

How to maintain superior chick quality after incubation

A hatchery pays a lot of attention to the optimisation of incubation conditions in the setters and hatchers to obtain maximum hatchability and superior chick quality. However, the important job of the hatchery does not end the moment the chicks are pulled from the hatcher.

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Between the hatcher and arriving at the farm, superior chicks can still be turned into less vulnerable chicks. Before chicks arrive at the farm, they have to pass through the handling and selection procedures, afterwards they have to wait for the truck in the chick holding room and then they go on transport.

During the several procedures after pull time, chicks can be exposed to several stressors, such as handling stress, temperature stress, hunger and thirst.

During the incubation process the main focus is on maintaining optimal eggshell temperatures for optimal embryonic development. During the last phase in the hatcher, when chicks have hatched and are waiting to be pulled, the main focus is on maintaining optimal rectal temperatures.

Optimal rectal temperatures prevent chicks from starting to pant and losing excessive amounts of water from their body that can lead to dehydration. Even when rectal temperatures are maintained in the optimal



range of 40.0-40.6°C, chicks lose 6.4% of their body weight in 24 hours. However, when rectal temperatures exceed 40.6°C, body weight loss can easily increase above 10% in 24 hours. For optimal development of the young chick, water is important for nutrient transport and it is necessary for tissue growth.

Therefore, it is crucial that rectal temperatures are maintained in the optimal range of 40.0-40.6°C to prevent temperature stress and to minimise body weight loss.

In the majority of hatcheries, the design of the chick holding room is not optimal. It is often a large room with fans for air movement.

Exact control of the airflow is difficult. Therefore, temperature control is also difficult and chicks are not comfortable in this last part of the hatchery. Even a short stay in a chick holding room with suboptimal temperatures can have large detrimental effects on the survival rate of the chicks and on their later performance.

Chick holding room design

To obtain optimal and uniform rectal temperatures within a chick holding room, the design of the chick holding room is crucial. It is as important as the design of your setters and hatchers.

Therefore, the HatchTech Chick Storage

Room is equipped with HatchTech's patented laminar airflow technology.

The specially designed, perforated radiators create pressure differentials that distribute the air in a uniform flow of parallel air layers. As a result the air velocity is uniform throughout the storage room and, consequently, the rectal temperatures of the chicks are uniform in all transport baskets. Not all sections of the HatchTech Storage Room have to be filled because temperature is controlled per section.

The current HatchTech Chick Storage Room ensures that chicks will not be exposed to heat stress.

In the near future HatchTech Chick Storage Rooms will be equipped with LED light to have the opportunity to give chicks feed and water while they are waiting for the truck, so that hunger and thirst are also excluded.

The HatchTech Chick Storage Room maintains chick quality by preventing heat stress and consequently dehydration. In the near future, these chicks will also be free from hunger and thirst. It also optimises the final step in your hatchery to ensure that only superior chicks are brought to the farm. ■

