1. PURPOSE

The aim of this SOP is to describe the procedures for daily monitoring of the environment in the Layer Barn to ensure that the temperature and the ammonia level is maintained at a level that promotes good health and for the laying hens.

2. RESPONSIBILITY

2.1 Poultry Barn Staff

2.2 Poultry Barn Manager

3. MATERIALS

3.1 Tablet
3.2 Excel application
3.3 Temperature controllers
3.4 Hydrion© Ammonia Test kit
3.5 Distilled water

4. GENERAL CONSIDERATIONS

4.1 Temperatures are maintained within a range that contributes to good health and welfare of the birds in accordance to the general guidelines of the Code of Practice for the Care and Handling of Pullets and Laying Hens.

4.2 Environmental temperatures must be maintained within the range of 18-22° C. Temperature fluctuations must not exceed 3° C as this cause stress, respiratory problems and affect productivity.

4.3 Ammonia levels are tested at least once monthly. Level should not exceed 10 ppm.

∗ NOTE

** The following guidelines are for the routine management of the environmental parameters of the Layer Barn however; surveillance of temperature, humidity and ammonia levels is continuous. If temperature and/or humidity anomalies are suspected, measures must be taken to confirm the parameters and address as indicated below.

4.4 Irregular temperatures may contribute to health problems. Signs that indicate that temperature is;

4.4.1 Too HIGH include:
   • frequent spreading and flapping of wings
   • panting

4.4.2 Too LOW include:
   • feather ruffling
   • rigid posture
   • trembling
   • huddling or piling on top of each other
   • distress vocalization
5. PROCEDURES

5.1 DAILY MONITORING (TEMPERATURE)

Temperature readings are recorded at the beginning of each day.

Temperature readings are recorded from the control panels located on the South wall of the barn. Temperature controllers (Fig. 1) are individually identified with a number corresponding to the room it is reading.

5.1.1 Turn the left dial from position 12 to position 11 to obtain the maximum temperature reading achieved with in the 24-hour period.

5.1.2 Record the Maximum temperature in the Temperature Records Excel file.

5.1.3 Turn the right dial back and forth until “CLR” is indicated on the display screen.

5.1.4 Turn the left dial from position 11 to position 10 to obtain the minimum temperature achieved with in the 24-hour period.

5.1.5 Record the Minimum temperature in the Temperature Records Excel file.

5.1.6 Turn the right dial back and forth until “CLR” is indicated on the display screen.

5.1.7 Turn the left dial back to position 12.

5.1.8 Report irregular temperature observations to the Poultry Farm Manger immediately.

5.2 MONTHLY MONITORING (AMMONIA LEVEL)

Ammonia levels of the Layer barn are measured and recorded once monthly:

5.2.1 Tear off a 2-3 inch strip from the pHydrion© Ammonia Test Kit

5.2.2 Moisten the strip with distilled water.

5.2.3 Expose the strip to the air by air drying. Wait 15 seconds.

5.2.4 Compare the test strip to the calibrated color chart on the strip holder. The color chart shows readings in ppm of ammonia air.

5.2.5 Reading should not exceed 10 ppm. If too high;

5.2.5.1 Open the inlet of the ventilation ducts. This will increase the speed of the fans and push out the air. Extent of the aperture depends on the external temperature and humidity.

5.2.5.2 Repeat test after 1 hour.

5.2.6 Record the results.
6. REFERENCES


<table>
<thead>
<tr>
<th>DATE</th>
<th>PREVIOUS VERSION</th>
<th>NEW VERSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-May-2019</td>
<td>Revision 3</td>
<td>Full revision: MAC Campus FACC approved</td>
</tr>
</tbody>
</table>