

# Outside the BOX: Technology — cake or frosting?

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Fascinated by a farmer's description of a dashboard software system that allowed him to make agile irrigation decisions based on the capacity of the system to collect and synthesize a multitude of data points, each in the crowd of professional agriculturalists at a

research field day silently contemplated the value of the system to his or her own enterprises.

A young farmer asked, "How long did it take you to learn to use the technology?"

The speaker paused and responded, "That's a good question, but it's not

the most important one. The critical question is how much time passed before I trusted the technology."

At the same event, a professional agronomist with more than 40 years of experience shared his perspective as to what he had learned during his career. He presented several case studies, backed up by photographs and data that laid out cause-and-effect relationships and challenges arising from violating fundamental principles of good management. He made the case that superior farming was the result of practical "boots on the ground" experience, a commitment to the principles of stewardship, and effective use and timing of appropriate technologies.

The messages of the day were clear for me: Technology does not a manager make, plus thoughtful observation and critical thinking should be applied before choosing which, if any, technologies should be applied.

Increasingly, choices about technology come down to trust. Individuals make decisions based on their sense of the cost and benefit relationship, the level of perceived risk weighed against risk tolerance, and, increasingly, by their view of how a product or service measures against their personal value system.

## Trust levels

Furthermore, it's not enough to consider only the trust level of the adopter of technology — ultimately the trust of consumers must be considered. This bi-level approach complicates matters as it forces early adopters to consider not only their own needs, but also those of their primary and secondary customers. This conundrum is not easily resolved, but wrestling with it is worth the brain pain.

From an enterprise level, my family's cow-calf business utilizes a multitude of technologies ranging from high-quality vaccines to heavy equipment. We are not the most tech-driven ranch in the industry by any stretch, and our decision-making process is decidedly conservative with a high need to see proof of concept before we get too interested in the next new thing.

On the other hand, we are not tech-phobic. We try hard to keep our business profitable, our operational strategies fairly simple and flexibility is a requirement in most areas of our enterprise. Our experience has reinforced a fundamental lesson from our forefathers — there is no substitute for excellent stockmanship.

William Danforth, the founder of Purina Mills, was spot on in his view that, "We are all measured by the animal we keep." He founded his company on the belief that there were four building blocks of a successful livestock enterprise — good feeding, good breeding, proper sanitation and sound management. Technologies

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alone do not create any of these four building blocks. However, when applied with commonsense and critical thinking, appropriate technologies can build upon Danforth's four foundational principles.

Issues of trust arise when technology replaces stockmanship as the foundation. History has clearly shown poor nutrition, for example, will undermine the effectiveness of a sound vaccination protocol; poor sanitation practices undercut the effectiveness of treatment protocols, and poor management is ultimately a fatal flaw within the system. None of the technologies available to us are capable of propping up and sustaining profitability in herds where nutrition, genetics, preventative sanitation practices and general management are subpar. Furthermore, if the marketplace becomes convinced that a food industry has flipped the model to make technology primary and stockmanship secondary, then consumer confidence declines and market share erodes.

There was a time when the highest compliment for a livestock producer was to be referred to as a good stockman — the person who personified Danforth's highest aspiration about being "measured by the animals we keep." Stockmanship can be learned and its practice depends on a commitment to continuous improvement, honing observational skills, leveraging previous experience, and a willingness to sustain the deep emotional and spiritual connection that comes with pursuit of mastery as a steward of land and livestock. However, there are no shortcuts to becoming a master stockman, and to attain success requires that we embrace it not as a practice, but as way of life and as a measure of our humanity.

In no way should these comments be construed as anti-technology. Rather, it is time for the beef industry to reconnect with its deep roots in high-quality stockmanship. When great management is in place, technology has the potential to add value, but in the absence of the thoughtful and skilled stockman, technology is only an expensive Band-Aid®.



**Editor's Note:** Tom Field is director of the Engler Agribusiness Entrepreneurship Program at the University of Nebraska–Lincoln.