

# Breeding programmes and the sustainability of the egg value chain

As animal breeders, we believe sustainability should be fully integrated through every element of the egg industry and aspire to a global egg value chain that is environmentally sound, socially responsible, and economically viable.

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Egg production is already one of the most environmentally friendly forms of agricultural production as hens convert feed into protein very efficiently and require a relatively small land base to do so. However, as an animal breeding company, we are always striving for continuous improvement in our aim to set the standard for sustainable animal breeding.

We are proud of the improvements that we have delivered to the global egg industry via poultry breeding. With the ongoing improvements and new insights in day-to-day management, housing climate, health, and nutrition, we clearly see that an increasing number of egg producers can reach the genetic potential of today's laying hens.

Today's crossbreeds of modern laying hens are genetically capable to produce almost an egg per day. In the field we come across more and more flocks that demonstrate this



genetic potential, resulting in highly productive flocks. In our breeding and selection programme we focus on the entire life cycle of the laying hen: from day-old chicks arriving in good condition at the rearing farm, all the way up to valuable end-of flock laying hens (spent hens).

## Good quality chicks

Here are some characteristics that define good quality day-old layer chicks, and where we, as poultry breeders, are selecting for:

- **Health and vigor:**  
Good quality chicks are active, alert, and

exhibit strong movement. They should have bright eyes, clean feathers, and a lively demeanor.

Chicks that are weak, lethargic, or show signs of illness should be avoided.

- **Uniformity:**  
The chicks in a batch should be relatively uniform in size and appearance. This ensures consistent growth and performance within the flock.

- **Navel health:**  
The navel, also known as the umbilicus, should be clean and dry. Any signs of infection or moisture could indicate poor hygiene or management.

- **Weight and size:**  
While there might be slight variations in size, good quality chicks should be within an acceptable weight range for their breed. Excessively small or large chicks might face growth or health issues.

- **Vaccination and health management:**  
Vaccinations are provided to the chicks to ensure their health and reduce the risk of diseases.

Good quality day-old layer chicks should come from hatcheries with proper health management protocols.

It is important for pullet farmers to work closely with reputable suppliers of day-old

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chicks and follow proper management practices to ensure the successful rearing of these day-old layer chicks into productive egg-laying hens.

## Good quality laying hens

Good quality laying hens are the backbone of commercial egg production, and their quality is determined by various physical, health, and performance characteristics:

### ● Longevity:

Laying hens with good quality genetics and proper management practices can have an extended productive lifespan. The longer a hen remains productive, the more economically valuable it becomes, and the more sustainable the total egg value chain will be.

### ● Health and vigor:

Healthy hens are more likely to be good egg producers.

Good quality laying hens should exhibit strong movement, alertness, bright eyes, and good feather cover. They should be free from signs of illness or disease.

### ● Feather condition:

A healthy layer should have smooth and well-arranged feathers. Feather loss or ruffled feathers might indicate stress, poor nutrition, or health issues. Like with overall health and livability, feather cover plays an important role in the selection index.

### ● High egg production:

Good quality laying hens are capable of consistent and high egg production. They should be able to peak at expected levels and maintain this peak production for longer periods. Rate of lay will go down as the flocks are getting older, via selection we try to postpone this decline in egg production.

Only healthy and robust hens, that do not exhaust themselves fully, are the ones that can keep up with laying first grade eggs.

Our breeding programme focuses on healthy and vigor hens, as this will also



improve the value of the spent hens that go to the live market after their productive life.

### ● Egg quality:

The eggs laid by our laying hens should have desirable characteristics such as strong shells, uniform size, and proper eggshell colour. High egg quality is essential for both consumer satisfaction and hatchability if eggs are intended for hatching.

Since the beginning of genetic selection, great focus and emphasis is being placed on egg quality traits, resulting in more first quality eggs being collected with every new generation of commercial laying hens.

### ● Body conformation:

While livability and first quality egg production are the primary goals, the overall body conformation of laying hens also matters.

Hens with balanced body structure tend to have better egg-laying capacity and longevity. Laying hens that develop and grow well in the rearing period, but that do not get too fat during their productive life are being selected.

### ● Resistance to disease:

While no laying hen is completely immune to all diseases, good quality laying hens

often come from breeding programmes that have their biosecurity plans well in place. This helps reduce the risk of disease outbreaks and contributes to safeguard supply. Selecting for overall disease resistance is vital part of the breeding programme.

### ● Nutritional requirements:

Proper nutrition is crucial for maintaining egg production and overall health. Good quality laying hens should receive a balanced and adequate diet to support their egg-laying demands.

With the ever-increasing pressure on feed-food-fuel, and the transition to cage-free housing, feed intake and feed conversion are key-traits in today's breeding programme. Producing more eggs with less feed, or cheaper feed (lower quality ingredients) contributes to the sustainability of global egg production.

### ● Management and housing:

The environment in which the hens are kept significantly influences their quality and performance. Clean, well-ventilated housing and proper management practices contribute to the well-being of the laying hens.

Consult breed management guides, technical videos, industry representatives, or fellow egg producers to bring your poultry knowledge to the next level.

In the world of egg production, genetic selection of quality in laying hens is paramount for both economic success and the sustainability of the industry.

When laying hens are bred for quality, their ability to lay a consistent stream of high-quality eggs serves not only the market's demand but also aligns with the principles of sustainability.

Healthy hens are more likely to endure the challenges of production and contribute meaningfully over time, as in various markets across the globe, the revenue of selling spent hens contributes greatly to the overall income for egg producers. The sustainability of egg production extends beyond the henhouses. It ripples through the entire supply chain, encompassing the resources required for feed production, energy consumption, waste management, and more.

The pursuit of good quality laying hens is an investment not only in profitability but also in the longevity and sustainability of egg production.

By championing the health, vigor, and overall well-being of these hens, the egg industry embraces a responsible ethos that respects both the animals and the environment.

Our commitment to responsible animal breeding resonates far beyond the individual egg and resonates with a vision of sustainable agriculture that feeds the present without compromising the future, or as we like to say, 'better breeding today, for a brighter life tomorrow'. ■

