

INTERNATIONAL news

British farm moves into new technology with 5G collars on cows

ON THE DAIRY farm of the future, the cows are going wireless. The bovine residents of a British agricultural technology research center are helping to test next generation mobile technology aimed at helping make dairy farming more efficient.

The herd's 180 cows are fitted with wireless monitoring collars that work like fitness trackers, recording their movements and eating habits, and sending data to the cloud using fifth generation, or 5G, mobile network signals. From there, an algorithm analyzes the information, notifying farmers and veterinarians through a smart phone app, if there are any fluctuations that could indicate an illness or other health condition that needs more attention. The goal is to boost productivity and save manpower by allowing farmers to keep an eye on their herds remotely.

"Having the data available to your phones, to mobile devices, just makes it that much more accessible, much quicker," explains Mr. Mark Gough, a herdsman at the experimental farm run by the British-government-backed Agricultural Engineering Precision Innovation Centre.

"You can be at one end of the building, you get an alert, it's telling you exactly which cow it is, what the problem potentially is, and it's an instant assessment," said Mr. Gough. The app showed a spike in activity that indicated the cow went into labor and calved overnight, without any complications, he said.

Farms are no stranger to technology, with robotic

milking systems and self-steering tractors now in common use. The next wave of innovation could come from 5G technology, which telecom experts say will bring ultrafast download speeds and reduced signal lag that promise to transform industries. New 5G networks will let many more devices connect to the internet, making them better suited than existing 4G networks for handling lots of users or sensors and heavy data traffic.

Wireless carriers in Europe and elsewhere have just begun launching 5G service this year in a global rollout expected to take up to a decade, and comes amid a geopolitical battle between the US and China over concerns about the security of data on the new networks.

The center's experimental farm in Somerset, southwest England, has built a 5G network to send data from the collar sensors to the cloud, bypassing the farm's slow broadband connection a common problem for rural internet users. The trial is part of a national project, partly funded by the UK government.

For the milk cows at the English farm in Somerset, the connected collars are just one of a number of technologies increasing productivity. When the cows decide they are ready to be milked, a collar transponder identifies them when they enter the robotic milking pen and keeps a digital tally of their milk contribution. At feeding time, an automated feeder glides overhead on ceiling-mounted rails, dropping precise amounts of grass into a feeding trough.

Do not consume raw sheep's milk cheese

50 people have fallen ill in France due to foodborne outbreak linked to eating a brand of unpasteurized, raw milk sheep's cheese. A spokeswoman from Santé publique France told Food Safety News that *Salmonella enteritidis* was responsible for 49 illnesses and one person needed hospital treatment.

The first patients were reported in early June with the most recent reported illness in early July. Two incidents of food poisoning with isolates of *Salmonella enteritidis* in patients were declared via mandatory declaration by regional health authorities in Center-Val-de-Loire.

All these people had eaten sheep cheese and checks on the cheeses revealed the presence of *Salmonella enteritidis*. Product recall and international distribution in mid-July, French firm GAEC Froidevaux Cornuet withdrew products from sale as tests detected Salmonella and the epidemiological link to potential human illness.