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VOLUME 13 WHAT'S INSIDE

Recommendations for remaining on the leading edge of ag production.

Agriculture is on the brink of another transformation. This time it will be powered by data and technology.

Six essential skills that make for entrepreneurial success.

Every farm, business and community is unique. How can you adapt to changing local risks and opportunities while also keeping an eye on global trends and the nation's economy? With nearly 90 offices and more than 1,100 employees, Farm Credit Mid-America is constantly working to help farmers in Indiana, Ohio, Kentucky and Tennessee leverage the economics of change in their favor. This report shares some of our insights to help you manage your operation and stand strong in today's competitive, ever-changing marketplace.





THE ABILITY TO MEET TODAY'S DEMANDS AND TOMORROW'S CHALLENGES IS A CRITICAL SKILL FOR GROWTH-ORIENTED FARMERS.

TIPS FOR SUCCESS IN 21ST-CENTURY AGRICULTURE

Sweeping demographic changes and the rise of technology have dramatically altered the agricultural landscape. Farmers who are equipped to quickly satisfy changing consumer preferences and who proactively anticipate challenges are likelier to thrive.

“Demographics and technology are reshaping the consumer landscape and the amount of information people have at their fingertips,” says Jason Henderson, Ph.D., associate dean, Purdue University College of Agriculture and director of Purdue Extension. “This translates into how much information consumers want regarding the food, fuel and fiber that come from agriculture.”

Here are some recommendations Henderson has for growth-oriented farmers who want to remain on the leading edge of ag production.

Meet 21st-century demands

The largest demographic groups in the United States – millennials – have needs that are different from those of previous generations, says Henderson. A number of millennials, for example, are interested in understanding where their food comes from. They may also be more drawn to ideas such as urban agriculture and the local food movement. “These food demands are potentially reshaping agriculture and the rural economy,” he says.

Farmers must also be adept at identifying new sources of market demand. Farm booms tend to occur when there has been a new source of demand – for example, a boom in Chinese exports of methanol spurred the last boom in the mid-2000s.

“Agribusinesses need to be more in touch with consumers and understand how demand is shifting, both here in the United States and globally, to identify and to even drive some of the future booms going forward,” says Henderson. “In the past, agriculture focused on the supply side – driving operational efficiencies and being the low-cost producer. Now farmers recognize that ag is a consumer-oriented industry and that they need to produce crops, livestock and other products that meet specific consumer demands.”

Acquire the tools you need

Not only do farmers need to have agronomic and/or animal husbandry acumen to run their operations, but they also need marketing skills to sell their goods at the best price and manage risk.

“Increasingly, farmers need STEM [science, technology, engineering and mathematics] skills,” says Henderson. “It could be the ability to work with robotic milkers, fly drones or synthesize big data and use it to make decisions. These are skills that are essential for farmers and producers, but also industrywide and throughout the entire value chain.”

Address the requirements of your workforce

Farms are on track to increase in size and will need younger people to fill staffing demands. Some of these workers will have an agricultural background, while others may not have grown up on a farm. How should you think about workforce management? New technology? Worker training opportunities?

“We need to think about the farm workforce of the future more broadly,” says Henderson. “Not only how we hire employees and decide what skills they must possess, but also how the spouses of those farm employees can be integrated into the workforce and into the rural community.”

Be entrepreneurial

Purdue University and Purdue Extension help farmers discover how they can meet emerging consumer demands while driving efficiencies in their operations and ultimately turn a profit.

“We encourage farmers to identify new market opportunities or develop new products,” says Henderson. “Once they identify those new demand sources, they can then work to meet those demands efficiently and in a way that drives environmental, economic and social benefits.”

He offers the example of orange corn. This corn is packed with carotenoids, which are only available through diet. Ultimately, they are converted into vitamin A, which is vital for eye health. Children with severe vitamin A deficiency can go blind. As a result, orange corn could be a great benefit to a number of populations around the globe. “It’s going to take farmers who are entrepreneurial and willing to do things a little differently on their farms to grow this type of value-added product,” says Henderson.

“As farmers become more entrepreneurial, they need to focus on shifts in broader consumer demands and understand the consumer side of emerging trends. It’s the entrepreneurial enterprises that will be the first to capture those benefits.” ♦





A THREE-STEP PROCESS
FOR FUTURE-PROOFING
OPERATIONS.

THE BIG AHA: HOW TO THINK LIKE A FUTURIST

In 1923, International Harvester debuted the Farmall tractor, and within two decades, the tractor had replaced the horse and plow, forever changing the farming industry.

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According to global futurist Jack Ulldrich, these trends are going to transform agriculture sooner rather than later, and farmers need to be prepared. He addressed these trends during his keynote at the 2017 Farm Credit Mid-America Insights Conference.

In his presentation, titled “The Big AHA: How to Future-Proof Your Farm Against Tomorrow’s Trends Today,” Ulldrich shared the trends and emerging technologies that will bring sweeping changes to agriculture, just as the gasoline-powered tractor did in the 1940s.

Think wearable technologies like Google Glass and the ability to 3D-print broken tractor parts; augmented and virtual reality, the Internet of Things, artificial intelligence and big data; and sensors that speak to each other in everything from bales to cows to turbines.

In addition to new technologies, there are also consumer trends that farmers need to be aware of, Ulldrich says. The two that could have the biggest impact on operations are artificial meat and urban farming.

“A traditional lettuce farmer can grow two crops in a year,” he explains. “These urban farms, because they have around-the-clock LED lighting, can grow 22 in a year. They can also grow it really close to their customer. These advances are coming fast. Farmers may need to rethink their industry to stay competitive.”

The challenge of future-proofing operations falls squarely on farmers. Ignore these changes, and farmers risk being left behind, Ulldrich says. Ulldrich walked through what he calls the “Big AHA,” an acronym that can help farmers prepare, and which stands for aware, humility and action.

Farmers must first be *aware* of changes on the horizon. Then they must have enough *humility* to acknowledge that what worked on farms yesterday might not be sufficient moving forward.

“The reason so many existing businesses are disrupted isn’t simply because they didn’t see the change coming — it is because they couldn’t let go of their assumptions earlier,” says Ulldrich.

One example Ulldrich gives is virtual reality. “If you see someone wearing virtual reality goggles, it looks ridiculous,” he says. “Most farmers would say they’d never wear them.”

However, he says, there are farmers who are leveraging the technology to virtually bring people from the city to their farms. These experiences help improve relations with farmers’ customers in the city. “You really have to think through these technologies and understand how they can be used to benefit you today. But to do that, you have to challenge your assumptions and unlearn some things,” he says.

Finally, farmers must be willing to take *action* in the face of less-than-perfect information. One strategy Ulldrich recommends to farmers is seeking out a “reverse mentor,” someone who is younger and more comfortable and experienced with new technologies. Farmers are accustomed to mentoring their younger employees and grandchildren, he says. But, in a world that is changing as quickly as ours, it’s important to seek out different perspectives.

“The very act of getting a reverse mentor requires some humility,” he adds. “You don’t know everything. The world is changing, and you may have to take advice from someone you’re not as inclined to take advice from.”

While the future can feel uncertain, Ulldrich believes that as long as farmers are prepared, they have no reason to worry. In fact, these technologies may bring more opportunities than challenges.

“Farmers have been able to feed the world for the last 100 years,” he says. “In the near future, we’re going to go from 7 billion people to 10 billion people. I’m absolutely convinced that because of these new advances in technology, farmers are going to rise to the challenge. In the new 3 billion people, there’s a lot of opportunity.” ♦





THE SIX SKILLS FARMERS SHOULD DEVELOP TO LEAD THEIR OPERATIONS TO SUCCESS.

THE SIX ESSENTIAL SKILLS FOR ENTREPRENEURIAL SUCCESS

Farmers fulfill nearly all executive roles on their operations: chief executive officer, chief financial officer and HR manager, just to name a few. While the majority of farmers may consider themselves business managers, many may not think of themselves as entrepreneurs.

However, in the constantly changing economy and agricultural landscape, farmers are challenged to find new solutions and adjust on nearly a day-to-day basis. Even if you are a sixth-generation farmer, chances are you aren't doing things exactly the same way you were five years ago. This constant evolution is what is at the heart of entrepreneurship. Whether you are a first-year farmer or are on the same land your great-grandfather farmed, you are more entrepreneurial than you may believe.

Amy Wilkinson, founder and CEO of Ingenuity, lecturer at Stanford Graduate School of Business, author of *The Creator's Code: The Six Essential Skills of Extraordinary Entrepreneurs* and recent speaker at the Farm Credit Mid-America 2017 Insights Conference, spent five years studying and interviewing some of the most well-known entrepreneurs to understand what makes them tick and what has made them successful. Here is the list of six skills she identified.

Skill #1: Find the gap

Entrepreneurs are always on the lookout for opportunities that others aren't taking advantage of or aren't seeing. Wilkinson says this is done in one of three ways: as a Sunbird, as an Architect or as an Integrator.

A Sunbird, like the species it's named after, takes an idea that's working elsewhere and transplants it into another arena. An Architect solves a problem from the ground up. Finally, an Integrator brings together concepts and ideas that haven't been linked before.

Skill #2: Drive for daylight

Being a business owner takes immense focus, and there are a lot of thoughts that can distract you on your journey: What your neighbor is doing, what your family thinks and what your past failures are are just a few.

As Wilkinson explains, when NASCAR drivers are on the racetrack, they keep their eyes forward. They don't look in the rearview mirror or to the side. Instead, they keep their thoughts and focus toward the horizon. Farmers should always look toward where they want to go.

Skill #3: Fly the OODA-loop

"OODA" is originally a fighter pilot mantra that stands for *observe, orient, decide* and *act*. Instead of ruminating over endless options, the goal is to make quick decisions that change the business or the competitive landscape. The OODA-loop is the constant iteration of this concept. Making decisions quickly means you are pivoting and iterating as needed to keep up with the changing demands of your business.

Skill #4: Fail wisely

Large, devastating mistakes can be avoided by strategically choosing small failures that the business can accommodate. Farmers are continually assessing what type of risk their operations can and cannot take on; this skill is no different.

An example of failing wisely may be doing small tests – like planting just a few rows of an experimental crop – that minimize the overall impact if they don't go as planned. The goal should be to learn what works and what doesn't.

Skill #5: Network minds

Though farmers are well-versed in many components of their operation, nobody can be an expert on everything. Multifaceted businesses like farms need the brainpower of individuals with diverse skills. Many farmers do this already by hiring an agronomist, sending their children to college for animal science or working with a financial lender.

Bringing in a group of experts on a variety of subjects will help build on ideas for your operation and create more robust problem-solving approaches.

Skill #6: Gift small goods

Finally, Wilkinson outlines how sharing information and opening opportunities can help pay dividends down the road. Kindness may not seem like a skill

that can help build success, but it strengthens relationships and fosters a strong community that will ultimately support your business. For farmers, gifting small goods can be joining a mentorship program to assist young farmers in the next state or helping a family member learn a new skill on the operation.

As every farmer knows, running a successful

operation means pivoting to keep up with constant changes in agriculture. No matter what the size or age of your operation is, developing these six skills can help set up your farm for long-term success.

For more on these six skills, pick up a copy of *The Creator's Code: The Six Essential Skills of Extraordinary Entrepreneurs*. ♦

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The information in this report is derived from Farm Credit Mid-America's experience in rural and agricultural lending, and does not take into account the financial needs of particular individuals. This content is intended to be informational and is not a substitute for detailed advice on your specific situation.

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