

Industry Presentation - Technology on the Dairy Farm – So What's All the Fuss About?

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The implementation and utilization of technology has exploded into our lives the past 5 yr at a rate that we have never before witnessed. Depending on the region and economic scenario, technology has entered into agriculture such that both young and old alike are making decisions based on information from apps or gadgets. Instead of going to a library and taking days to compile research, many read information on the internet in ¼ of the time. However, still a significant amount of time must be devoted to filtering out irrelevant information, such that only quality information is used. Here is the challenge of data and information in the new world.

The reasons for buying technology may be economics, labor efficiency, fascination with a new technology, or emotional (75 % of the driver for personal purchases). We always speak in the dairy industry of economic reasons, but there is much more to it. One clear criterion is that the relationship with the local dealer is critical. The dealership must have well trained staff with a support network backed from the corporate level.

In the past, hardware was more apt to be hardware. Nuts and bolts and a lot of steel with motors, pumps, hoses, and lines were sold and installed. It had minimal options on settings. Today the hardware includes not only these traditional components, but much more with the entry of sensors, readers, and electronics managed by software. The software is two-fold in dairy farming, which makes it more complicated than even cell phone software.

The software runs the milking equipment and it is a tool in the toolbox to help dairy producers and their staff manage their cows.

If you are currently a producer with minimal parlor technology, i.e. no milk meters or automatic take offs, the argumentation and the preparation for updating a parlor with just these two additions may appear simple. However, without proper preparation this first step could end up in a great deal of frustration. All parties involved should know why the changes are being made. Is it for increased returns through finding cows that are not paying for themselves or have a health issue and therefore are not producing? Return over feed costs is a key driver and cows producing below your breakeven are a drain on this equation.

If you want to improve labor efficiency and even udder health then automatic take offs are a logical choice. But if vacuum and flow settings are not discussed and necessary modifications explained, after a few cases of mastitis quick negative reactions from team members questioning the change may compromise teachable moments. It is always better to understand what the changes will be, and who to call if results on the farm are different than expected. This keeps everyone's attitude positive. Then any challenge, no matter how smaller big, is worked through in a more positive manner.

Another group of dairy producers may find that they have tools but are not using the software to analyze parlor

performance, udder preparation, and personnel performance. Who at the dealership can support a training request or can they call upon the corporate level to bring in regional support? Software should be used so that owners/managers can monitor their ability to train or provide training for the staff. If the staff view it only as a tool to punish them, then negative attitudes can develop. If discussions begin with how to use software to improve people's work experience and how it can benefit everyone with benchmarks better set to aid in either a bonus structure or improved training then perhaps more positive attitudes help in a smoother transition. Remember the radio station WIFM – "What's in it for me?"

What if you are always leading the pack and looking for new or different ways? You may be looking for technology to replace what people do now or for technology that can do it more cost effectively over a 5 to 10 yr period?

- One example would be a teat robot sprayer. The work force is changing and the pool of workers for certain jobs may no longer be available, you will need tools that allow people to work in a different manner.
- Another example of this may be automated calf feeding, instead of mixing and delivering milk, the role changes to managing and monitoring calves and to ensure that the calf feeder is working/cleaning properly and that the environment (ventilation, housing) supports success with this technology.
- A third reason could be that you are listening to the consumer and regardless of what you believe;

they are applying pressure through their buying trends or their social voice to influence what you are doing. An example would be utilizing activity systems in combination with sync programs to reduce the dependence on 100 % **TAI** (timed artificial insemination). Someday technology such as Herd Navigator™ (DeLaval, Bannockburn, IL) that measures progesterone will be used so the hormones in TAI programs are only given to non-cycling cows. With a technology like Herd Navigator, that also measures metabolites for metabolic disease and udder health, you quickly identify abnormal cows and your team has a tremendous tool to work to minimize these cows.

Henry Ford was quoted to have said, *"It is not the employer who pays the wages. Employers only handle the money. It is the customer who pays the wages."* If we don't listen to the consumer (ultimately everyone's customer) of milk and milk products we may find ourselves with additional struggles in marketing our quality products. While the safety of what we do is not the issue, the perception by the consumer regarding products used in or on our animals is that some of these products are. I have slowly accepted that this must be a part of my vision.

In preparation for the new technology coming to your farm you must decide when or how you are going to start to bring the staff into being a part of it. Too often with companies, staff tend to be told what is about to happen. We know that the initial response after a surprise or lack of information can be negative. Depending on the staff's perception of what it will do to their life, they may

begin the process of sabotage quite early in the process. On the other hand if discussions begin early and bring in the opinions of key managers you can start the process of a successful integration.

If technology can make life easier from a physical perspective, most people welcome the addition. However, there may be an automatic fear of lack of ability to manage the new technology and/or a greater fear that the technology may lead to their dismissal. If employees can't read or write, will the new technology mean that they will "for sure" lose their job? Also is the owner's understanding of the technology in line with the reality of how the key managers understand it and with realistic results in the first year compared to 3 yr or more? I have witnessed some owners misunderstanding what the technology can do, and because as an owner they don't work with it on a daily basis, there can be surprises months after the installation. We are a society of wanting instantaneous results; therefore proper training and understanding are key to knowing how to benchmark results.

The last part of this team that can really advance the use of the new technology or potentially hold it back from its potential is the role of the advisors in your dairy operation. Are your advisors supportive of new or different technology? If yes, bring them into the training process. Ensure that they understand how the technology will work and what the benchmarks are for changes in productivity, standard operating procedures, or work efficiencies. I have participated with dairy producers who have advisors as excited as they are about the new technology. These meetings are very productive; and the on-farm results are reflective of this. I have also participated in meetings where advisors have been

extremely critical or worst non-participatory. Consequently the ability to go forward with the technology is compromised. If you have made the decision to move forward with technology, please ensure that your advisory team is supportive.

In summary:

1. Why are you buying the technology?
2. What is it that you want to know from this technology and what do you want to do with its mechanical benefit or the data that comes out of it?
 - a. What are practical benchmarks to achieve the results that you would like?
 - b. Are your staff or key managers a part of the decision making or is it "Do as you are told"?
 - c. Is your advisory team a part of this decision making and what role will they play in designing rations or standard operating procedures because of the change in technology or because of the data coming from technology?
3. How much support does this new technology require?
 - a. Too often quotes just state "support"; however it should be clearly stated what the default support is, who provides that support (their qualifications), and an approximate estimate of the time.
 - b. Does this support come locally and how do they work with the corporate support should more or different questions arise? It is a fine

balance between having great local support and having someone at the corporate level answer those *tough* questions.

There doesn't have to be a lot of fuss with new technology. There will be some, but it can be managed if the right questions

are asked beforehand and everyone with a stake in the results feels like they are a part of the decision and part of making the technology work. While price is important with technology; preparation, knowledge, and support are equally critical and cannot be compromised.