

The vital role of airflow, hygiene and disinfection in day-old chick transport

In the world of poultry farming, the journey of day-old chicks from the hatchery to the farm is a critical step in ensuring their health and well-being.

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While this process is often overlooked, it serves as the bridge between the hatchery and the farm, making it an essential phase in poultry production.

Whilst regulations and legislation on animal transport is becoming more stringent, it is crucial to understand that the successful voyage of day-old chicks from the hatchery to the farm is not merely about reaching the destination, it is about safeguarding their production potential and ensuring their overall well-being during this journey.

Ensuring optimal transport conditions will have a significant positive impact on the productivity and financial gains of poultry farming.

In this article, we will emphasise the significance of three essential factors: airflow, hygiene, and disinfection. We will explore how these aspects play a pivotal role in maintaining the safety and optimal condition of day-old chicks during their voyage from the hatchery to the farm.

The hatchery-to-farm link

Day-old chick transport represents the link between the hatchery and farm. For many poultry farmers, the day-old chick carrier arriving with their chicks is the only part of the hatchery process they witness, thus making it a critical point of interaction between hatchery and farm.

Therefore top quality product and a seamless transition of day-old chicks from the controlled environment of the hatchery to the dynamic surroundings of the farm is crucial for the farmers impression of the hatchery performance.

This is a delicate process that hinges on several key factors.



Airflow: the breath of life

One of the most vital parts in the transportation of day-old chicks is the role of airflow. Powerful ventilation is critical to maintain a healthy and comfortable environment for these fragile, newly hatched birds.

In the following paragraphs we highlight the importance of airflow in the journey of day-old chicks and how it directly affects their well-being.

● Temperature regulation:

Maintaining the right body temperature, between 39.5°C and 40.5°C, is crucial for day-old chicks. Proper airflow is the key factor to help in temperature regulation, preventing overheating or chilling during transit.

Incorrect temperatures during transport, possibly caused by lacking airflow, have a direct effect on the body temperature of the day-old chicks. Research has shown that sub-optimal body temperatures will lead to stress, reduced growth and development, reduced immunity and health and eventually even mortality.

● Oxygen supply:

Proper airflow also ensures adequate oxygen supply during transportation, which is essential to ensure that the chicks can breathe comfortably. Additionally, metabolic gasses like CO₂ will be dispersed at the same time.

Strong 400 volt fans have the capacity to

provide significant pressure and flow, thus enabling the uniform and efficient distribution of air throughout the box. This capability ensures that every corner receives the necessary fresh airflow, contributing to a healthy and comfortable environment for the birds. For safety it is crucial to incorporate duality or redundancy in the design of ventilation systems. This ensures that even if one component fails, the system will not completely malfunction at once.

Hygiene: the cornerstone of poultry health

In addition to airflow, maintaining impeccable hygiene is a non-negotiable aspect of day-old chick transport.

Hygiene practices serve the dual purpose of keeping the hatchery safe and ensuring the chicks' optimal condition upon arrival at the farm.

● Sanitation of crates and vehicles:

Thoroughly cleaning crates, trolleys and vehicles used for chick transportation is vital to prevent the spread of disease. Any residual contamination can potentially carry pathogens and spread diseases.

● Hand hygiene:

Personnel handling the day-old chicks should adhere to strict hand hygiene protocols. This helps prevent the introduction of harmful pathogens to the chicks during handling.

● Biosecurity measures:

Having mentioned hand hygiene separately, of course all other biosecurity measures have to be taken into account at the hatchery, during transport and at the farm. It is essential to minimise the risk of disease transmission.

This includes controlling access, using disinfectant foot baths, use of personal protective equipment and thorough monitoring of the biosecurity measures for both personnel and equipment.

Disinfection: safeguarding the future of poultry

Besides hygiene, disinfection is also fundamental in ensuring the safety and health of day-old chicks.

This process goes beyond the hatchery, extending into the vehicles, equipment, and facilities involved in transport of day old chicks.

Choosing a chick carrier with a robust and long-lasting monobloc body build, featuring smooth walls and floors without rivets or unnecessary obstacles, plays a vital role in maintaining optimal biosecurity. This design prevents any potential contamination buildup in seams, edges, or other vulnerable areas as it is easier to disinfect.

● Vehicle and equipment disinfection:

Before loading chicks into vehicles, it is imperative to disinfect the cargo space thoroughly after cleaning. Proper disinfection reduces the risk of disease transmission and ensures a safe environment for the chicks.

Besides the vehicle, all other equipment used during the transportation of day-old chicks must also be disinfected thoroughly. This includes crates, containers, and any tools used for handling.

Selecting the right disinfectants is of crucial importance. Utilising disinfectants suitable for agriculture and specifically for poultry, preferably with a base of quaternary ammonium or glutaraldehyde, in the appropriate dosage, and adhering to the recommended contact time is advised.

These disinfectants have proven efficacy in eliminating pathogens without harming the equipment, safeguarding the health and well-being of the birds. By following these guidelines, a high standard of biosecurity can be maintained, protecting flocks and contributing to a successful and sustainable poultry operation.

Creating a seamless journey

The transportation of day-old chicks is a complex operation that requires coordination of multiple factors. When airflow, hygiene, and disinfection are managed effectively, it sets the stage for the chicks' successful transition from the hatchery to the farm.

● Chick loading and unloading:

The process of loading and unloading day-old chicks must be carried out with utmost care. Ensure that the environment remains clean and that chicks are not subjected to stress or injury during these crucial stages. This also entails working swiftly yet calmly. The time between unloading the trolleys and tipping the crates should be minimised as much as possible.

It is often preferred by farmers to have all trolleys unloaded at once before starting the tipping process. However, this is not ideal if the tipping crew is small, as it would result in the birds waiting longer in the crates. Since farm house ventilation is not designed to handle densely packed chicks in crates, there is a risk of the birds overheating within a very short period of time. Therefore, it is more favourable to unload the trolleys in phases, allowing the tipping crew to keep up with the process and minimising the time chicks spend in the crates, reducing the likelihood of overheating.

● Monitoring and quality control:

Throughout the journey, monitoring the condition of the chicks is vital. Early detection of any issues can prevent larger problems from developing. Quality control checks, such as measuring body temperature, should be performed at various points during transportation.

● Emergency preparedness:

Having contingency plans in place for unexpected events is essential. These plans can make the difference between a successful journey and one fraught with challenges. Emergency preparedness also involves the human element.

The human element

The role of personnel involved in the transportation of day-old chicks cannot be understated. Those responsible for handling the chicks and managing the logistics play a crucial role in ensuring a safe and comfortable journey.

● Personnel training:

Personnel involved in the transportation process should receive proper training in handling day-old chicks, biosecurity, and hygiene protocols. Well-trained staff are an asset in minimising risks and maintaining the health and well-being of the chicks.

In addition, it is also critical to provide personnel with comprehensive instruction on operating the chick carrier and its machinery, including emergency operation, further ensuring the safety and well-being of the chicks throughout the transportation process.

● Communication:

Effective communication between the hatchery and the farm is paramount. This includes sharing information on chick health,

expected arrival times, and any specific requirements for the farm's receiving team. Clear communication ensures that both parties are on the same page and can take appropriate actions if needed.

Post-arrival evaluation and feedback

The journey of day-old chicks does not end upon arrival at the farm. Post-arrival evaluation and feedback mechanisms are essential for continuous improvement.

● Health and welfare assessment:

After the chicks have been placed in their designated area at the farm, a health and welfare assessment should be conducted. Several parameters such as, body temperature, mortality, farm house floor temperature and bird activity should be monitored. This assessment can provide valuable insights into the condition of the chicks upon arrival.

● Data collection and feedback:

Collecting data on chick performance and health outcomes post-arrival is crucial. This data can inform decisions and help identify areas for improvement in the transportation process. Together with the system data of the day-old chick carrier, a performance review can be made. Preferably feedback mechanisms between the farm and the hatchery are established to make improvements in day-old chick transportation possible. If issues or challenges are identified, they can be addressed collaboratively.

Conclusion

In the world of poultry farming, the transportation of day-old chicks from the hatchery to the farm is an essential step in the production chain.

It is the point of interaction between the hatchery and the farm, and it represents a commitment to the well-being and success of the birds.

Airflow, hygiene, and disinfection are the pillars of successful day-old chick transport. These principles, along with the careful management of personnel, climate control, and addressing challenges, ensure a safe and comfortable journey for the chicks.

Therefore, ensuring the safe transportation of day-old chicks is not just about logistics. It is a symbol of the industry's commitment to the welfare and success of its future. In recognition of this crucial connection between the hatchery and the farm, we acknowledge that every chick's journey represents growth, health, and the ongoing strength of the poultry industry.

Making sure these young birds have a smooth and safe trip ensures they arrive at the farm all set to thrive and contribute to the industry's sustainability and future. ■