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**Data collection in the barn can help farmers make better decisions**

Well-managed animals can reduce GHG emissions by 30 per cent, says researcher

BY LILIAN SCHAER  
FARMTARIO CONTRIBUTOR

**B**etter livestock health through more precise management represents a significant greenhouse gas reduction opportunity for livestock farmers, says a senior executive with an animal health multinational.

Innovation is a major way to accomplish that goal, Jamie Brannan told participants at the recent European Animal AgTech Summit. Brannan is a Zoetis vice-president and cluster lead for the UK, Ireland and Nordic countries.

WHY IT MATTERS

Livestock production is considered a leading contributor to greenhouse gas emissions, and innovation is one way the sector can lower its environmental footprint while also improving profitability.

"Healthier animals produce better quality food and use fewer resources like land and water. And well-managed animals can reduce emissions by 30 per cent," he said, adding that the global African Swine Fever outbreak has resulted in 45 million tons of greenhouse gases invested in livestock production that weren't converted to food.

"How decisions are made on-farm needs to change. It's still very much based on group averages and macro-trends when we need to look at per animal," Brannan said.



Use of precision livestock technology such as Farmsee can manage pigs individually using real-time data. PHOTO: FARMSEE.COM

FarmSee was one company to profile a precision livestock solution during the innovation showcase at the conference. The goal of its camera-based pig weighing sensor is to help hog farmers manage their pigs individually and with precision using real-time visual data.

"We want data-driven decisions, not just based on historical assumptions, so we can improve animal welfare, get rid of inefficiencies, optimize the operation and ensure the biosecurity of farms," said chief executive officer Nimrod Madar.

"With FarmSee, we collect visual information that is analyzed in various forms like pig weight on a continuous basis. This is critical because one of the first indicators of a sick pig is weight loss."

A camera with a sensor is installed above each feeder to take pictures of each pig as it comes to eat. The images are analyzed and

the resulting data can help producers decide the best time to ship pigs, adjust rations to maximize feed conversions and identify sick animals for treatment.

Developed in Israel, FarmSee is also working with producers in Denmark, Poland, Spain and Russia, and with three farms in the U.S.

Madar expects the system to be commercially available by spring 2022 and is working on adding a behavioural analysis feature.

Joey Spicola, a former Texas cattle rancher turned innovator, has also invented a vision-based weighing system for livestock. He's now CEO of ClicRtechnologies, which has developed ClicRweight solutions for cattle and pigs.

According to Spicola, ClicRweight is a 3D digital imaging system that scans cattle or pigs, each sporting an RFID tag, when they are at a watering station and produces an instant weight, letting producers track average daily gain data in real-time.

"We process all the information, average it out and come up with a weight that's 95 to 96 per cent accurate. The user interface is updated every morning with the animal's weight, average daily gain and photo," Spicola said.

"You can pre-set the market weight you want, so when the animal is within five pounds of that, it's sprayed automatically for easy sorting. Not only does that save you time on feed, but it saves the time of a person to mark animals based on an individual, visual guess of market weight."

One scanner can capture about 30 animals per group, and one of Spicola's goals is to keep the system affordable.

"You have to break your mindset away from cost per animal. This is a management tool that takes so much of the daily management off your plate and helps you make better decisions with economic impact," he said.

According to Spicola, the equipment is installed at the Abraham Baldwin Agricultural College in the U.S, where it's used in both research and teaching and he's looking to make inroads into Latin America and Canada. ClicRweight is the only livestock-focused finalist in the Ag Innovation competition at the Agri-Trade Equipment Expo in Red Deer, Alta., on Nov. 10 and 11.

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