

DeltaTrak Cold Chain Solutions Help Reduce Chick Mortality at Hatcheries

Situation: Hatcheries need effective monitoring during storage and transport of day old chicks.

The profitability of any broiler enterprise is predicated on the number, quality and weight of the birds that make it to the slaughter stage. Effective temperature monitoring and control can help reduce the mortality rate of day old chicks. While it is desirable to have 100% survivability, it is normal to incur some mortalities in the broiler business. Suppliers of day-old chicks and poultry production experts state that for these modern genetics, a mortality of 5% is acceptable and has little impact on a producer's bottom line.

It is common knowledge that day-old chicks require brooding where a source of heat is provided. Research at hatcheries around the country indicate that 85°F is an ideal temperature for day-old chicks. However, observing chick behavior will help to determine the optimal temperature of the brooder. For example, ninety degrees is too hot and will cause chicks to sweat and become stressed in the brooder, creating an increase in the mortality rate to 10% or higher. Conversely, when temperatures slump lower than desired, the chicks contract pneumonia and suffer chilling. When cold, the young birds also tend to stop feeding and huddle together for warmth. Surprisingly, when temperatures drop, the actual causes of death are smothering, dehydration and venting, rather than low temperatures.

Arriving at and maintaining the right temperature should not be left to chance. Temperatures should be measured at the chick level, in the brooder litter. Constant measurement of the brooder temperature will ensure that the birds are in a comfortable environment, which will encourage survival.



Problem: A fluctuating environment makes it difficult to maintain proper temperature.

Perdue Farms, headquartered in Salisbury MD is a leading nationwide poultry processor, with 14 hatchery locations throughout the Southeast. The extreme ebb and flow of the temperature and humidity

conditions of the region make temperature control of the brooder a bit tricky. Maria Palermo, the hatchery manager, was looking for a way to monitor her brooder without exposing it to the extreme temperature fluctuations resulting from the environment, as well as frequent opening of the brooder doors.

Solution: DeltaTrak FlashLink BLE Logger

The Flashlink BLE logger is ideal for facility monitoring. As a wireless monitoring solution, it provides temperature and humidity data, which may be downloaded from the BLE Logger using the DeltaTrak smartphone app. Passcode protected access offers an added level of data security. The mobile device uploads information to a web application where it can be viewed remotely via computer, tablet or smartphone. Data is viewable and archived in the cloud.

Email or SMS alerts are immediately sent when out-of-range conditions occur. Hatchery personnel can easily access real-time temperature readings in the brooder. This allows the hatchery staff to identify when chicks may be compromised due to changes in the temperature and/or humidity. Having access to this information allows staff to take immediate corrective action when problems occur.

Results: Efficient temperature monitoring leads to a reduction in brooder mortality rates.

Perdue has seen mortality rates decrease from 9% to 4.5% within one calendar year, as the BLE logger has been deployed throughout their brooders. Because the temperature data is being archived in the cloud, each location can replicate the historical data and conditions, so that data is the same in Maryland or Alabama. Maria Palermo says, "The BLE Logger has allowed Perdue to maximize our chick investment."



DeltaTrak® is a leading innovator of cold chain management, environment monitoring and food safety solutions for the food, pharmaceutical, life sciences and chemical industries. Contact DeltaTrak by phone at 1-800-962-6776 or by email at marketing@deltatrak.com. Additional information can be found at www.deltatrak.com.

