

Ensuring profitability and optimum hatching results through automation

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Within the hatchery of today an efficient and hygienic production process is crucial to ensure profitability and optimal hatching results. Current production volumes, biosecurity standards, labour and animal welfare regulations make innovative hatchery automation fundamental to achieve this.

Delicate handling of eggs

Every hatchery aims to fully utilise the hatching potential of the eggs that enter its facility. This can only be achieved when the incoming eggs are held under optimum conditions until the moment they are placed in the incubator.

These optimum conditions are created by a proper hygiene level, good storage conditions and delicate handling in the egg room. From the 18th day of the incubation process, eggs are transferred from the setter tray to the hatcher basket.

The essence of this procedure is to avoid eggs cooling down or being damaged, which has a negative influence on hatchability. Therefore the transfer process needs to be both quick and gentle. With the current increase of daily production volumes, labour costs and biosecurity risks, reliable automation is essential to do this efficiently and safely.

Enhancing chick quality

When processing day old chicks, many important factors need to be taken in to account to maintain chick quality. The daily production volume and the available time frame demand, in many cases, a high throughput.

On the other hand, delicate chick handling is required to conform with the high standards of animal welfare. Precision and accuracy during operations such as gender sorting, vaccination and counting require special attention as well. Efficient, space-saving and hygienic workflows, combined with high quality automation, will make hatch-



eries more capable of controlling these important factors.

Improving hygiene

Each production cycle the product carriers (for example, setter trays, hatcher baskets, etc) need to be cleaned, dried and stored to be re-used again the following production day. To prevent cross contamination the cleaning and drying results needs to be optimal, but the product flow should also be hygienic.

Energy and water usage are a substantial cost factor in the daily operation of a hatchery in which an efficient cleaning solution can make a difference. The hatchery design should avoid physical crossing of dirty and clean products by separating pre-soak, washing and clean storage areas. This reduces the risk of cross contamination.

High quality industrial washing machines are available in various models with capacities ranging from 200-3,000 products per hour. Efficient heat exchangers and an optimal water re-circulation system gives the best washing result against the lowest usage of energy and water.

Product specific air re-circulation dryers with water recuperation, will efficiently dry the products and reduce water usage.

Data management

The transfer room is the ideal place to collect pre-hatch management data. Viscon's latest innovation the Live Embryo Detection accurately indicates which eggs contain a living embryo and classifies the non-viable eggs as infertile, early or late dead embryos. These figures are summarised per flock and can be used to predict hatching numbers and monitor the breeding and incubation performance.

Exactly knowing the content of each egg, also enables selective processing during in-ovo vaccination, egg transfer and waste discharge. For this reason Viscon has especially developed the Vinovo Select Inject in-ovo vaccination machine and the Select Transfer machine. Both machines will only process the eggs that contain a living embryo. The infertile eggs and eggs with dead embryos (including rotten eggs/'bangers') remain untouched in the setter tray and are processed in a separate waste room.

The Vinovo Select Inject enhances the accuracy of injection and delivery of the correct vaccine dose in the proper egg compartment by re-positioning the 'living eggs' in perfect perpendicular position under the injection tools.

The Select Transfer selectively transfers the living eggs by use of mechanical grippers instead of a vacuum. The grippers gently pinch the eggs during transfer, do not touch the area of injection and prevent air movement inside the eggs. These innovative technologies and the fact that contaminated eggs or eggs with dead embryos are excluded from the remaining production process, creates a more hygienic and safer environment during in-ovo vaccination, hatching and chick processing.

With in-house R&D, manufacturing and a worldwide network in sales and services, Viscon is the ideal partner in developing turnkey and cost effective automation that will help poultry egg producers improve animal welfare, efficiency and hygiene within their hatcheries. ■