Technology Tools

By Jennifer Ifft & Jason Karszes

To Adopt or Not?

Deciding whether or not to adopt a new technology is a critical decision that farm managers regularly face. However, having the latest and greatest technologies does not ensure success! Farms that achieve long-term profitability make judicious decisions about what investments in technology best fit the needs of their business model. Technologies and innovations that occur might be physical (new milking equipment) and process-based (changing milking frequency), or as economists like to say, embodied or disembodied.

Carefully evaluate all information available when taking on new investments to prevent avoidable risks.

In today's difficult market environment, it is worth emphasizing that processes-based innovation, or more basically, changing the way you run your farm operation may be just as effective as investing in physical technology, and potentially less risky. This could involve, for example, collecting new information on cow productivity that could aid in culling decisions or grouping strategies, providing regular feedback for employees, or changing ration formulations. While these practices might not be thought of as technologies per se, they are innovations that can affect your bottom line as much as physical technologies, if not more. This article applies more directly to physical technologies, but can also be used to evaluate new, innovative management processes.

No matter the technology you are considering, it is worth thinking carefully through several questions that will influence its profitability. When taking on new investments and potentially exposing your business to new risks, carefully considering all information available can help prevent otherwise avoidable risks.

What research supports the new technology?

Has it been proven to be effective? Be careful of any biases you may have. While one or two respected neighbors may have made apparently-successful investments in a new technology, this may not mean that it will be widely successful or even successful for your operation. In some cases what appears to have been a successful investment for a neighbor may not even have been profitable despite the productivity increase. Information about technology comes from different sources, including university or government research, industry research or testimonials. As a general rule, studies conducted with a large numbers of farms by an independent third party, university or research institution are the most reliable. On the other hand, single-farm testimonials or advertisements that don't include data or specific facts can certainly be useful, but alone should not considered conclusive.

What will improve or change?

What will the impacts be and how can you measure them? If you understand how a new technology or process will improve or change your business, you can then estimate potential impacts and evaluate the costs and benefits of your investment. This fits into the classic management principal that "If you can't measure it, you can't manage it. And if you can't manage it, you can't improve it." The actual degree to which something can be measured varies, but you should be able to tell if something in your operation has improved or changed as the result of adopting a new technology or process. As always, the ultimate consideration is not "Can I increase my production?," but "Can I increase my bottom line?" These two may indeed often be closely related, but should not be assumed that they are the same.

How fast will I see results?

Some technologies or processes will yield results sooner than others. Speed is not the goal, but will affect how you consider the returns to your investment. Will returns be realized as soon as needed for your operation? If an investment does take longer to have positive returns, will your operation be able to survive the lower-income years? Some investments may simply have lower returns, but may help you prepare for the future. For example, automatic milking systems may have lower returns than other milking systems, such as rotary parlors initially. But some farms have considered continued tight domestic labor markets and an unfavorable policy environment as "the future" and have made the investment anyway. Whatever the technology or process you are considering, the speed at which you see results is a critical component of your decision.

Is everything in place to allow the technology to work on your farm?

There are very few areas of a dairy business that don't have strong interrelationships with other aspects of the business. If you are going to invest in a new technology, are all the other aspects of your business in a position to support the success of this technology? If you adapt technology to improve forage quality, will the improvement in feed quality be muted by limitations in cow comfort or cow time budgets that may exist?

How fast is innovation occurring?

Any firm investing in new technologies or processes must consider the speed at which this technology will become obsolete. Will your operation be able to adapt and compete if much-improved technologies are introduced in a few years? While it shouldn't be an excuse to never make necessary investments, there is a balance to be achieved. A farm could become obsolete by never adopting

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What challenges came with the radios and do you have any advice for people looking into buying radios?

Jeff True: Buy them from a reputable dealer that will service them. Off-brand radios come and go, so buy from a name brand company with a dealer close by. Multiple channels are helpful to switch between the harvesting/trucking crew channel to the barn crew. If you want to have a more private conversation, it can be held on a channel not regularly used.

Mike McMahon: The biggest challenge with handhelds are getting employees to return them to their charger at the end of the day. Putting a name on each radio with a label maker has helped mitigate this. Having a good technician work with the radios is important and upgrading to lithium batteries for longer life has helped.

The cost of one handheld radio is anywhere from $200 to $500. The initial investment in radios is a tough pill to swallow, but those using the radios on a day to day basis don't regret their investment. Employees at True Farms, Porterdale Farm, and McMahon's EZ Acres are responsible for keeping their own radios charged and cared for. By understanding the costs of the radios, more care and caution is taken by employees using them.

Farms considering buying radios should look further at how the added communication may fit into day to day management and how they could eliminate some unnecessary cell phone use on-farm. Cell phones are a great form of technology and communication but can easily be distracting and dangerous. Improving the communication, safety and accountability of your farm team can provide a positive impact in your dairy business.

"I cannot imagine operating without radios as they have been a critical part of our communication protocols for 30 years," says Mike McMahon. ❐

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new technologies due to waiting for something better. For example, the next iPhone/planter/cow monitoring system that is released will inevitably be better, but taking that mindset too far could lead to your farm falling behind. However, sometimes it will be worth waiting for a later model to be released. In other cases when obsolescence is quite likely, another strategy is to consider how easily your technology or process can be updated. Partial obsolescence is better than having to adopt something entirely new. For example, some companies promote rotary parlors that can be relatively more easily upgraded as robotics become more cost effective. There are no easy answers for these issues, just different options that must be carefully evaluated.

What is the exit strategy if doesn't work?

All farms take risks, and it is inevitable that not all decisions will be successful, or that some technologies will fail or not work as intended. Fear of failure can easily prevent farms from making investments that in most situations would increase their bottom line. While it is important to plan to avoid such situations, it may also be prudent to take measured risks where failure is an option, while also planning an exit strategy. Some technologies may be more irreversible than others, and some may have higher "salvage" value than others. Understanding your potential options under failure allows you to develop an exit strategy. The basic approach is that, "Under most scenarios this technology will work well and pay off for our operation, but in case it doesn't, we will…" Potential strategies can range from just going back to what was done before, to selling the technology, to walking away from it for $0 return and trying something different. ❐

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