

Improving Vaccination Management in Parents Improves Viral and Bacterial Enteritis in Chicks

Author: Muccioli Filippo



Intro to Good Practice

The challenge which the Good Practice (GP) addresses is 'Improving chick quality', a key determinant for the success and sustainability of poultry production systems.

The objective of this Good Practice is to reduce the use of antibiotics and improve the productive performance of future broilers. This GP foresees at least a monthly audit of vaccination in broiler flocks (via subcutaneous inoculum, mist spray, by mouth and eye) and in chicks at hatchery level (administration via subcutaneous inoculum and coloured spray). Quality and quantity controls are carried out by certified and adequately trained personnel. In the case of hatchery spray vaccination, the colouring of the vaccine in the down is used to check how many chicks have actually been vaccinated.



Photo 1. In ovo vaccination equipment

In addition to this, a check is made on the quality of the droplet size (i.e. the quality of the vaccine); in the case of subcutaneous vaccination (both in the hatchery and on the farm), the audit checks not only the correct inoculation point and the possible presence of vaccine outside of it, but also the dose administered (number of animals vaccinated/ vial). In the case of vaccination by eye spray, serological tests are carried out at the end of the broiler rearing period to assess the development of antibodies and thus the quality of the vaccination; in the case of vaccination by mouth, the ingestion rate is assessed.

Background & challenges

High-quality chicks are distinguished by characteristics such as uniform size, vitality and robustness. Robust chicks, in particular, boast a strong immune system, which is essential for resisting disease and ensuring good health throughout their lives. Furthermore, superior chick quality has a direct impact on performance parameters such as feed conversion efficiency, growth rates and final product quality.

To successfully adopt this practice, a change in mentality and approach towards the animal is necessary. This practice is widespread in Italy and quite common in Europe.



Improving Vaccination Management in Parents Improves Viral and Bacterial Enteritis in Chicks

Additional information

This good practice is implemented in a highly organised and large-scale manner, with two hatcheries guaranteeing a total weekly production of 960,000 chicks. The first hatchery produces 280,000 chicks per week in two hatchings, while the second one reaches 680,000 chicks per week, spread over three hatchings, thus ensuring a continuous flow of fresh chicks for the market. In addition, the management of breeding broilers takes place through 15 breeding farms, with a total of 300,000 breeding broilers, each housed in sheds accommodating approximately 8,000-10,000 animals. This organisation makes it possible to optimise production processes, reduce waiting times and guarantee a constant supply of high quality chicks. The facility is designed to constantly monitor the health and welfare of the animals, promoting sustainability and efficiency in the entire production cycle, from breeder to chick.



Photo 2. Young chicken drinking

Benefits

The implementation of this good practice has resulted in a significant improvement in occupational safety through the purchase of state-of-the-art machinery and the running of training courses. Although implementation has increased costs by 6-7% per year, animal performance has improved by 3% annually. Over the past 10 years, there has been an 80% reduction in the use of antibiotics. Improvements in animal welfare and feed conversion have led to a reduction in feed consumption, thus decreasing the production of excrement and CO₂.

Despite the increase in costs of +3% annually, there has been an increase in productivity, a reduction in livestock losses and an overall improvement in animal welfare. In addition, water and energy consumption decreased, operational risks were reduced and employees were more satisfied, resulting in increased job satisfaction and a better reputation for the industry and the country.



Scientific article on the quality of vaccination without good control and the positive impact of a hatchery vaccination program.

Publication date: 24-07-2025

Version: 1 EN



This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No101060979. It reflects only the authors view. The European Commission is not responsible for any use that may be made of the information it contains.



twitter.com/broilernet



linkedin.com/company/broilernet



youtube.com/@broilernet

BroilerNet.eu

