

BY CREATING MOVEMENT SPOUTNIC LIMITS FLOOR EGGS

With Spoutnic, the Rennes start-up Tibot Technologies is bringing new products to egg production. By creating movement Spoutnic limits floor eggs.

Report from Pierre Marais' farm in Ombrée d'Anjou (49).

This Wednesday morning, Simon Planard, sales representative at Tibot Technologies is visiting Pierre Marais, a farmer in Maine et Loire. He has come to pick up Pierre's helper robot (for a review) and to check in with him on his use: *"this feedback from the field is very important for us"*, insists the sales rep, *"because it allows us to adapt our robot to the needs of the farmers"*.

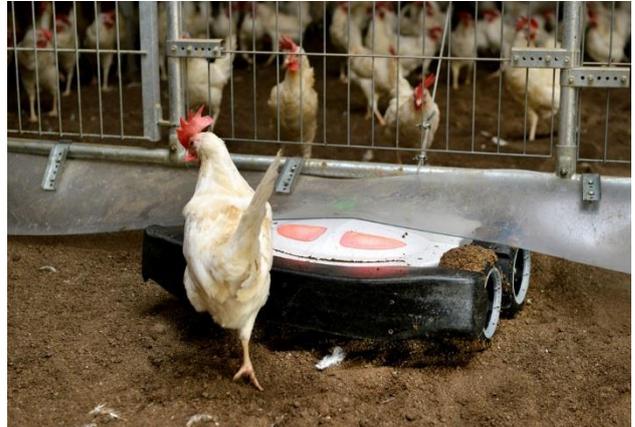
And for good reason: the first Spoutnic models, like this one, have been in use less than two years.

Favourite at SPACE!

The adventure began in 2014 with Laëtitia and Benoît Savary, poultry farmers with laying hens in Mayenne: *"at the start of the batch, we spent so much time moving the hens so that they would develop good habits that we said to ourselves that there must surely be some technology that would do this for us"*. So they searched, surfed, tested, even going as far as testing a lawnmower robot! But as they didn't find anything effective, the Savarys ended up going to Cimtech, a Rennes design office. In September 2016, a Spoutnic prototype was presented at SPACE. Bingo! The robot won the innovation prize and was the panel's favourite.

In the meantime, Yanne Courcoux, who specialised in supporting companies developing digital technologies, joined the farmer couple and the members of the design office to create "Tibot Technologies".

Yann Courcoux points out that *"Spoutnic is designed to meet three needs: increase production by reducing floor eggs, reduce the onerousness of the work and contribute to the wellbeing of the animals by improving their health through extra activity"*.



Very compact, Spoutnic can pass under flat chains or barriers installed within the henhouse like the plastic strips put in place by Pierre Marais.

Robust, Spoutnic is a robot that is designed to withstand very hostile environments: dust, ammonia, being pecked or stepped on...It moves around the henhouse randomly and emits sound and light stimuli on rotation. Thus, the robot creates movement in the building, effectively animating an area of about 1000 m².

At 18.5 cm tall, it easily passes under flat chains (where the hens like to go and lay) or from one area of the henhouse to another (see photo). Weighing 12 kg, it is easy to carry thanks to its built-in handle and it is stored in a suitcase.

The robot has 6 speeds and runs for 10 hours one a single charge.

Recent development: an external control unit helps to adapt it to the specifics of the building, the current batch or the type of poultry, etc. The farmer can therefore customise the stimuli. The first robots that were released can now be adapted to this control unit.

It has four-wheel drive allowing it to drive on all litters. Once it meets an obstacle rigid enough, it changes direction. Also, if hens decide to lay more often in a corner of the henhouse, lures can be added (bundles of straw, etc.) to make Spoutnic pass through that area more often.



Established in beef cattle, Pierre Marais, 28, invested in a laying hen farm. To help them learn to nest at the start of the batch, he uses Spoutnic which encourages the most resistant hens to lay their daily egg in the nest by creating movement.

Pierre Marais' farm produces 27,000 white eggs per day on average. His rate of dirty eggs (because they are laid on the ground) does not exceed 0.2%.

Concentrate on your work

Sixty farmers spread across 12 countries (including the USA and Canada) have already been attracted by the services that Spoutnic offers, just like Pierre Marais, a cattle farmer who relied on free-range poultry farming to ensure regular income.

Unlike Benoît and Laëtitia Savary, it wasn't the time and comfort savings that motivated his purchase of the robot: *"my crops and cattle take up most of my time. When a batch of young hens arrives, I know it will take them at least 3 months to learn to lay. During this period, I need help"*.

Even with a well designed henhouse and the farmer being present more often at the start of the batch, a certain number of hens persist in laying on the floor. With its lights and beeps, Spoutnic disturbs them regularly, encouraging the most resistant to go to their nest to have more peace. *"This only makes my walk through the henhouse more efficient in the morning. Our job is to check that everything is okay, to take the time to analyse and monitor the health of our hens...not to pick up their eggs off the ground! Then, when you have to pick up tens of eggs, they start getting heavy,*

you go back and forth several times, you tire yourself out unnecessarily...".

More time, fewer losses

Although he is not able to precisely calculate exactly how many hens learn to lay in their nests because of Spoutnic, Pierre notes that the results are there: *"with a collection of nearly 30 to 60 eggs every morning, my floor egg rate now varies between 0.1% and 0.2%"*. Translated into turnover, a slight difference in this percentage could quickly account for several thousand euros earned or lost at the end of the year.

There are good reasons to expect a quick return on the "Spoutnic" investment. Without counting the gains in time and effort and the improvement that it brings to the management programme, Pierre Marais remembers how *"one night, I forgot to reprogram the automatic opening system for the nests. The next morning, I picked up several baskets of eggs that had been laid on the ground. Therefore, I ran my robot for three or four days until my hens began to behave normally again"*.

Successfully placed into orbit

An atypical startup if there ever was one, since the innovation it offers didn't come from a think tank but the concrete need of a couple of farmers, Tibot Technologies seems to have had a definitively successful launch and has placed Spoutnic into orbit. A second robot is set to join it before the end of 2019: *"our four research and development engineers are working on it"*, announced Yanne Courcoux. *"This robot will be dedicated to broiler farms which account for 80% of the poultry farming sector."*

It will have a dual mission: on the one hand, to increase the mobility of the animals and therefore contribute to better health and to improved weight gain. On the other hand, to reduce some of the pathologies by maintaining the surface of the litter through regular scratching, to keep it dry and flaky".

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