# Sex determination in the egg is ready for practical application

Hy-Line France has been using hyperspectral measurement technology to determine the sex in the egg since the beginning of 2020. Developed by the German manufacturer AAT, this innovative technology is now ready for high-volume, practical application for brown-laying hens in France, Germany, Belgium, Spain, and other European countries.

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'CHEGGY' is the name of the machine that marks a breakthrough in hyperspectral measurement technology.

After years of intensive research and development work, this technology based on the detection of the feather colour is the first procedure suitable for the high volumes of a modern hatchery. AAT's technology is currently the most cost-efficient process on the market.

"From our hatchery in Brittany we have been supplying Hy-Line Brown in-ovo sexed chicks to the French market since Spring 2020," says Frédéric Masson, Managing Director of Hy-Line France.

"As the market share for brown layers in France is over 90%, CHEGGY can contribute very quickly to the high demands of the egg market in France."

In fact, hyperspectral measurement technology has several advantages. The procedure can be fully automated with high accuracy (currently greater than 95%) and more than 20,000 eggs can be tested per hour and machine.

The procedure is non-invasive, so the eggshell does not have to be opened for taking liquid samples.

Therefore, there is no risk of contamination and no risk of injury to the embryo. Thus, there are no hatching losses and the technology makes additional contributions to animal welfare.


Finally, no chemicals must be used in hyperspectral measurement technology, which makes CHEGGY particularly environmentally friendly.

"With this technology, it is possible to 'in-ovo'-determine the sex of all brown-laying hens hatched for the French market," according to Vincent Baumier, Managing Director of Lohmann France.

"We can also meet the needs of other European countries concerning safe and sustainable sex determination of hatching eggs on a large scale."

Due to the determination time of the sex (like all current procedures for sex determination, this happens in the second third of the incubation period), AAT also offers an additional, innovative and particularly animal welfare-friendly procedure.

'STUNNY' can anaesthetise male embryos in accordance with animal welfare requirements. This ensures the adherence to animal protection guidelines and marks another decisive advantage over other processes.

But AAT are just getting started. They aim to offer supply chains without culling of day-old males starting 2022 in Europe.

For the German market, AAT has already started offering CHEGGY-sexed eggs. Now, other European countries are adopting the technology: IBERTEC in Spain and Pluriton in Belgium can offer CHEGGY-sexed brown layer chicks for the Spanish and Benelux markets, respectively. ■