

In-Ovo Vaccination Technology in Jordan: Innovation Serving Poultry Health by Ceva Animal Health

In-Ovo vaccination technology is one of the latest innovations in poultry health, introduced in Jordan by **Ceva Animal Health**. This advanced technology, **EGGINJECT**, follows three primary stages:

1. Egg candling to identify viable embryos.
2. Removal of non-viable eggs, vaccine injection.
3. Transferring the eggs from trays to hatching baskets.



Egg Candling Stage

The **LaserLife technology** is employed during the egg candling stage, offering precise differentiation between viable embryos, which require vaccination, and non-viable eggs such as infertile eggs, dead embryos, rotten, or contaminated eggs. Only live embryos are injected and transferred to incubators, while non-viable eggs remain untouched.

Non-Viable Egg Removal and Injection

Following the candling process, non-viable eggs are automatically removed, ensuring that only live and healthy embryos receive vaccination. The Dual Pressure Injection System, an exclusive patented technology by Ceva Animal Health, enables precise, individualized depth adjustment for each embryo, regardless of egg size or flock age.

Transferring Eggs from Trays to Hatching Baskets

The automated transfer of vaccinated eggs from trays to hatching baskets minimizes manual handling and enhances operational efficiency. This process ensures that vaccinated embryos are safely transferred to incubators, thereby increasing their survival and healthy development.

Benefits of EGGINJECT Technology in Jordan

The implementation of **EGGINJECT** technology enhances poultry health by ensuring precise and efficient vaccine delivery. This contributes to improved productivity and cost reduction. With this advanced technology, poultry companies can benefit from healthier flocks and sustainable production growth.

CEVA C.H.I.C.H Program

The **CEVA C.H.I.C.H program** supports the **EGGINJECT** technology, offering an integrated service package aimed at optimizing in-ovo vaccination quality, executed by a team of specialized professionals.

Enhanced Immune Response

In-ovo vaccination stimulates an early immune response, strengthening poultry immunity without post-vaccination complications. Additionally, the **dual sterilization system** minimizes contamination risks.

Additional Advantages of In-Ovo Vaccination

- **Reduced Contamination:** Needles are sterilized after each injection, and egg surfaces are disinfected before and after the process.
 - **High Vaccination Accuracy:** Every viable egg receives a precise vaccine dose at the correct location and time, reducing vaccine waste.
 - **Improved Chick Quality:** Removing contaminated eggs during transfer reduces the risk of contamination in both in-ovo vaccination and hatcheries, supporting antibiotic-free production.
 - **Lower Chick Stress Levels:** Compared to traditional vaccination methods, in-ovo vaccination reduces chick stress, enabling faster post-hatch delivery.
 - **Optimized Performance Monitoring:** Performance is regularly monitored through a control unit, ensuring process quality and efficiency.
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The **EGGINJECT** system was successfully installed in Jordan by a dedicated team from Ceva Animal Health, under the supervision of **Amer Al-Adas**, Vaccination Services and Technology Manager NEGU-Sudan region, with professional installation completed by **Christophe Floch** and **Salah el-Hassani**, engineers from **ECATID**.

This milestone marks a significant advancement in Jordan's poultry sector, positioning in-ovo vaccination as a key technology for enhancing flock health and production efficiency.