



## Quarterly Progress Report on *Salmonella* Testing of Selected Raw Meat and Poultry Products: Preliminary Results, July – September 2009

This report discusses the *Salmonella* verification sampling results for the third quarter CY2009 as presented in Table 1-9, Chart 1, and Figures 1-8. 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/science/Q2\\_2008\\_Salmonella\\_Testing/index.asp](http://www.fsis.usda.gov/science/Q2_2008_Salmonella_Testing/index.asp).

### Table 1

Table 1 describes the performance standards/guidance for 8 product classes and allowed positives for category 1, 2T, 2 and 3.

### Table 2

This table summarizes *Salmonella* verification samples including *Salmonella* positive results, based on sample collection date, from July – September 2009 for all eight product classes.

### Tables 3-10

Tables 2-9 report the proportion of establishments by category that has 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. This aligns the quarterly reports with the monthly posting of names of those establishments in Category 2 and 3. 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.

**Table 7** (ground beef) continues to report only those establishments eligible for traditional *Salmonella* verification sampling sets and that have completed two sets.

A total of 1070 samples in the low volume ground beef sampling program were collected and analyzed from July – September 2009, and 8 samples were positive for *Salmonella*.

## Chart 1

This chart represents the total percentage of establishments within product classes classified by category and sub-category. The Agency has set the goal of having 90% of establishments from all product classes in Category 1 by 2010. This chart indicates that as of September 31, 2009, 81 % of establishments are in Category 1, 9% are in Category 2T, 8% are in Category 2, and 2% are in Category 3.

## Figures 1-8

Figures 1-8 summarize *Salmonella* 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 July, there were 14 establishments in Category 2 and 2 in Category 3. In August, there were 13 establishments in Category 2 and 2 in Category 3. In September, 11 establishments were posted in Category 2 and 3 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 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 1: 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	Category 1 <sup>§</sup>	Category 2T (letter T standing for transitioning) <sup>§</sup>	Category 2 <sup>§</sup>	Category 3 <sup>§</sup>
Broiler	20.0	51	12	recent two set results $\leq 6$	last set $\leq 6$ and prior set $\geq 6$ w/o failing	either last one or two sets $\geq 6$ w/o failing	most recent set $\geq 13$
Cow/Bull	2.7	58	2	most recent two set results $\leq 1$	last set $\leq 1$ and the prior set $\geq 2$ w/o failing	either the last one or two set results $\geq 1$ w/o failing	most recent set $\geq 3$
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 $\geq 2$ 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 $\geq 13$ 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 $\geq 14$ w/o failing	either the last one or two set results $\geq 14$ w/o failing	Most recent set $\geq 30$
Market Hog	8.7	55	6	most recent two set results set $\leq 3$	last set $\leq 3$ and the prior set $\geq 3$ w/o failing	either the last one or two set results $\geq 3$ w/o failing	Most recent set $\geq 7$
Steer/Heifer	1.0	82	1	most recent two set no positives	last set no positive and the prior set 1 positive	either the last one or two set results positive	Most recent set $\geq 2$
Turkey* <sup>Φ</sup>	19	56	13	most recent two set results set $\leq 6$	last set $\leq 6$ and the prior set $\geq 6$ w/o failing	either the last one or two set results $\geq 6$ w/o failing	Most recent set $\geq 14$

\*Guidance measure set

§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: Turkey (Category 1:  $\leq 6$  vs  $\leq 7$  *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 2. Percent Positive *Salmonella* Tests (All Samples) in the PR/HACCP Verification Testing Program by Product Class and Establishment Size - Third Quarter CY2009 (July 1, 2009 - September 30, 2009).**

All Sets	Establishment Size											
	Large			Small			Very Small			Unknown		
Product ID	Samples	Positives	Percent Positive	Samples	Positives	Percent Positive	Samples	Positives	Percent Positive	Samples	Positives	Percent Positive
Broilers	1,428	68	4.8%	280	42	15.0%	52	15	28.9%	13	1	7.7%
Market Hogs	9	0	0.0%	409	7	1.7%	473	10	2.1%	0	0	0.0%
Cows/Bulls	80	0	0.0%	252	0	0.0%	54	3	5.6%	0	0	0.0%
Steers/Heifers	515	0	0.0%	396	3	0.8%	472	1	0.2%	33	0	0.0%
Ground Beef	237	17	7.2%	1,403	58	4.1%	327	3	0.9%	0	0	0.0%
Ground Chicken	0	0	0.0%	59	8	13.6%	23	7	30.4%	0	0	0.0%
Ground Turkey	37	2	5.4%	33	5	15.2%	20	0	0.0%	0	0	0.0%
Turkeys	201	8	4.0%	92	8	8.7%	0	0	0.0%	0	0	0.0%

Product ID	All Sizes		
	Samples	Positives	Percent Positive
Broilers	1,773	126	7.1%
Market Hogs	891	17	0.2%
Cows/Bulls	386	3	0.8%
Steers/Heifers	1,416	4	0.3%
Ground Beef	1,967	78	4.0%
Ground Chicken	82	15	18.3%
Ground Turkey	90	7	7.8%
Turkeys	293	16	5.5%

**Table 3. Broiler Establishments, by Category, Quarter 1-3 CY2009**

<b>Broiler Establishments, by Category, Quarter 1-3 CY2009</b>						
<b>Category</b>	<b>Quarter 1</b>	<b>Percent of TOTAL</b>	<b>Quarter 2</b>	<b>Percent of TOTAL</b>	<b>Quarter 3</b>	<b>Percent of TOTAL</b>
1	144	82%	143	82%	141	82%
2T	13	7%	14	8%	15	9%
2	18	10%	14	8%	13	7%
3	2	1%	3	2%	3	2%
<b>TOTAL *</b>	<b>177</b>	<b>100%</b>	<b>174</b>	<b>100%</b>	<b>172</b>	<b>100%</b>

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

**Table 4. Market Hog Establishments, by Category, Quarter 1-3 CY2009**

<b>Market Hog Establishments, by Category, Quarter 1-3 CY2009</b>						
<b>Category</b>	<b>Quarter 1</b>	<b>Percent of TOTAL</b>	<b>Quarter 2</b>	<b>Percent of TOTAL</b>	<b>Quarter 3</b>	<b>Percent of TOTAL</b>
1	154	82%	154	82%	159	83%
2T	22	12%	20	11%	19	10%
2	10	5%	11	6%	12	6%
3	1	1%	2	1%	1	1%
<b>TOTAL *</b>	<b>187</b>	<b>100%</b>	<b>187</b>	<b>100%</b>	<b>191</b>	<b>100%</b>

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

**Table 5. Turkey Establishments, by Category, Quarter 1-3 CY2009**

<b>Turkey Establishments, by Category, Quarter 1-3 CY2009</b>						
<b>Category</b>	<b>Quarter 1</b>	<b>Percent of TOTAL</b>	<b>Quarter 2</b>	<b>Percent of TOTAL</b>	<b>Quarter 3</b>	<b>Percent of TOTAL</b>
1	34	100%	32	97%	31	94%
2T	0	0%	0	0%	0	0%
2	0	0%	1	3%	2	6%
3	0	0%	0	0%	0	0%
<b>TOTAL *</b>	<b>34</b>	<b>100%</b>	<b>33</b>	<b>100%</b>	<b>33</b>	<b>100%</b>

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

**Table 6. Cow/Bull Establishments by Category, Quarter 1-3 CY2009**

<b>Cow/Bull Establishments, by Category, Quarter 1-3 CY2009</b>						
<b>Category</b>	<b>Quarter 1</b>	<b>Percent of TOTAL</b>	<b>Quarter 2</b>	<b>Percent of TOTAL</b>	<b>Quarter 3</b>	<b>Percent of TOTAL</b>
1	65	85%	66	86%	68	89%
2T	8	10%	6	8%	5	7%
2	4	5%	2	3%	2	3%
3	0	0%	2	3%	1	1%
<b>TOTAL *</b>	<b>77</b>	<b>100%</b>	<b>76</b>	<b>100%</b>	<b>76</b>	<b>100%</b>

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

**Table 7. Ground Beef Establishments By Category, Quarter 1-3 CY2009**

<b>Ground Beef Establishments, by Category, Quarter 1-3 CY2009</b>						
<b>Category</b>	<b>Quarter 1</b>	<b>Percent of TOTAL</b>	<b>Quarter 2</b>	<b>Percent of TOTAL</b>	<b>Quarter 3</b>	<b>Percent of TOTAL</b>
1	223	76%	221	75%	223	75%
2T	29	10%	37	13%	36	12%
2	34	12%	31	11%	33	11%
3	6	2%	4	1%	6	2%
<b>TOTAL *</b>	<b>292</b>	<b>100%</b>	<b>293</b>	<b>100%</b>	<b>298</b>	<b>100%</b>

\*Total Number of Establishments Currently Operating and Subject to Sampling That Have At Least Two Completed Sets.  
Establishments in Category 1 have 2 or fewer positive sample results

**Table 8. Ground Chicken Establishments By Category, Quarter 1-3 CY2009**

<b>Ground Chicken Establishments, by Category, Quarter 1-3 CY2009</b>						
<b>Category</b>	<b>Quarter 1</b>	<b>Percent of TOTAL</b>	<b>Quarter 2</b>	<b>Percent of TOTAL</b>	<b>Quarter 3</b>	<b>Percent of TOTAL</b>
1	5	56%	6	67%	6	67%
2T	2	22%	1	11%	2	22%
2	2	22%	2	22%	1	11%
3	0	0%	0	0%	0	0%
<b>TOTAL *</b>	<b>9</b>	<b>100%</b>	<b>9</b>	<b>100%</b>	<b>9</b>	<b>100%</b>

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

**Table 9. Ground Turkey Establishments By Category, Quarter 1-3 CY2009**

<b>Ground Turkey Establishments, by Category, Quarter 1-3 CY2009</b>						
<b>Category</b>	<b>Quarter 1</b>	<b>Percent of TOTAL</b>	<b>Quarter 2</b>	<b>Percent of TOTAL</b>	<b>Quarter 3</b>	<b>Percent of TOTAL</b>
1	18	82%	20	90%	20	90%
2T	3	14%	1	5%	1	5%
2	1	4%	1	5%	1	5%
3	0	0%	0	0%	0	0%
<b>TOTAL *</b>	<b>22</b>	<b>100%</b>	<b>22</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.  
Establishments in Category 1 have 14 or fewer positive sample results

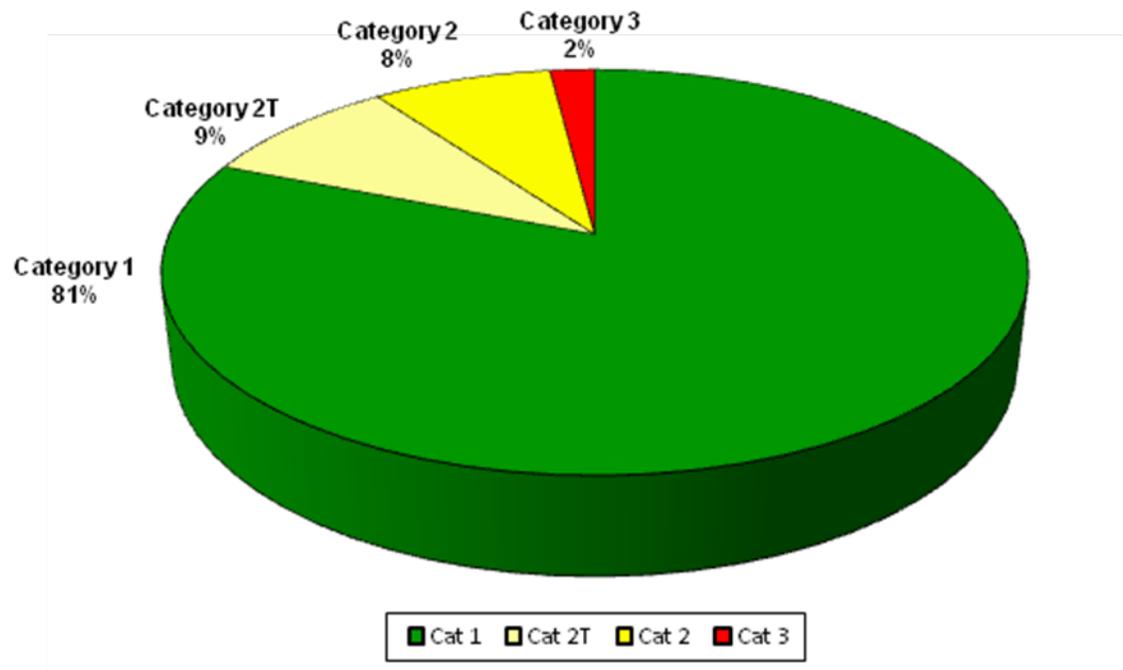
**Table 10. Steer/Heifer Establishments By Category, Quarter 1-3 CY2009**

<b>Steer/Heifer Establishments, by Category, Quarter 1-3 CY2009</b>						
<b>Category</b>	<b>Quarter 1</b>	<b>Percent of TOTAL</b>	<b>Quarter 2</b>	<b>Percent of TOTAL</b>	<b>Quarter 3</b>	<b>Percent of TOTAL</b>
1	70	85%	69	85%	73	85%
2T	4	5%	4	5%	4	5%
2	8	10%	8	10%	8	9%
3	0	0%	0	0%	1	1%
<b>TOTAL *</b>	<b>82</b>	<b>100%</b>	<b>81</b>	<b>100%</b>	<b>86</b>	<b>100%</b>

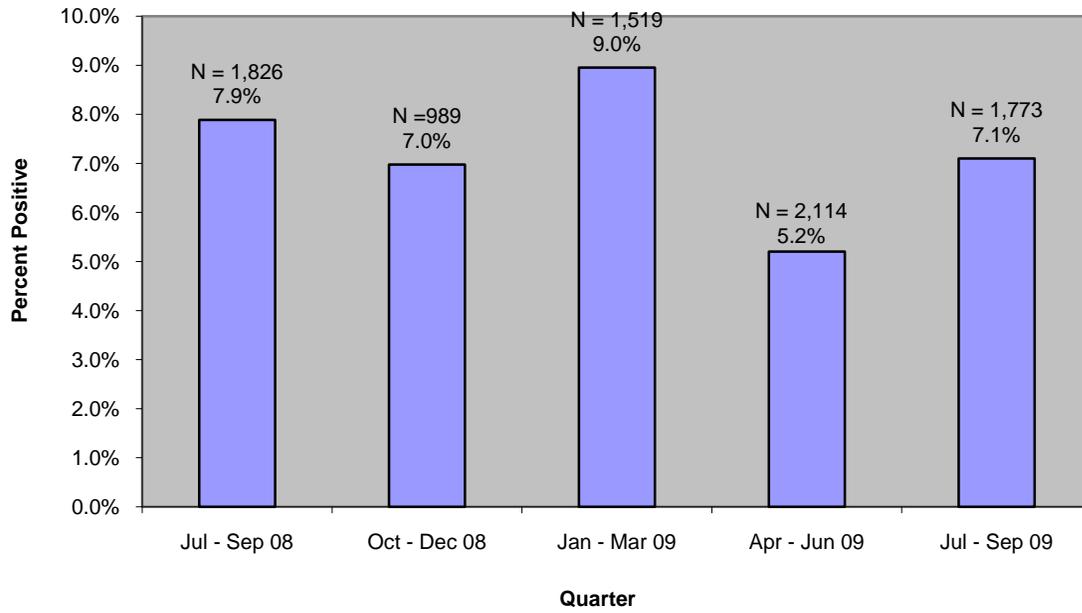
\*Total Number Of Establishments Currently Operating And Subject To Sampling That Have At Least Two Completed Sets

*Data Source: FSIS Data Warehouse (August 07 2009) Gurinder Saini*

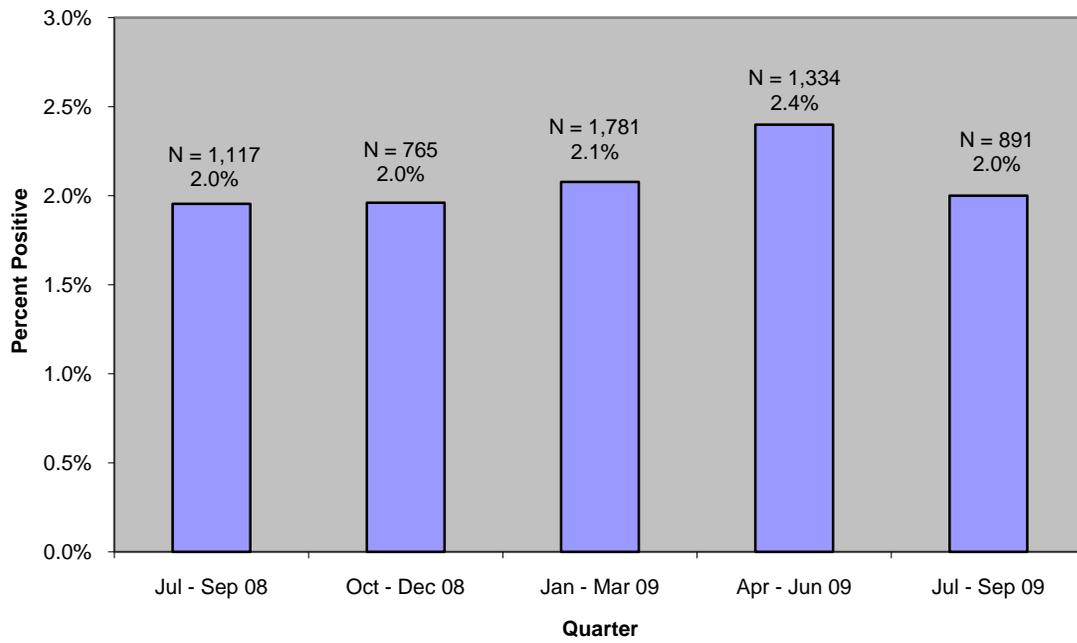
**Chart 1: Product Classes by Category: July – September 2009**



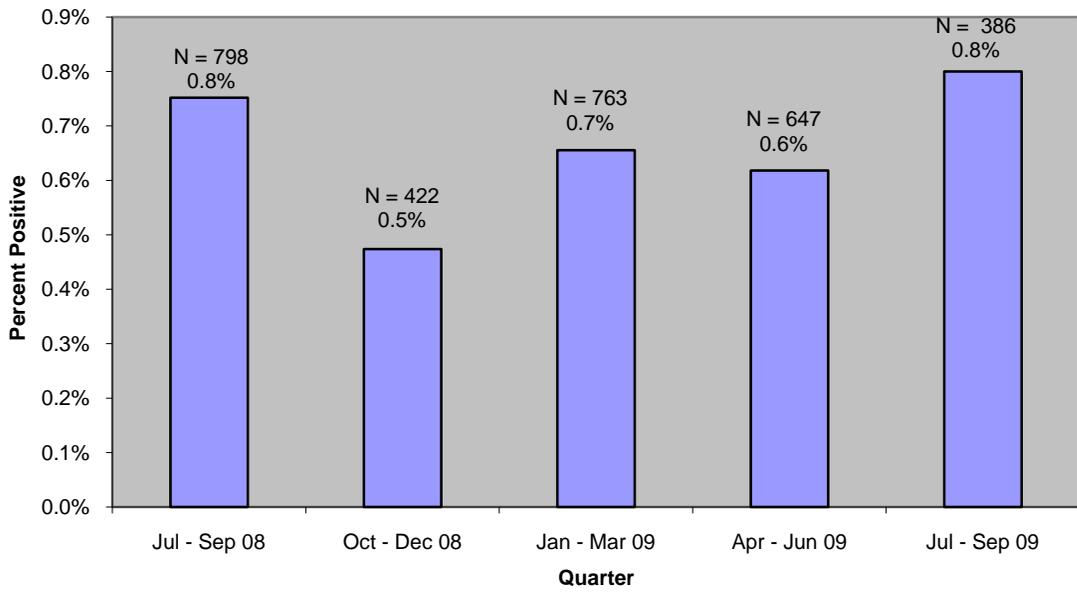
**Figure 1**  
**Microbiological Results of Broilers (Young Chicken) Carcasses (All Samples) Analyzed for Salmonella in the PR/HACCP Verification Testing Program Summarized by Quarter from July 2008 to September 2009**



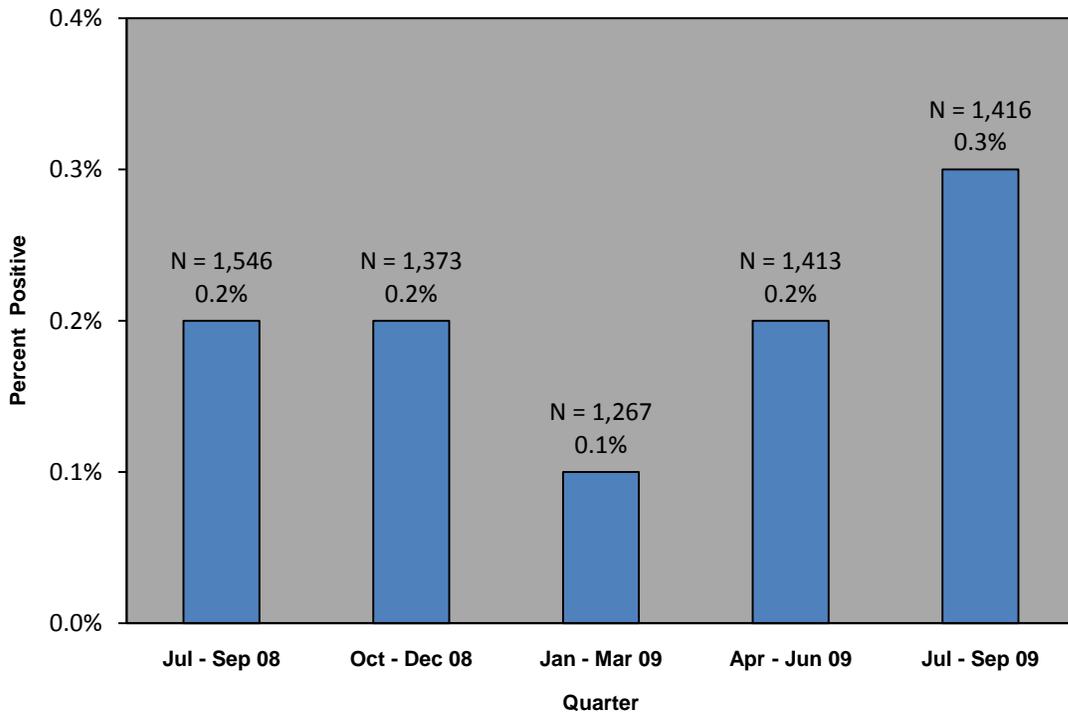
**Figure 2**  
**Microbiological Results of Market Hog Carcasses (All Samples) Analyzed for Salmonella in the PR/HACCP Verification Testing Program Summarized by Quarter from July 2008 to September 2009**



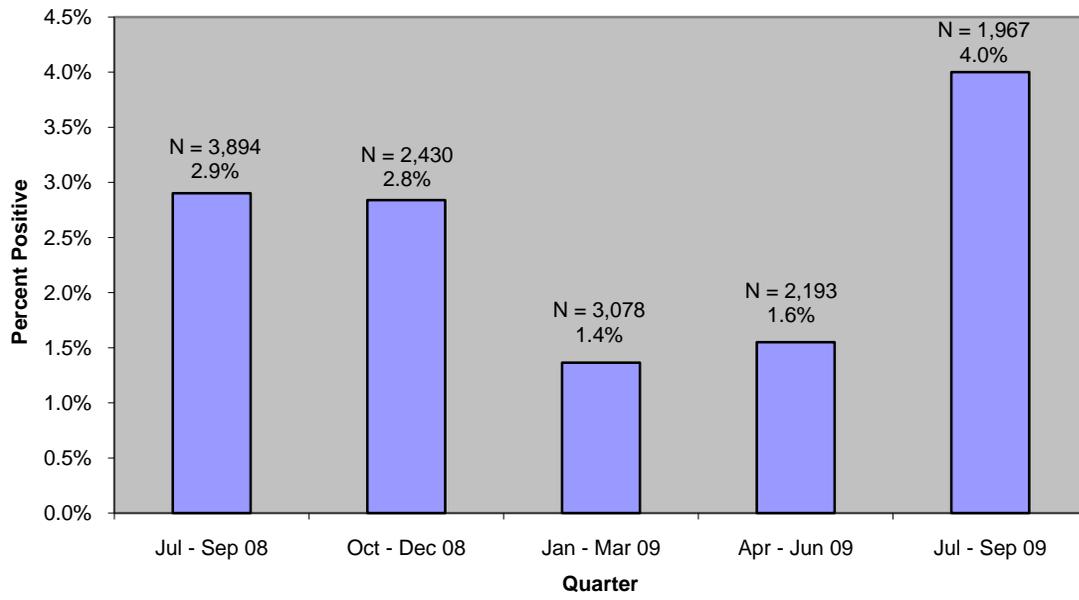
**Figure 3**  
**Microbiological Results of Cow and Bull Carcasses (All Samples) Analyzed for Salmonella in the PR/HACCP Verification Testing Program Summarized by Quarter from July 2008 to September 2009**



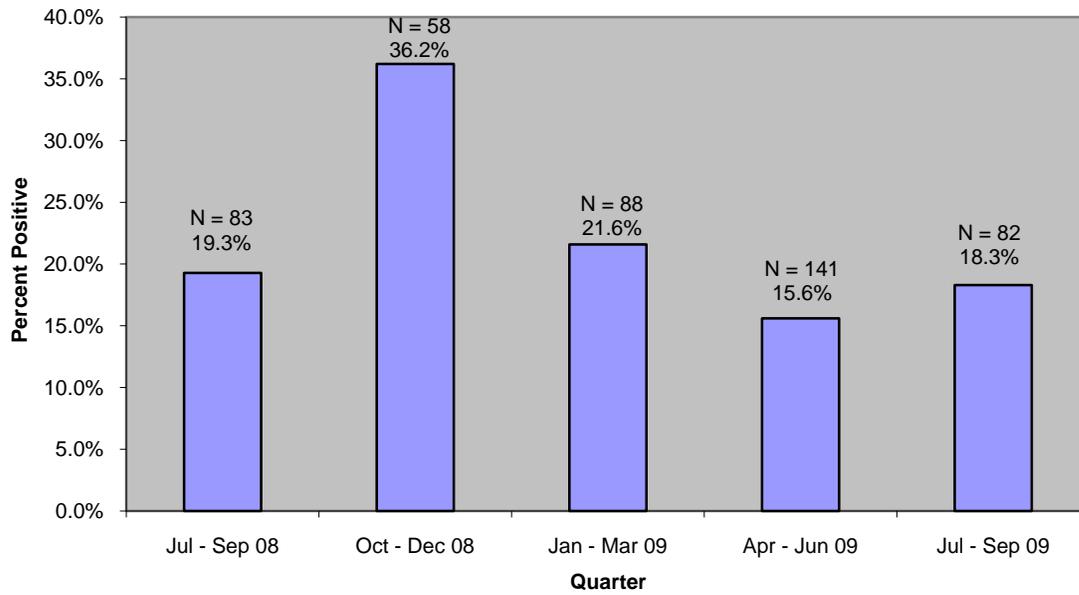
**Figure 4**  
**Microbiological Results of Steer and Heifer Carcasses (All Samples) Analyzed for Salmonella in the PR/HACCP Verification Testing Program Summarized by Quarter from July 2008 to September 2009**



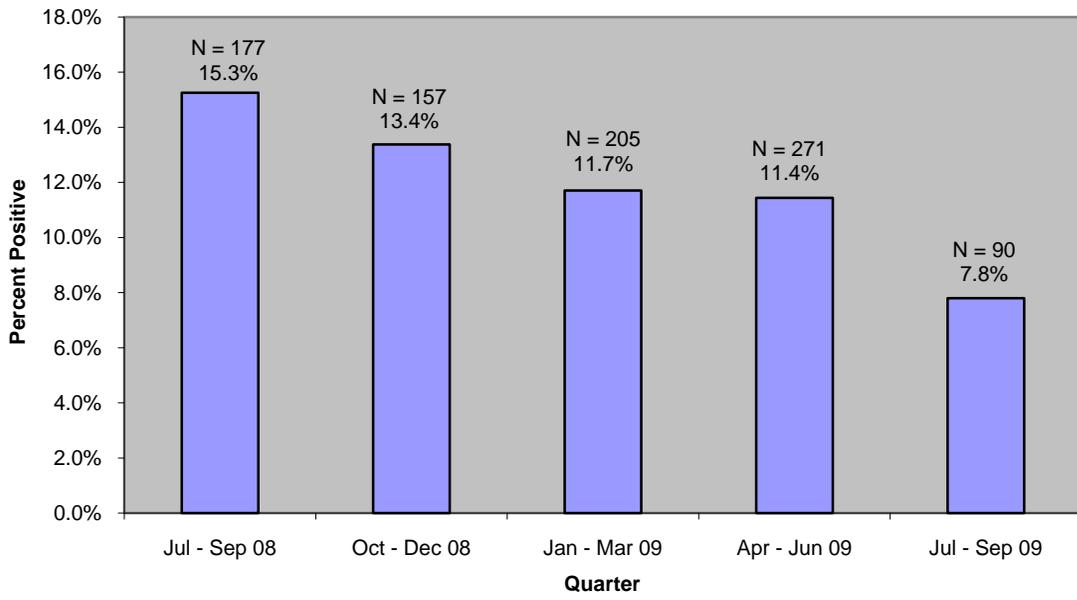
**Figure 5**  
**Microbiological Results of Ground Beef (All Samples) Analyzed For Salmonella in the PR/HACCP Verification Testing Program Summarized by Quarter from July 2008 to September 2009**



**Figure 6**  
**Microbiological Results of Ground Chicken (All Samples) Analyzed For Salmonella in the PR/HACCP Verification Testing Program Summarized by Quarter from July 2008 to September 2009**



**Figure 7**  
**Microbiological Results of Ground Turkey (All Samples) Analyzed For Salmonella in the PR/HACCP Verification Testing Program Summarized by Quarter from July 2008 to September 2009**



**Figure 8**  
**Microbiological Results of Turkey (All Samples) Analyzed for Salmonella in the PR/HACCP Verification Testing Program Summarized by Quarter from July 2008 to September 2009**

