

Insight into the use of New Technologies

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Using multiple online systems to monitor and manage herd performance of gestation and farrowing sows all the way to finishing is now second nature for John Van Engelen and his family at Hog-Tied Farms in Lambton County, Ontario. Van Engelen can attest that the advantages provided by these systems are very powerful, but stresses that if you are not the type of farmer who is interested in trying new things and using the knowledge that comes with new tools, the technology (and its benefits) are not for you.

Let's start with benefits to the bottom line. Every system at Hog-Tied has paid for itself at least once over, and indeed, Van Engelen says a particular system can pay for itself with the quick solving of a single problem.



"As an example, a while back, my feed monitoring system (PPT, Pig Performance Tester) informed me the pigs had an ADG of 880 g a day, when that's usually about 1000 g," he explains. "I suspected toxins in the corn, and I had it tested and the feed company assured me all was well, but I had it tested two more times because I could clearly see the loss in performance with the system data. I put a binder in the feed and the pigs went to gaining over 1000 g a day again. Without the system picking that up right away, it would have taken me a much longer time to see the problem and deal with it. And I wouldn't have had any hard data about the extent of the problem."

Solving potential problems aside, Van Engelen also points to the big financial picture in terms of small ongoing savings. "If an average herd goes through a million dollars of feed in a year, and the technology allows you to save half or one per cent every year, it's more than worthwhile in a year," he says.

The system data can be viewed on a smart phone or any other device. Van Engelen spends the first minutes every morning looking at how each sow is eating, and his son looks at the market pigs.



Van Engelen also installed a two-way sorter for phase feeding in 2003, and then when he built a new barn in 2013, he added five three-way sorters with RFID (ear tag) technology used in conjunction with the PPT. It means physical sorting is not needed, which provides labour cost savings. The system's market predictor (when to ship) provides more savings. Pig weights are uniform and pigs get the exact protein they need at the time they need it. It simplifies a lot of things, Van Engelen says, and there are savings all the time.

Right now, he only uses the RFID system with pigs in trials being run on-farm in collaboration with Van Engelen's packing plant or veterinary pharmaceutical companies, but he is looking at using the system for all pigs. "What I've learned so far with the

trial pigs is that there is an average difference of \$20 in feed between the pig that does best and worst," he says. "If you can use the technology in the entire herd to identify and segregate the poor doers and sell them for BBQ and stop the spread of flus for example, the performance of the herd and the health of the herd will be better. The cost will easily be worthwhile. "It's so easy to track individual animals with their growth rate and so on. With this system, you can also age boars and ship them before there is boar taint and the need to castrate. Mandatory shipping before taint to completely avoid castration may become a requirement for pigs shipped to Europe or for all pigs raised here in North America. It's not possible to know the way things will go but European ideas always come here. With this system, I am ready for whatever comes."

Van Engelen also uses four ESF stations, three for sows and one for gilts. The data allows him to provide exactly the feed required for sow at various stages of pregnancy and by weight, and also try different feeding regimens (he is currently experimenting with protein levels for third parity-plus sows, feeding them lower-scale protein to day 85.)

There are a few more technologies in place at Hog-Tied Farms. The ESF software program has also been added to an automatic feed dispenser for the farrowing sows, which provides labour savings (and is especially handy when Van Engelen and his son are busy combining in the fall). RFID technology is also tied into the ESF pens, automatically tracks how many times they approach the window of the adjacent boar pen and for how long they stay. When a threshold is reached, the system automatically spray-marks the sows identified to be in heat. Lastly, the ventilation systems are also automated.

In Van Engelen's view, the benefits of these tools go beyond a dramatic improvement of the productivity of his operation – he thinks that technology will do nothing short of keeping younger people in farming. "Once you have various tools in place, I would think you won't believe the difference and would never go back," he says. "I've grown into it, but my kids have never been without these systems, and I don't think they would be here without them because it would be dull, cumbersome and unsafe. If my son and I are busy, then my daughter can fill in completely with no problem and does not have to physically sort 300-pound pigs. We have wifi in the barn and we wear wireless headphones that provide hearing protection but you can also hear the news or take a phone call or the kids listen to music. They both love being here. With all these tools, pig farming is interesting, efficient and enjoyable."

Another advantage to all these technologies for Hog-Tied Farms is that there will not be any more labour required after the 2018 expansion is complete (a new barn is being built, with the total farm sow number increasing from 250 to 350). "With these systems, I am ready for the future," Van Engelen says. "I highly recommend them but if you are not excited about change and learning and using the knowledge that you will have, don't bother."

This past September John was one of several experts invited to speak at a series of Group Sow Housing Seminars hosted in Winnipeg and Strathmore. The meetings brought together experts the areas of construction/renovation, technology/innovation, nutrition and systems, science and behaviour to speak directly about the conversion to group sow housing. If you are looking for more information on the transition to group sow housing; videos and presentations from the seminar can be found online.

<http://www.prairieswine.com/successfully-converting-to-group-sow-housing/>

Funding was provided by

