Highlights of Layers '99 Study Results:
Part II General Management

Table egg layer management varies by region in the United States. For instance, more farms in the Southeast test for *Salmonella enteritidis* and more farms gather eggs by hand in the West than other regions.

The USDA’s National Animal Health Monitoring System (NAHMS) designed the Layers ‘99 study to provide both participants and the table egg layer industry with information on the United States’ layer population for education and research purposes. The USDA’s National Agricultural Statistics Service (NASS) collaborated with VS to select a statistically-valid sample from 15 states for Layers ‘99. The 15-state target population accounted for over three-quarters of the table egg layers in the U.S. as of December 1, 1998. NASS enumerators collected the data that formed the basis of Part I from 526 farm sites from February 1 through 26, 1999. State and Federal Veterinary Medical Officers and Animal Health Technicians collected data for *Part II Reference of 1999*

![Figure 1](image)

### Percent of Farm Sites Tested for *Salmonella enteritidis* in the Layer Houses by Time Frame and by Region

<table>
<thead>
<tr>
<th>Region</th>
<th>Time of Layers '99</th>
<th>In 1994* interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>West</td>
<td>68.8</td>
<td></td>
</tr>
<tr>
<td>Central</td>
<td>25.6</td>
<td></td>
</tr>
<tr>
<td>Great Lakes</td>
<td>57.3</td>
<td></td>
</tr>
<tr>
<td>Southeast</td>
<td>83.8</td>
<td></td>
</tr>
</tbody>
</table>

*Excluded farm sites that were less than 5 years old at the time of the Layers ‘99 interview.

![Map](image)

*Alabama, Arkansas, California, Florida, Georgia, Indiana, Iowa, Minnesota, Missouri, Nebraska, North Carolina, Ohio, Pennsylvania, Texas, and Washington.

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**Table Egg Layer Management in the U.S.** from 252 farm sites via questionnaire administered from March 22 through April 30, 1999. Part II highlights related to biosecurity practices are summarized in a separate Info Sheet. More detailed information on the study and the sampling methodology is available in NAHMS Layers ‘99 tabular summary reports.

**Salmonella enteritidis Management Practices**
- A total of 58.0 percent of farm sites tested for *Salmonella enteritidis* (S.e.), an increase from 15.7 percent in 1994. Percentages of farm sites with an S.e. testing program ranged from 25.6 percent in the Central region to 83.8 percent in the Southeast region (Figure 1).

- Over one-half (56.1 percent) of farm sites participated in an S.e. quality assurance program, with the most common being a company sponsored program (40.3 percent). The percentage of farm sites participating in any program ranged from 22.9 percent in the Central region to 83.8 percent in the Southeast.

**Health and Health Management**
- Generally, few producers had any severe or moderate morbidity problems. In fact, less than 3 percent of farms had severe or moderate problems with any common infectious disease.

- About one-half (53.2 percent) of the last completed flocks (one flock per farm site) experienced prolapse problems, and 16.2 percent of flocks had moderate or severe prolapse problems.
About one-third (32.8 percent) of last completed flocks had problems with cage layer fatigue, and 7.4 percent of flocks had moderate or severe problems.

- A total of 6.5 percent of hens placed in the last completed flock (one flock per farm site) died by 60 weeks of age. The 60-week mortality was less than 4 percent for 24.0 percent of last completed flocks and was 10 percent or higher for 19.2 percent of last completed flocks.

**Egg Management**

- Gathering eggs by hand was most common in the West region where over one-half (58.3 percent) of farm sites gathered eggs only by hand, and another 9.7 percent of farm sites used both belt and hand gathering. The percentage of eggs gathered by hand ranged from 2.2 percent in the Central region to 38.7 percent in the West region.

- The average peak hen-day egg production for the last completed flock was 90.1 (average maximum production of 90.1 eggs per 100 hens per day). Overall, 17.2 percent of last completed flocks (one flock per farm site) had a peak production of less than 88 eggs per 100 hens per day, and 10.8 percent peaked at 94 or more eggs per 100 hens per day (Figure 2).

**Molting**

- Routine molting was most common in the Southeast and West regions (97.0 percent and 94.9 percent of farm sites respectively). Overall, 82.6 percent of farm sites routinely molted their birds, while only one-half (56.9 percent) of farm sites in the Central region molted.

**Facilities & Facility Management**

- A total of 11.5 percent of layer farm sites had pullet raising facilities on the farm site.

- All together, 76.8 percent of houses were 10 years old or older, and 38.7 percent were at least 20 years old.

**Percent of Farm Sites by Peak Hen-Day Egg Production for the Last Completed Flock**

<table>
<thead>
<tr>
<th>Number of Eggs per 100 Hens per Day</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 88</td>
<td>17.2%</td>
</tr>
<tr>
<td>88 - 90</td>
<td>24.1%</td>
</tr>
<tr>
<td>91 - 93</td>
<td>47.9%</td>
</tr>
<tr>
<td>94 or more</td>
<td>10.8%</td>
</tr>
</tbody>
</table>

Nearly one-half (45.4 percent) of farm sites had at least one house that was 20 years old or older. The West region had the largest percentage of farm sites with at least one house that was 20 years old or older (71.2 percent).

- The Great Lakes region was the only region with layer houses that could hold 200,000 or more layers. No farm sites in the Southeast region had houses with a capacity of 120,000 or more. In the other regions, the percentage of farm sites with at least one house that could hold 120,000 to 199,999 layers ranged from a low of 4.0 percent of farm sites in the West region to a high of 23.6 percent of farm sites in the Great Lakes region.

- Nearly one-half (47.8 percent) of layer houses used a chain feed delivery system. A hand cart feeding system was used for 12.6 percent of layer houses.

- About two-thirds (66.0 percent) of farm sites used wells less than 300 feet deep as their primary water source. A municipal water source was most commonly used in the West region (16.7 percent of farm sites).

- On 4.7 percent of farm sites, the last completed flock was placed in the layer house at over 60 weeks of age (recycled flocks).

- Most of the spent hens from the last completed flock were disposed of by processing for food. Although 10.8 percent of the farm sites disposed of some spent hens through live bird markets, these birds accounted for only 2.6 percent of the spent hens from the last completed flocks.

- High rise housing was the most common manure handling method used in the Great Lakes and Central regions (63.0 and 48.1 percent of farm sites, respectively). In the Southeast region, the most common method was flushing to a lagoon (41.9 percent of farm sites), while scraper systems (not flush) was the most common in the West region (43.6 percent of farm sites).

- Nearly all (99.2 percent) farm sites used some method of rodent control. Chemicals or baits were by far the most common method used.

- A total of 27.9 percent of farm sites considered their farms to have a moderate or severe problem with mice, and 8.5 percent considered their farms to have a moderate or severe problem with rats.