Can You Use Technology to Uber Proof Your Business?

Marty Seymour

Director, Industry & Stakeholder Relations Farm Credit Canada, Regina, Saskatchewan

Farming today is not what it was 50, 25, or even five years ago. The pace of change has never been this fast and it will never be this slow again. Farmers, ranchers and food companies all face the same disruptive question: "If the future is different than the past, how safe is my business?" For most farms today, technology offers solutions to labour, food safety, risk management and efficiency, but many farms struggle with the complexity or return on investment for some of the technologies available.

Seventy-five percent of Canadian dairy farms adopted new technology in the last year according to research completed by the Farm Credit Canada Vision Panel in 2018. This is a number we can all be proud of, but it also means one in four farms did not adopt new technology. For those skeptical of new technology, it's ok not to be an early adopter. My rule of thumb for skeptics who may wait to see if there is value in the latest idea or gadget is: "You don't have to have the latest technology, but you have to compete with those who do."

Agriculture appears to be ripe for a massive data harvest. Companies, including Google, Amazon and IBM, are lining up to help agriculture enthusiasts harvest and make sense of mountains of industry data. The challenge is a general lack of understanding of what problem we are trying to solve with each data set.

Artificial intelligence (AI) offers a huge upside for looking at these massive agricultural data sets. Computing power, as well as algorithm accuracy, has improved data analysis substantially. A challenging obstacle to AI application in biological systems is inconsistent data, which leads to difficulty in writing effective herd health management solutions. In the near term, we have sensors and apps on our phones to identify heat cycles or feed intake of individual animals. These innovations allow farms to expand and grow, and make it easier to train new employees entering the industry without livestock backgrounds.

Robots show the most shine when it comes to attracting interest in the farming community. The advancement of the dairy robot from 1999 to 2019 has been exponential. Robotic milkers have become an economically viable solution in all kinds of farm models. The next generation of robots is going to surface in autonomous agriculture. The farms of the future are likely to be sized and scaled around the use of robots and driverless technology. It also means the farmer of the future may need to have a bias to technology savviness in addition to animal behaviour.

The next frontier of disruption in modern agriculture is anchored in a shift in consumer preferences. The shift in the millennial diet from milk and animal proteins to plant-based alternatives is rooted in social values. These dietary changes are likely to have the biggest change on production agriculture because the current supply chain and food production model in North America is based on animal proteins.

The agri-food industry will continue to evolve. There are a couple fundamental truths the ag community must embrace: 1) consumers will always want choice, and 2) health is one of the key drivers in many food choices people make. The dairy industry has much to offer in both these categories.





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