WHAT TOMORROW'S FARMER LOOKS LIKE

THIS BUSINESS OF FARMING | BY MIKE WILSON

IMAGINE THIS DAY: Just before you retire for the evening, you head to the office and fire up your laptop. You push a series of buttons that activates an autonomous set of vehicles in field No. 47, a half-mile down the road.

A cab-less harvester wakes up and starts chewing through a field of corn. As it moves, it "talks" to a self-propelled grain cart, which begins transferring loads of grain back and forth between the combine and nearby semitruck.

It's driven by GPS. No lights are needed — no humans, either. Passersby hear the gently hum of engines but see little else.

The farmer puts on his virtual reality goggles and views the scene from a nearby hovering drone. Satisfied all is well, he goes to bed. The field will be finished by morning. The self-driven truck will be waiting for him at the grain complex.

When will it happen? Five years, 10? The technology already exists. Autonomous vehicles will be the next disruptor in ag, but by no means the last. Tomorrow's farmer will need a different set of skills and insights to succeed. Here are three:

1. Ag tech knowledge. The top skill needed by tomorrow's farmer is

technology adoption. It's especially important as young farmers move into management and rapidly expand their business. Data-driven tech services can help them with logistics, people management and marketing, and that's just the tip of the iceberg.

"If anyone thinks ag will be the same in 20 years, they have their head in the sand," says Aidan Connolly, chief innovation officer at Alltech, a global biotech and animal nutrition company. He believes eight technologies will transform ag, from food to fork: robotics, artificial intelligence, drones, sensors, 3-D printing, virtual and augmented reality, blockchain, and the "internet of things."

The farmer of today will become an ag technologist in the future.

2. Analytics. Increasingly those people who are going to be successful will need analytical skills, tied to data and information, says Purdue University ag economist Mike Boehlje. "We see this particularly in finance. Some farmers abhor having to keep records to provide to lenders. But we are increasingly going to need to feel comfortable understanding that information, to understand the story the numbers tell.

"Data assessment is going to be an increasing skill more producers need to have," he adds. "Strategic thinking, risk assessment are other important skills. A willingness to work with data and understand the story it tells — that's a key skill for the future."

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3. Collaboration. Another key skill is the ability to produce for today's consumers. Right now most farmers work in the "production push" supply chain, driven by low-cost commodities with little interest in "market pull." But market pull is exactly where we are headed.

"We're increasingly seeing the entire food and production distribution system move from a commodity, supply-chain mentality to a differentiated product, demand-driven system," says Boehlje. "Consumers want food consumption experiences, and that's very different from the old commodity-driven, produce-and-peddle mentality. That is not the industry of tomorrow."

That means farmers must work in an interdependent system focused on relationships and collaboration. "They didn't want to mess with records or have relationships with others, but increasingly those are skills essential for a farmer of the future," he adds.

Agriculture is an industry in transformation. It's been tradition-bound for decades, but there is now disruption, and it's coming from nontraditional players. When Silicon Valley invests in ag, you know it's not your daddy's farm anymore.

Connolly's advice to farmers?

"Buy yourself a passport, travel the world, and learn as much as you can," he says. "When you see innovation, embrace it as quickly as possible, because that will be the farm of the future." **FF**

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