

ENVIRONMENT MANAGEMENT: BROILER BARN**1. PURPOSE**

The aim of this SOP is to describe the procedures for daily monitoring of temperature in the Broiler Barn to ensure that the environmental parameters are maintained at a level that promotes good health for the broiler chickens.

2. RESPONSIBILITY

- 2.1 Poultry Staff
- 2.2 Poultry Barn Manager

3. MATERIALS

- 3.1 Tablet + Excel application

4. GENERAL CONSIDERATIONS

- 4.1 Temperature and Humidity readings are monitored and recorded daily (morning).
 - 4.1.1 Ambient temperature: 30-34°C for the first 3 to 5 days upon arrival, then decrease the temperature by one degree every 3-4 days in reference to the PU-A-2A: Broiler Temperature Management Chart.
 - 4.1.2 Humidity 25-60%
- 4.2 Irregular temperatures may contribute to health problems. If the birds are clumping together tightly, this means that the temperature is too cold. If the birds are panting and look lethargic, then this is a sign that the birds are too warm.

5. PROCEDURES

- 5.1 Enter the Broiler barn as per SOP [DC-101: Biosecurity: Poultry Unit](#).
- 5.2 TEMPERATURE RECORDING:
 - 5.2.1 Temperatures are monitored via the control panels located on the South wall of the barn. Temperature controllers are individually identified with a number corresponding to the room it is reading.
 - 5.2.2 Turn the left dial from position 12 to position 11 to obtain the maximum temperature reading achieved with in the 24-hour period.
 - 5.2.3 Record the Maximum temperature in the Temperature Records Excel file.
 - 5.2.4 Turn the right dial back and forth until "CLR" is indicated on the display screen.
 - 5.2.5 Turn the left dial from position 11 to position 10 to obtain the minimum temperature achieved with in the 24-hour period.
 - 5.2.6 Record the Minimum temperature in the Temperature Records Excel file.
 - 5.2.7 Turn the right dial back and forth until "CLR" is indicated on the display screen.
 - 5.2.8 Turn the left dial back to position 12.
 - 5.2.9 Report irregular temperature fluctuations to the Poultry Unit Coordinator immediately.



5.3 TEMPERATURE SETTING

5.3.1 Small room 1 controller (room 1430) set the controller to 31

5.3.2 Big room 2 controllers (room 1200) 2 on the left and 2 on the right 1L/2L and 1R and 2R

5.3.2.1 1R set for 30 degrees

5.3.2.2 2R set for 32

5.3.2.3 1L set to 30

5.3.2.4 2L set to 32

5.3.3 Gradually decrease the room temperature by 1 degree every 3- 4 days depending on the following (refer to temperature chart as a guideline).

- External temperature
- Growth of broilers
- Observation (e.g. panting)
- Humidity levels – high humidity levels = too hot = decrease the temperature which increases ventilation rate to get rid of humidity.

5.4 HUMIDITY RECORDING:

5.4.1 Humidity is monitored via thermo-hygrometers located within the Broiler rooms (at the far end)

5.4.1.1 Press the **HUMIDITY** button once on the back of the device to obtain the maximum humidity reading achieved within the 24-hour period.

5.4.1.2 Record the Maximum Humidity in the *Temperature Records* Excel file.

5.4.1.3 Press the **HUMIDITY** button a second time to obtain the minimum humidity achieved with in the 24-hour period.

5.4.1.4 Record the Minimum humidity in the *Temperature Records* Excel file.

5.4.1.5 Press the **HUMIDITY** button a third time then press on clear to reset.



5.5 LIGHTING

5.5.1 Lighting is controlled via preset settings programmed into the LM-4200 control panel.

5.5.1.1 One hour prior to bird manipulations reduce the light intensity on the control panel in manual mode to decrease bird activity and allow for smoother handling.



ENVIRONMENT MANAGEMENT: BROILER BARN**5.6 VENTILATION**

5.6.1 Ventilation is controlled automatically and manually by personnel.

5.6.2 Fresh air intake for the rooms relies on apertures in the ceiling that bring fresh air from the attic.

5.6.2.1 Open or close the apertures upon monitoring following the PU-A-2A: Broiler Temperature Management Chart. to adjust the temperature

5.6.2.2 Use Floor fans in hotter periods of the year to provide uniform air flow and mixing inside the rooms.

5.6.2.3 Test air ammonia levels at least weekly or upon notice of ammonia emanations with Hydrion Test Papers (CAT# AM-40)

5.6.2.3.1 Remove 5cm of test paper from the dispenser

5.6.2.3.2 wet with distilled water and shake the test strip for 15 seconds to measure the ammonia concentration in the air.

5.6.2.3.3 Refer and compare to the color chart on the dispenser to record the concentration.

5.6.2.3.4 Take corrective actions to maintain the level below 25ppm at all times:

- Adjust the ventilation.
- Clean and/ or add bedding.

5.6.2.4 Air outflow is automatically controlled through the same controls as temperature. Ceiling fans pull the air from inside the room, and it is ejected via chimneys through the roof.

6. REFERENCES

Fédération des producteurs d'œufs du Québec. Bien-être des poules pondeuses, 4 aout 2015.

Canadian Council on Animal Care. CCAC Guideline on: The Care and Use of Farm Animals in Research, Teaching, and Testing." Canadian Council on Animal Care, 2009.

Document Status and Revision History

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