# Improving yield across the chain from breeder farms to hatcheries

Delivering high quality hatching eggs makes or breaks the success of a breeder farm starting the journey into the food supply chain from egg to chicken. Nowadays, data collection and improving efficiency based on insights derived from data has undeniably become part of every industry.

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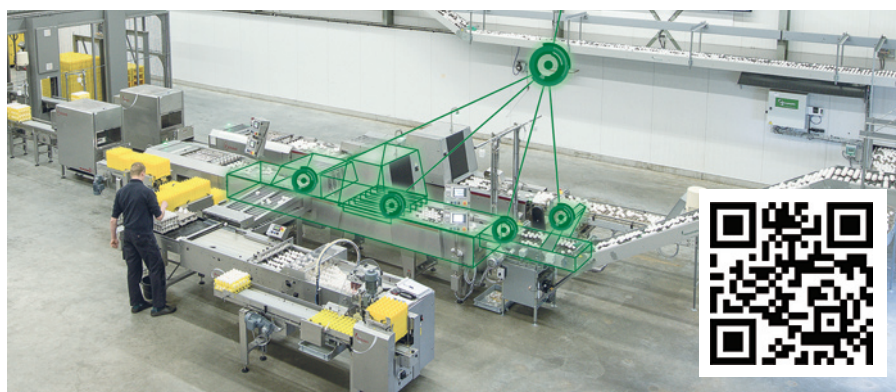
Enhancing efficiencies can help the industry to reach the maximum genetic potential of every bird, every flock, and every farm. But data on its own does not run the daily operations, you need (skilled) labour to do so.

Meggsius Select, machine vision-based egg sorting

Grading eggs is usually done through visual inspection by the staff standing at the belt.

This subjective way of sorting eggs is very labour intensive, expensive, and risky. Meggsius Select does the same job but in an absolutely objective and consistent way.

Meggsius Select is a machine consisting out of multiple cameras and a sorting unit. The objectivity of sorting is ensured by the criteria-based algorithm; the operator sets them to his own requirements and according to the flock's age. Quality control by the Meggsius Select is defined by the egg's size and shape, various kinds of dirt and various grades of shell damage.

Multiple pictures are taken from all sides of each egg to avoid missing any abnormalities on the eggshell. If desired by the customer, all systems are remotely accessible, facilitating easy updates.

Meggsius Control & Count, creating a constant flow of eggs

The different modules within the Meggsius family can function independently of each other. The Control & Count system, which delivers a constant egg flow into the egg room, is ideally installed as a set. Meggsius Count is a camera system that counts the eggs just before the transfer to the central collection belt and works even in dark and dusty houses.

The cameras also signal how many eggs are on the left and right sides of the conveyor. The counting is done visually with infrared light. Placing a camera on the system egg belt including smart/knowledge-based software prevents eggs from being counted twice or even three times before and after standstill. Additionally, the system includes cameras at the transitions from one belt to the other. Smooth transitions are crucial for the quality of the egg.

All risks that can negatively impact the hatchability of the egg or even worse lose the egg before it even reaches the incubator should be kept at a minimum.

Potential issues with the transition points can come to light, via a fast and easy check using the Gregg smart eggs.

These smart eggs measure the impact (G-force levels) an egg is faced with when moving across the different parts of machinery.

The second part, the Meggsius Control, includes software to optimise the egg supply via the different belts by automatically adjusting the speed of the belts, resulting in an efficient egg packing operation.

Hectic work environments with staff adjusting the speed of the belts or running into the house to see if there is an issue with a belt, are a thing of the past. With the Meggsius Control & Count the number of operators can be brought down to a minimum.

Meggsius Detect, stop the mess of broken eggs

The Meggsius Detect – placed between the cross conveyor and the egg packer – detects leaking eggs. When the egg liquid comes in contact with the Meggsius Detect, the belt stops immediately.

A warning light signals the operator that liquid has been detected. The operator can remove the leaking egg, clean the Meggsius Detect simply with a cloth, and egg collection can continue.

This avoids further contamination on the egg packer consequently saving valuable time in the egg collection process.

Meggsius Connect, data collection and analysis

All the data generated by the systems within the Meggsius family are presented in a dashboard, helping the farmer steer his daily business.

The more data the machines learn to interpret the better it will become at identifying issues.

For example, an obstruction in the nest or egg belt, issues with the indoor climate or signals about a potential disease in the flock.

Data is not just collected for the sake of collecting data. Data only brings value if the insights help to optimise the business operations, delivering the best quality eggs and improving yield.

The Meggsius family can do just that no matter if you are operating in the chain of hatching eggs or consumption eggs. ∎