

# CHEGGY

Automated sex determination  
in the hatching egg of layer chicks



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## In ovo sex determination of up to 20,000 eggs per hour? That's easy. With CHEGGY.

Every year and all over the world millions of day-old male chicks, deemed the 'brothers' of laying hens, are culled because they can neither lay eggs nor do they have as much meat on them as broilers do.

European countries were the first to decide on ending the practice of culling these day-old male chicks. This topic of discussion has arisen and is moving forward in other countries as well.

The animal welfare friendly alternative is in ovo sex determination with CHEGGY. This fully automated machine uses hyperspectral imaging technology that identifies the gender in the brown layer lines by embryonic plumage colours. Technology that is currently used for sex determination does so in the second-third of the incubation period.

CHEGGY is able to safely check up to 20,000 eggs per hour. Thanks to its non-invasive process, there is no risk of contamination and no risk of injuries to the embryo.



# Let there be light: The non-invasive hyperspectral measurement technology.

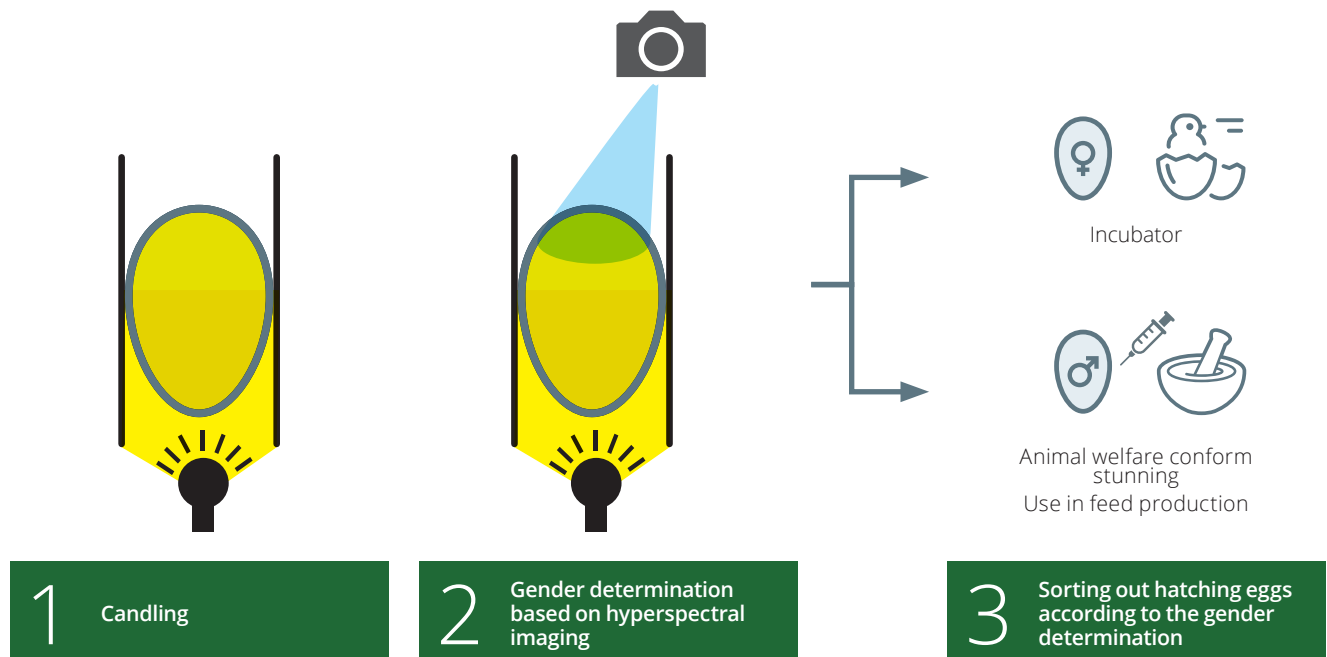
**CHEGGY is not only the first technical solution suitable for the high volumes of a modern hatchery, but also currently the most cost-efficient alternative to culling male day-old chicks.**



Due to gender-specific plumage colours in brown layer lines, the sex can already be determined in the embryo based on its first feathers.

This is how it works: inside the measuring chamber, eggs are illuminated from below and a spectral image is taken from above. The procedure is non-invasive, keeping the eggshell intact. Based on differences in the measured light spectra, an algorithm classifies the gender. In addition to sex determination, unfertilized eggs are also identified and sorted out at the same time.

The hyperspectral measurement technology does not require expensive consumables. This is another reason why it is around one-third of the cost of alternative methods and, most importantly, is more environmentally friendly.





## CHEGGY Advantages

CHEGGY enables hatcheries to determine the sex of layer chicks in an animal welfare friendly and cost-effective way. The fully automatic system has an impressively high throughput rate and maximizes egg safety.

- ✓ High accuracy of in ovo sex determination (>95%)
- ✓ Fully automated, high-speed measurement for up to 20,000 eggs per hour
- ✓ Approx. 1/3 of the cost of other methods
- ✓ No risk of contamination or injuries due to the non-invasive process
- ✓ Nearly no hatch losses
- ✓ Environmentally friendly: no expensive consumables required
- ✓ Easy to integrate the animal welfare-friendly stunning of male embryos with AAT's STUNNY





# Agri Advanced Technologies: From research to practice.

## **Technologies for poultry breeding and husbandry**

Agri Advanced Technologies GmbH (AAT) founded in 2015 is a subsidiary of the global company EW GROUP, headquartered in Visbek, Lower Saxony, Germany.

Our main field of activity is the development of specialized application technologies for poultry breeding and husbandry, for example machines for in ovo sex determination of layers, grading and vaccination devices for broiler breeders or technical solutions for feed disinfection.

## **Knowledge through global network**

We work closely with our sister companies in the EW GROUP, drawing on their knowledge from various fields. In addition, if necessary, we cooperate with external institutions such as universities or research service providers, as well as other business enterprises.

## **Solutions from one hand**

Our solutions encompass the entire process of development, starting at scientific analysis through to the construction of the application technique until documentation and hand-book preparation.

We implement theoretical knowledge gained through research into practical applications and provide a range of solutions in the areas of poultry breeding and husbandry for customers all over the world.



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