Successful poultry production needs to be based on data and a collaborative digital approach

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Production levels in the poultry industry are driven by consumer demand, but ensuring the entire chain of stakeholders works together successfully to ensure the right product is delivered at the right time in the most sustainable and cost-efficient manner, can be difficult.

Geneticists, feed producers, breeder farms, hatcheries, poultry farms, processing plants or distributors, there are a lot of parties involved in meeting retail customers' – whether a supermarket or fast-food outlet – appetite for chicken. They all have something to add to the process but are all too often working in their own "silo" and not seeing the bigger picture.

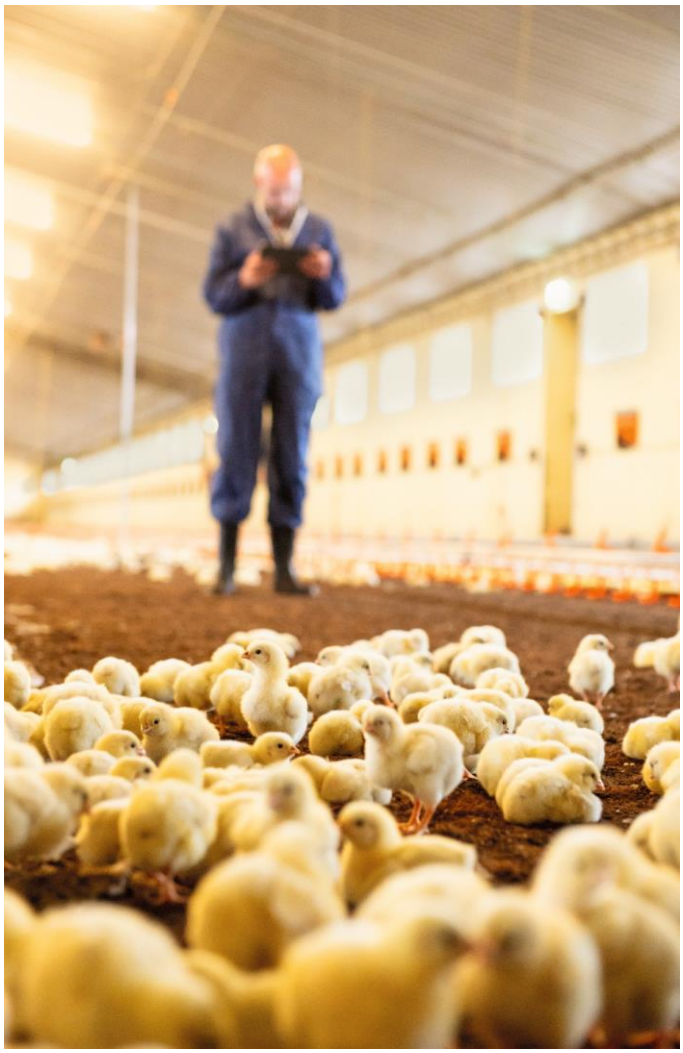
Working together

Several global megatrends – including an increasing population with more buying power; a greater demand for meat (especially poultry); the need for improvements in resource efficiency and sustainability; and the growth in Big Data, Internet of Things and new analytics technologies – are playing their part in how the industry develops.

The entire value chain is under escalating pressure to increase sustainability, quality, traceability and improve efficiency and welfare standards, all while being free of antimicrobial growth promoters (AGPs) and complying with stricter standards and regulations across the globe.

Meeting all of these demands, simultaneously, is not something one company, or even one silo of companies, can do on its own. It will require the adoption of new technologies and business models and will involve solving connectivity and security issues around data usage. Communicating more efficiently and sharing data appropriately is an important next step. The right partners along the production chain – from genetics to feed, hatchery, farming and processing, need to be involved at the right time. No one wants to see a nutritionist if day-old chicks aren't in the condition expected, they want the veterinarian, for instance, or want to talk to the hatchery that supplied the day-old chick. This approach, which combines decades of expertise with connectivity for data, data sharing protocols and intelligent software algorithms, fits in under the umbrella of 'Precision Livestock Farming' (PLF).

The livestock market is ready to take the leap forwards and adopt PLF at the core of the business process. This was proven by recent developments in the beef sector, where one of the world's largest animal health companies, recently purchased a PLF startup, Performance Livestock Analytics (PLA). It is believed that this acquisition will drive significant additional investment in the sector and improve growth.



Cooperative platforms for data

To ensure the value chain can meet the trajectory for product delivery on time and at the product target weight or size and consistency, information must be shared effectively. There is a lot of data available across the poultry supply chain, but it is not currently accessible to everyone who needs it at the right time. It is important for stakeholders to know what data they require, whether it is available and how it can best be used to optimize their stage of the production process.

Data is a central resource for future improvements, but it cannot solve everything. More than 50% of the information required can't be measured yet. This includes what is happening in the gut of each individual chicken, each chicken's exact temperature and its bodyweight for example. These issues, and whether they require attention, are largely down to expert knowledge and experience, built on the data that is measurable. This approach works best when everyone, from climate specialists working on the environmental conditions, to the nutrition experts working on gut health to the veterinarians focused on general health and all the other experts maximize their impacts by combining their efforts.

It would be great to break down the silo thinking and instead collaborate, improve offerings, and integrate poultry farming production to bring all the pieces of the puzzle together in one place. This can be achieved with a collaborative platform for the poultry industry to harvest the value hidden in data streams and optimize the production. Now is the time to start.

Intelligent poultry production software as the starting point in this journey

Porphyrio® is the new standard for cloud-based data management systems for the poultry industry. It adopts a three-step approach – monitor daily production, predict flock performance and plan production output. This enables optimized poultry production along the complete value chain.

Following an animal-centric approach, Porphyrio® supports daily poultry production management using big data, biostatistics and scientific self-learning algorithms. A variety of customizable software solutions offered by Evonik improve poultry production and product quality through holistic monitoring of parameters that matter and a smart early warning system which provides notifications as problems arise. Porphyrio® optimizes planning based on accurate predictions and allows stakeholders to take right decisions at the right time to maximize return on investment.

Overall, Porphyrio® embraces companies' digitalization strategies to improve production efficiency and increase profitability of poultry operations.

Porphyrio® is the digital pillar of Evonik's PLF concept. The PLF system house combines science, expert knowledge, intelligent software and connectivity into a comprehensive solution for poultry production, with a focus on animal nutrition, animal health and animal farming.

About the author

Kristof Mertens is Founder of Evonik Porphyrio NV, a Belgian based software company which develops cloud-based and scientifically justified solutions, which was acquired by Evonik in 2018. He is an entrepreneur and PLF ambassador with a mission to bring the PLF value to livestock producers worldwide. Kristof holds a Master in Livestock Production and a PhD in Bioscience Engineering from Katholieke Universiteit Leuven (Belgium).