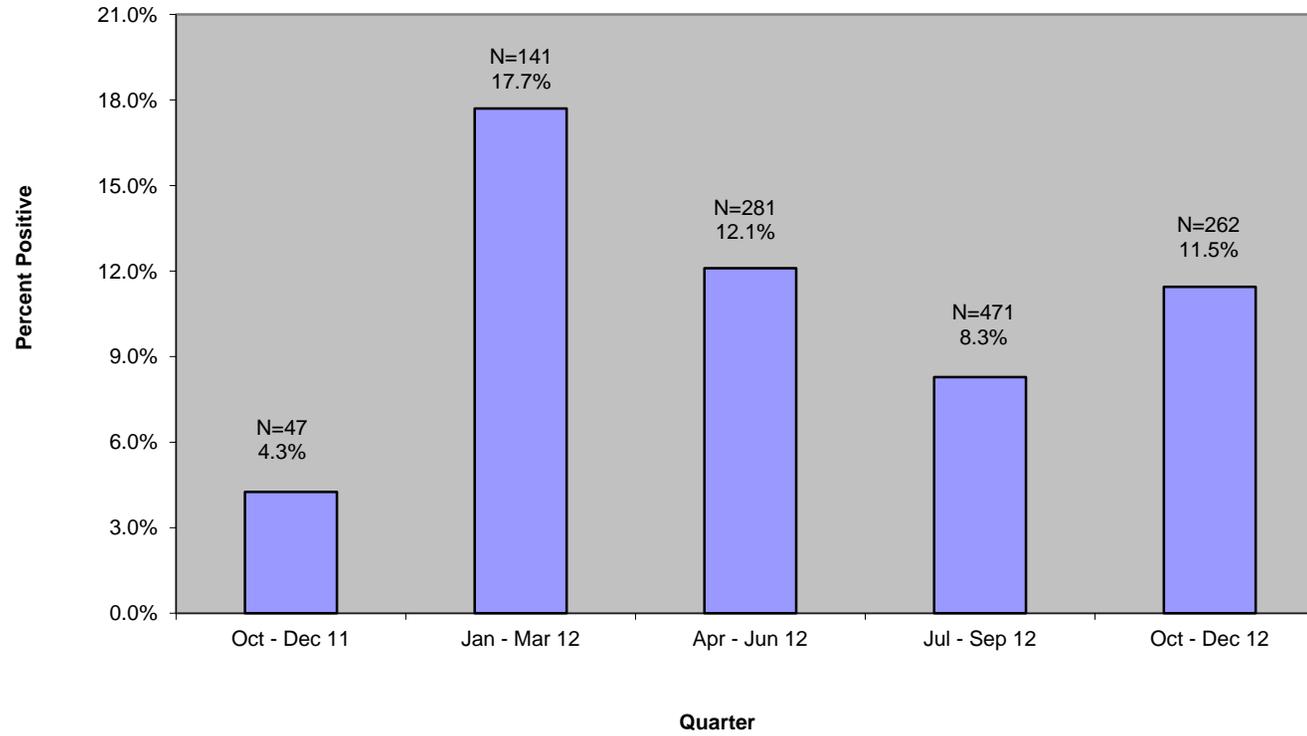
**Figure 2**  
**Microbiological Results of Ground Beef (All Samples) Analyzed for Salmonella in the PR/HACCP Verification Testing Program Summarized by Quarter from October 2012 to December 2012**



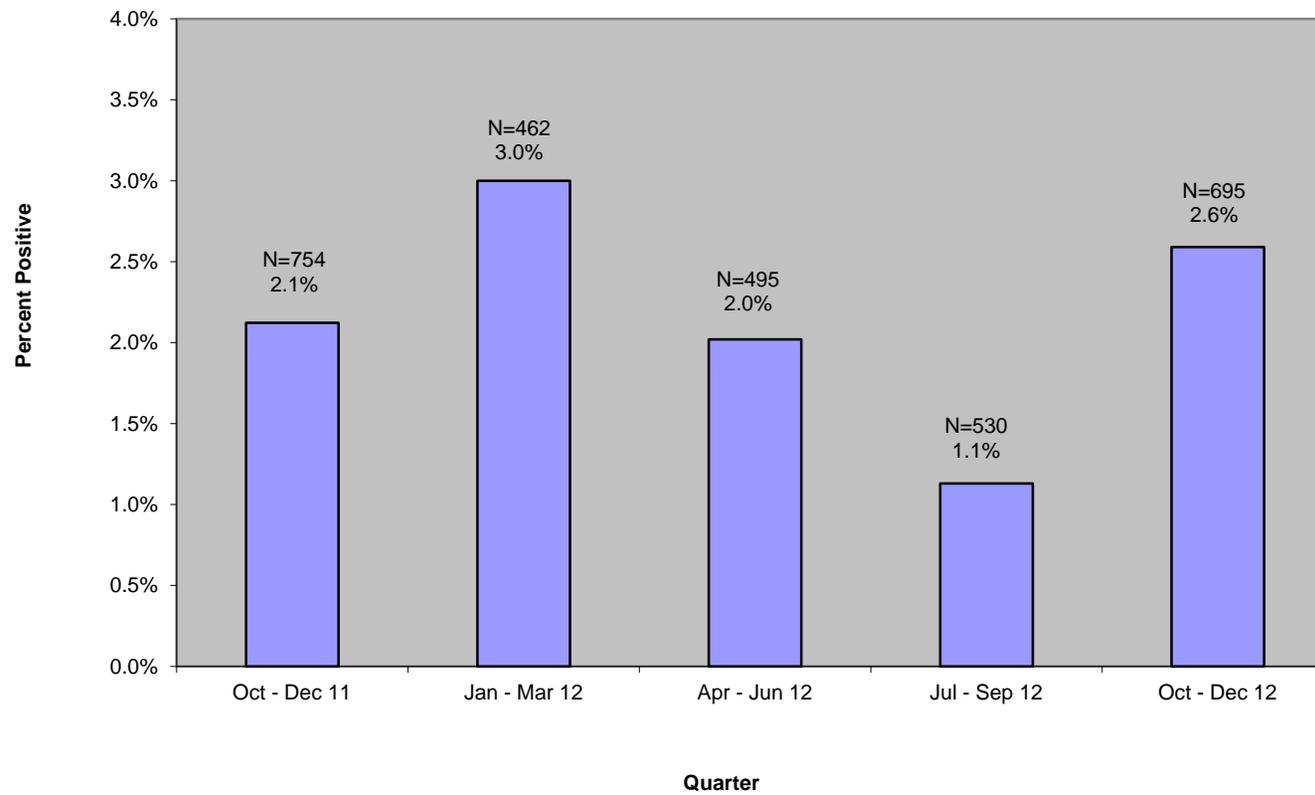
**Figure 3**  
**Microbiological Results of Ground Chicken (All Samples) Analyzed for Salmonella in the PR/HACCP**  
**Verification Testing Program Summarized by Quarter**  
**from October 2012 to December 2012**



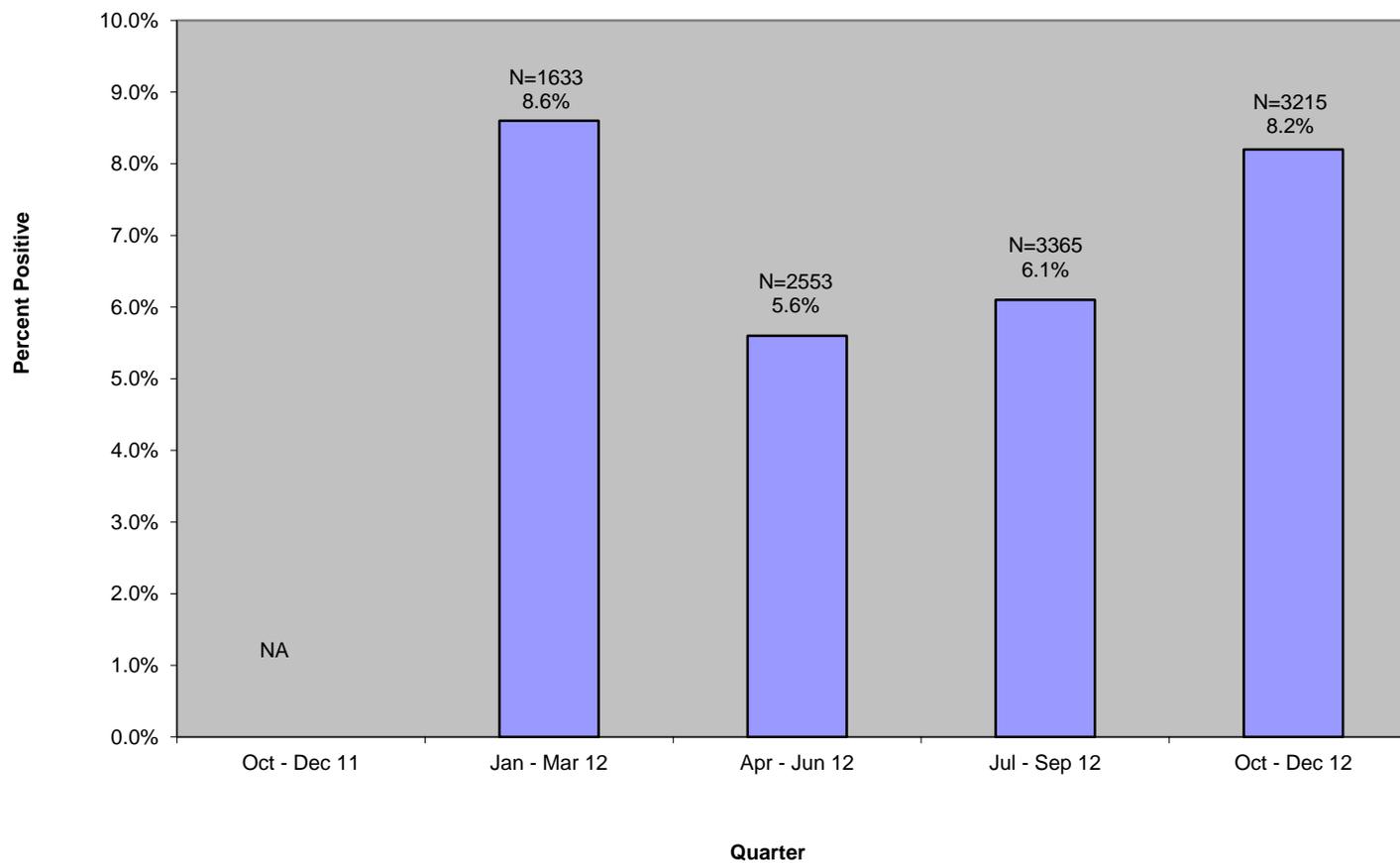
**Figure 4**  
**Microbiological Results of Ground Turkey (All Samples) Analyzed for Salmonella in the PR/HACCP**  
**Verification Testing Program Summarized by Quarter**  
**from October 2012 to December 2012**



**Figure 5**  
**Microbiological Results of Turkey (All Samples) Analyzed for Salmonella in the PR/HACCP Verification Testing Program Summarized by Quarter from October 2012 to December 2012**



**Figure 6**  
**Microbiological Results of Broilers (Young Chicken) Carcasses (All Samples) Analyzed for Campylobacter**  
**in the PR/HACCP Verification Testing Program Summarized by Quarter**  
**from October 2012 to December 2012**



**Figure 7**  
**Microbiological Results of Broilers (Turkeys) Carcasses (All Samples) Analyzed for Campylobacter**  
**in the PR/HACCP Verification Testing Program Summarized**  
**by Quarter from October 2012 to December 2012**

