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## Conclusions

Daytime, nighttime, rainy, and dry season temperature and RH distributions in the BC and DL systems were analyzed. A temperature range of 29-23°C and a RH range of 93-75% existed within the systems. Approximately, a 1.2°C temperature difference was recorded between the poultry house and the ambient environment during the day- and nighttime.

The temperature and RH distributions within the BC and DL systems were heterogeneous. Because the deep litter birds can move freely, they can sense comfort zones within the system which may lead to overcrowding among birds. In the case of laying birds in battery cages where movement is restricted, ensuring homogenous distribution is paramount.

Approximately 5% and 67-73% of the daytime and nighttime temperature data, respectively, were within the optimum environmental temperature of 18-24°C; 37-41% of the daytime RH was within the optimum environment RH. Natural ventilation is not sufficient to ensure homogenous distribution and optimum environmental conditions within the systems.

In the future, studies on the effect of ventilation on temperature, RH distributions, and energy demand in poultry environments are recommended.

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