

**ORGANISATIONS INVOLVED**

In Ovo B.V.

Hen-only hatcheries

**CONTACT**

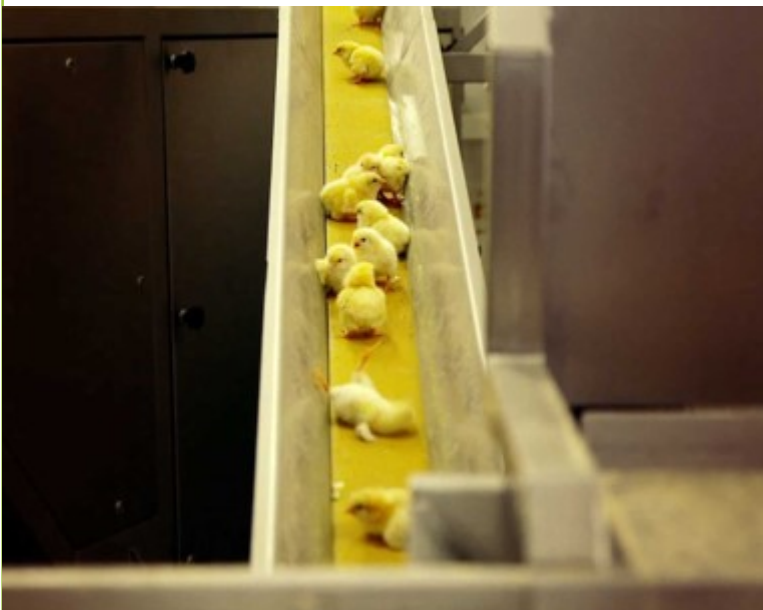
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In Ovo B.V.

## The Food Waste Problem

**Consumers** want efficiently produced food that is **affordable**. That's why the poultry industry decided to **specialize chickens** for either meat or egg production. Egg-producing chickens (layers) grow slowly and don't produce much meat. Because of this, **male layers are useless** to the industry. After hatching the day-old chicks, males and females are sorted manually. **The males are killed right away**, either by suffocation or shredding. Nowadays, this issue is **gaining more and more traction**. Around the world, people in different countries start noticing this problem and **demand a solution**. Germany faces the **biggest pressure** from consumers, France recently announced it is working on a ban on killing of these male chickens and producers in the US **pledged to stop this practice** as well. The problem of the male chicks is a **complex issue**, involving many stakeholders. This makes sharing this story and promoting a **solution** all the more difficult. But **here comes In Ovo**.



# The Food Waste Solution

In Ovo's solution is a **high-speed, fully automated sorting device** for fertilized chicken eggs. During the incubation process, all eggs in the hatchery are **screened on day-9** of development (it takes 21 days to hatch a chicken). Using our **patented method**, we measure a single naturally occurring molecule that we use to determine if an egg contains a male or a female chick.

For this analysis, we require a little drop of fluid from the egg, which is collected via a tiny hole in the shell, which is closed immediately after sampling.

The **embryo is not touched nor hurt** and puncturing the shell does not affect hatchability or chicken quality.

Sampling is done in parallel with multiple eggs. Every drop of fluid is **measured within a second**, which allows us to create **an egg-in, egg-out process** that fits within the hatchery's logistics. It only takes a few minutes to process one tray of eggs. At the end, eggs are marked and can be sorted into groups of female and male eggs. Male eggs are taken away and can be used for animal feed, female eggs are hatched. **Our solution is the first to enable completely hen-only hatcheries.**



## The Food Waste Impact of the Solution

### How much food was saved by this solution during the project?

Unfortunately, no day-old male chicken deaths were prevented.

### How much food do you expect to save in 2020?

We expect to prevent the killing of up to 900,000 male chicks.

### How much food will be saved 5 years after the end of the project (on a yearly base)?

Within five years, we'll place up to 15 sorting devices, capable of selecting nine million hens and saving nine million males. Per year. Per device.

### How much food will be saved 10 years after the end of the project (on a yearly base)?

Within ten years, we can cover all countries in Europe, preventing the killing of roughly 320 million day-old males per year.

Project Food Heroes aims to reduce food losses in the primary sectors (on farm and fisheries) by creating higher value uses for byproducts and products that are out of specification. Throwing it away is such a waste. This project is funded by INTERREG North West Europe, European Regional Development Fund.