

# THE MODERN PRODUCER

## IN THIS ISSUE:

A.I. IN A FINISHER

RISING CONCERN  
OF CRITICAL  
FUSION  
FREQUENCY

HANDLING  
THE  
TOUGH  
TIMES

BITCOIN  
TO  
BACON

AND  
MORE

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## FROM THE EDITORS

Good Day!

New Standard Group is pleased to bring you another issue of the Modern Producer.

It's been a challenging year for the ag industry, from low prices, to ASF in Asia and beyond. Producers have seen, and are facing many challenges.

This issue, we have articles on ESF history, reflections, tips for getting through the hard times, as well as something for turkey producers. It is our goal to always be getting better, and learning from our successes and failures.

As producers and those supporting producers, we need to keep our focus on the important things. Technology is making itself known in our barns more than ever. We are striving to make sure new tech is making a difference, not just for us, but also for our animals.

Getting "back to basics" and leaning on the wisdom we have gained is one of our greatest assets. We hope this issue is encouraging in your journey. Thank you.

Sincerely,  
Tim, Kevin & Kees (Kase)



# THE MODERN PRODUCER

Produced and Published By  
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# Curse of the Nibbler

So although the title of this may make you think of a cheap 80's movie, or one of those extremely unbelievable urban legends that were spread in the early days of email; we will be covering a serious topic. Yet, as with so many things in life, it doesn't hurt to see the humorous side of an issue.

So let me set the scene for you.

It was a dark and stormy night...

Okay, no it wasn't.

It was just another day, but a while ago we had a customer give us a call with a strange problem. His barn was losing ear tags left and right. He had been operating the barn for a couple years, he knew what it should normally be like. So, with a trembling voice shaking with fear, he asked, "What could it be?"

Now that we have accomplished the cheesy intro, we'll let Chet Mogler tell you his version of how things unfolded, at Pig Hill (with only the slightest dramatic license taken on his version of the events).

A few weeks back, I got notified that we were losing ear tags in one pen at a pretty alarming rate.

I headed over. First I checked the equipment and penning to see if they were maybe getting snagged, I checked the floor, no evidence of the tags were found. They were vanishing!

The problem did not stop, and if anything, it got worse. I ended up setting up a tool belt with new tags and a tagging gun in the pen to save time with the inevitability more tags would go missing.

At the peak of the disappearances I was tagging twenty to thirty head every day, and sometimes spending up to 6 hours a day in the pen. I still had no clue on where the tags were going!

At the end of my rope, I decided to give Tim Kurbis at New Standard a call. After explaining my problem, he chuckled and mentioned his brother Kevin had a similar problem at a barn in Western Canada. Tim was convinced that we were fortunate enough to have a rare and elusive breed of sow known as, "The Nibbler" amongst us. This particular breed had the uncanny ability to blend in, to look like all our other sows. It felt like the sow was on a secret operation. It's sole mission, to steal as many tags as possible before being caught.

Armed with this newly discovered information and determined to find this rogue sow, I returned to the pen with an eye on the animals. Within a few minutes of returning to the pen, I found a wet, chewed up ear tag on the floor. I knew the culprit had to be close. With my heart pounding out a

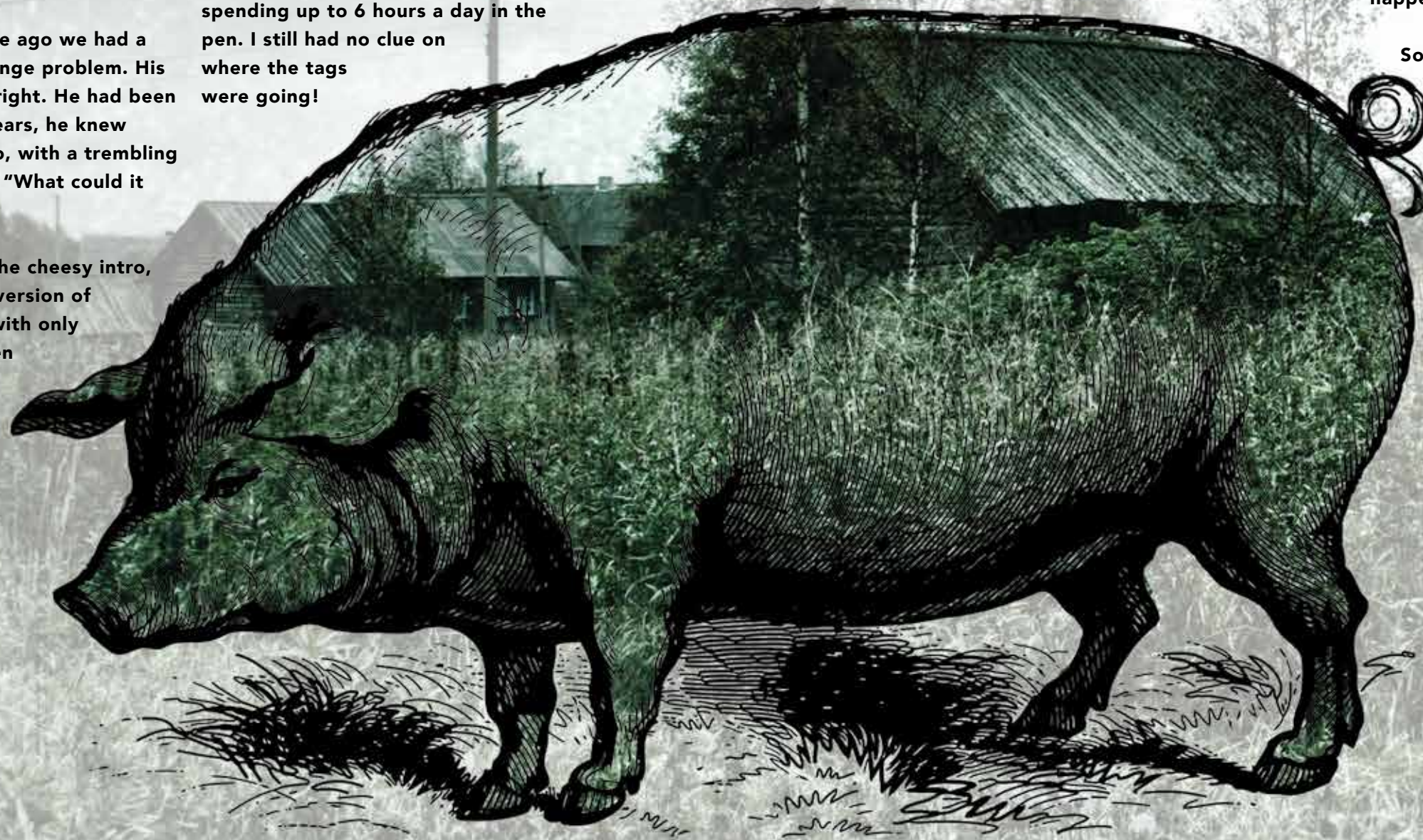
steady rhythm in my chest, I froze and allowed my eyes to scan the surrounding area. Within a few seconds I spotted what could only be our nibbler, calmly chewing on a freshly nipped ear tag.

Naturally, I took out my phone and started recording. Within forty-five seconds, the suspected nibbler walked up to another sow, and nipped the tag with one subtle yank. After a bit more observation, I realized the full scope of this rogue sow's tag addiction; she was taking these tags every 1-2 minutes!

Our nibbler is now living out her days in a breeding stall, but after she managed to steal the tags from each of her neighbors, we had no choice but to remove her from gen-pop, and send her to solitary confinement.

Although all and all this was not fun while it was happening, it sure is good for a laugh now.

So, if you have tags starting to disappear without a trace, you too may be experiencing "The Curse of the Nibbler". 🐷



# Selling Bacon With T-Shirts

By Kevin Kurbis

I take great pride in working in the pork industry, and have always tried to be a good ambassador to the general public. I find there are a lot of "myth-conceptions" about how pork is raised. As well as, some extremely wrong "facts" about the health factors associated with consuming meat.

Since changing the world is a daunting task, a few years ago I decided to try to change just one person at a time. Someone I have great respect for once told me to, "be an army of one". I took that advice and ran with it.

## My enemy?

Anyone who knew nothing about the pork (or meat in general) industry, but had very strong opinions about it.

## My goal?

Make them engage at least once with someone who might be able to set them straight.

## My weapon?

My chest. That's right, my scrawny hairy chest was my weapon of choice. I began to source shirts that bore messages that would force complete strangers to engage with me. This has been my favorite pastime. I wear these shirts everywhere I can, and the results have been fantastic. There have been some unintended results as well (my 5 year old nephew now calls me Uncle Bacon). However, in general, I have been able to get the message out.

Rather than bore you with all the past interactions, I believe it's time to share some of my favorite shirts.

## A Sampling of Kevin's Wardrobe

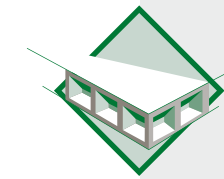


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## ESF in Europe and North America: A History + Reflections of Past 10 Years

In recent discussions, we have been fairly nostalgic. Spending time thinking about where we came from can be helpful in figuring out where we are going. Also, as we have many relationships and conversations with our European neighbors, we are reminded that at least here in the US, we are behind in some of the latest in terms of animal well-being. This is not to say everyone is behind, but as a whole, compared with Scandinavia and Europe we have areas we can still improve and grow in to.

We recently were able to talk with our good friend Mikael Kirk of AgriSys based in Denmark. Mikael founded ArgiSys in 2009, and has experience with transitioning many barns to ESF as well as new projects all over the world.

Little did Mikael know, shortly after the founding of his company, a worldwide financial crisis would hit. With a background in livestock housing, he was presented an opportunity to become a dealer for Nedap equipment. He

figured it was a good option with his history and personal connections he already had.

"It was either the best time to start or the worst," recalled Mikael. He decided to jump in head first. He did the installation himself, and surrounded himself with industry experts. The timing of AgriSys was perfect.

### Loose Sow Housing

In Europe it started in the late 1980s with alternative farmers.

"Folks with longer hair than most," joked Mikael. There was experimentation that was happening called Electronic Sow Feeding (ESF). It became general knowledge in the 1990s. Larger scale farms started to adopt the equipment and practices of ESF.

"The biggest jump and change we had was in the 2000s. We were at about fifty-fifty ESF and Free Access Boxes, and in

2004 legislation passed that if you build a new barn, it had to be loose sow housing," stated Mikael.

That rule was just the beginning. The European Union (EU), ruled that by 2013, everyone needed to adopt loose sow housing for pregnant sows, new and old barns alike. Why was it such a push?

"The main push was consumer demand," said Mikael. "The impact consumers had was enormous, and it is still influencing today's pig production." Mikael also believed most of the push was focused on, "humanely raising animals, even though some of the information getting out was false."

### ESF Earlier Struggles

This new ruling during the world financial crisis, was a challenge for many established barns. Many reduced the number of sows, removed pen equipment, and fed pigs off the floor. It was not optimal or sustainable, but it was a cheaper option to comply to legislation.

Early ESF was difficult to operate as well. There were misconceptions, poor training, bad electronics, and complicated systems to name a few. The early issues initially clouded the success and progress of ESF.

So, what has changed?

Younger farmers have overcome the history of ESF and are looking to the future.

"They want the connectivity," said Mikael. The consumers needs for transparency, and rising technological advances helped propel ESF. Farmers saw the cost of feed go down and bottom lines improve.

So, what's coming next? Consumers are continuing to push for transparency and want to know where their food is coming from.

"The next big shift is in farrowing pens, making them all free range pens. I believe around 20% have this implemented, but 100% is required in Scandinavia soon. I don't think anyone would build a traditional pen today; this is the effect of consumer demands."

\*\*\*

## ESF In North America and Nedap

Eagle Creek Colony was an early adopter of ESF and group sow housing. In 2008, they populated a new sow unit that would be the first in a long line of many technologically advanced barns using Nedap equipment. The unit was so advanced that in the first few years of operation, people from every continent, except Antarctica had toured the barn.

A Nedap sow pen layout required a properly functioning loose housing barn. New technology such as remote access using smartphones or tablets, emailed notifications, and ease of use were the tools needed to match the needs.

Nedap created Sow Weight Monitor, a hardware addition that allowed farmers to monitor each sow's weight and send notifications if any sow is losing weight during gestation. This unique tool provided valuable information not previously available. This opened up new possibilities to advance technologically using what is called the "Cloud".



The cloud is a remote storage, with an unlimited processing power, since it does not rely on device processing. Large amounts of data can be produced and stored without slowing down devices that use Nedap technology. The cloud also allows a farmer to record a sow's every movement and collect data for every animal in the barn. The immense amount of data generated can be stored in the Cloud, analyzed, and employed to improve operations.

### End Results

"We see how much more mobile pigs can be now, and they are in turn healthier and stronger. The pigs are happy."

### Future of ESF

With the rise of technology means the rise in understanding our animals. Nedap Sow Weight Monitor, will be able to help farmers determine if animals are getting sick or other health issues before anyone in the barn can notice. This can also alert farm owners to: feeders not being used normally, malfunction feeder, poor feed quality, and alert to check a feed station.

Simply put, once we start to collect and analyze all this data, the possibilities are endless. 🐷

# Bringing Tunnel Ventilation to Silver Lake Colony's New Turkey Finishers

When the poultry producers at Silver Lake Colony in Clark, South Dakota began planning their setup, New Standard was the first provider they turned to.

We spoke with Randy Waldner, one of the producers at the head of the project, to learn more about how introducing tunnel ventilation has already improved their operation.

## Beginning Construction on Silver Lake's New Tunnel-Ventilated Barn

Construction began on Silver Lake's barn around July of 2017, but installation of the tunnel ventilation equipment from New Standard didn't begin until November. Everything relating to ventilation and controls was designed by Tim Kurbis and the New Standard team.

"Tim was here pretty much from the get-go," said Waldner. "We wanted everything tunnel-ventilated, but we had ideas about a bit higher ceiling and a certain length of barn, and Tim convinced us to go shorter for better ventilation. He gave us a lot of pointers and good advice, and we're very thankful for what he did."

As far as construction, all the labor was done by people at the colony.

"We did everything ourselves," said Waldner. "We make everything here—everything's concrete, the floor and the walls."

But when it came to ventilation, the colony appreciated Kurbis' extensive assistance.

"He spent as much time as he needed to with us," said Waldner. "He was here a lot. When he delivered the chimney

fans, he showed up at noon and stayed here for the rest of the afternoon, working like a mule—even harder than the rest of us. That's where it kind of impressed me. I can honestly say, I can't complain."

## What is Tunnel-Ventilation?

This system draws in air through large openings with misting nozzles on one end of the building, and pulls it to the other end of the building. The high velocity air movement created by these systems, cool the birds more efficiently than conventional systems. Systems can also be designed with high or low pressure misting systems staged down the length of a tunnel ventilated barn to increase evaporation rates in higher humidity areas. Rather than cooling pockets of the barn, the air that is drawn in is pushed through the whole building, creating a cooling wall that reaches all areas of the barn. Because the air is

moved in a uniform and constant way, tunnel ventilation allows you to control the building temperature more effectively without causing large spikes and drops. This allows you to reduce the amount of heat stress you put on the birds, which in turn lowers the chances of mortality. Not only will your mortality rate decrease, your bird performance will increase.

The greatest benefit for turkeys in a tunnel

ventilated barn is the cooling that is achieved through a "wind chill" effect. The air flowing over the heads and upper bodies of turkeys can significantly help remove excess heat and provide a sense of cooling for the birds.

## Positive Effects of Tunnel Ventilation in Silver Lake Barn

Silver Lake Colony chose tunnel-ventilation over the open-air curtain system that used to be commonplace.

For an operation that moves mass quantities of birds over a 20+ week period, proper ventilation is key.

"We start with 14,500 birds, but when everything's full we'll be at four times that amount," said Waldner.

Waldner recalls the conditions when their first flock was in the new barn last year. The temperatures reached 90 degrees on multiple days, and according to Waldner, when the birds have grown to a larger size, it's pretty difficult to keep them comfortable in that type of heat.

"Everyone that walked into that barn was impressed," he said. "I walked through that barn a few times during the day and told everybody it's the most comfortable place here."

When you're dealing with a basic curtain barn, temperature control is almost impossible. If it's hot outside, it will be hot inside the barn. However, with a tunnel barn, you get a lot more control over your environment.

"It absolutely leads to healthier birds," said Waldner. "If you've got good ventilation, you keep your barn dry, and you keep moving that air, that goes a long ways." 🐔



"the colony appreciated Kurbis' extensive assistance, "He spent as much time as we needed him," said Waldner.



Silver Creek Colony's new Barns During Construction Phase  
Photo Via New Standard Group



# Rising Concern of Critical Fusion Frequency + HOW LEDS WORK

There is a growing concern about the effects that artificial light has on animals, specifically poultry. Here at New Standard, we believe in bringing the issue to light, to help educate about this rising issue.

Animals have adapted to the stable light regime of the sun and moon. Having stable lighting allows the animal to adapt to the habitat they live within, find food, mate and avoid predators. The issue is that there is no consistent steady in artificial lighting. Research has discovered the flickering within artificial light, which can impact the animals significantly.

How?

Let's dig in.

## The Effects on Human: A Study

Firstly, let's discuss when this seems to be acute. Artificial lighting during the night time has shown the concern of the overall health of a being. They began this research reviewing the effects on human health. They noticed that there were behavioral and physical effects on human health, in developing countries and night time workers while under artificial light during evening and night-time. What they discovered is that the flicker from the output on these lights resulted in: headaches, sight issues, neurological and

physiological issues. Yet, when these symptoms happened were mixed. Some experienced it in their ability to notice the output flicker. Others, however, could not notice it, as the frequency of the flicker was faster than the human body could perceive. Thus, resulting in the neurological and physiological issues, and what they call Critical Fusion Frequency. With this information, they believed that some animals could also be affected and exhibit similar issues.

## Critical Fusion Frequency

What is Critical Fusion Frequency (CFF)?

An article from NCBI says it best, "the threshold at which an animal ceases to perceive a flickering light source as a series of flashes, but rather as a continuous stream of light."

In conducting studies, researchers have discovered that mammals (also some reptiles, fish, crustaceans) with the same CFF as humans, could exhibit the same issues as state. The measure is 60 Hz.

## How does this affect poultry?

The higher frequency of the output of light does not always register to humans. However, poultry, on the other hand, can detect it. Domestic poultry that live under artificial lights, can experience symptoms such as stress and poor health.

Researchers have noticed the physiological and physical changes to poultry that live within the artificial light versus wild birds.

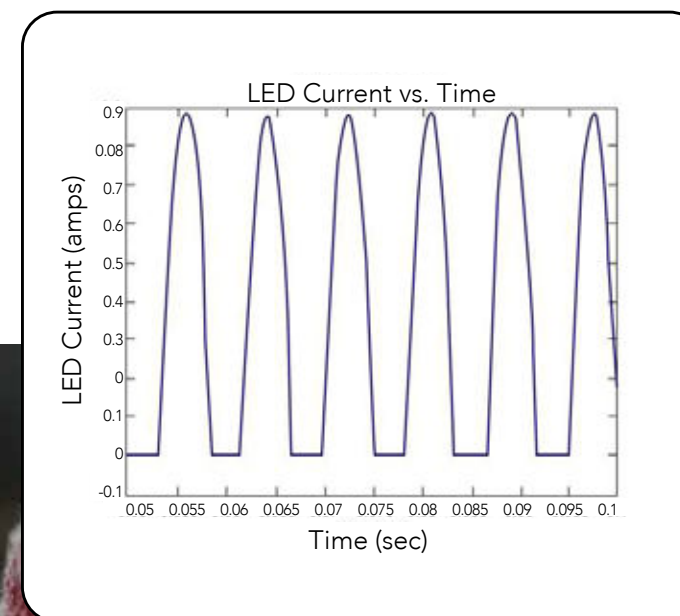
## What are LEDs?

Light-emitting diode (LED) is a semiconductor device. This device allows electrical current to pass through it and emit light.

A diode has two terminals that allow electricity to be conducted in one direction. This current helps to emit a bright light around a bulb.

### Issues in LEDs

Flickering can happen during rest points due to electrical current variations. Take a look at the chart below.



## What can we do moving forward?

The importance to draw from this is the understanding of cheap LED lights leading to potential decrease in health among animals.

## What are the solutions?

Currently, there are no solutions just yet, as the awareness is still rising. Many researchers have drawn conclusions that there is potential for detrimental effects in poultry, if there is still use of LED lighting during evening and night time. There is also increased studies of creating lights that reduce the flickering.

So we are curious, what are your thoughts on LED lighting?

Do you believe there is potential to disrupt physical and mental capabilities of animals by flickering artificial lighting? If you are curious to read further you can check out some of the links provided below for more information.

Read More at:  
<https://bit.ly/35zrMu6>



# Want to boost lactating sows' milk yield? Look to data

## Automated farrowing feeding systems provide critical insights to maximize milk yield

The number of piglets born per litter and the size of those piglets continue to rise.<sup>1</sup> As a result, today's sows face more pressure to produce milk and maintain body condition. How can producers gain control over milk yield and sow performance? Monitoring and stimulating the feed intake of individual lactating sows.

"Automated and responsive farrowing feeding systems collect individual sow feed intake data to ensure each sow's nutritional needs are met," says Cheryl Day, vice president of business development-North America at Nedap Livestock Management. "Strategically monitoring feed intake data trends enables

producers to identify problem sows faster – sows that aren't eating enough and those with potential underlying issues that could impact important factors such as milk yield."

Here are four ways monitoring individual feed intake of lactating sows can help meet growing milk production demands:

### 1. Identify sows with low feed intake faster

Feed intake averages don't identify sows that are below the curve. For example, average lactational feed intake typically ranges from 7 to 17 pounds per sow per day. However, even when herd feed intake averages appear normal, individual sows can be below the curve up to 60% of the time.<sup>2</sup> The consequences? A sow

weaning 10 piglets loses about 1 pound of body weight for each 2.2-pound deficit in daily feed intake.<sup>3</sup> And lost body condition means lost milk production, so early intervention is crucial.

Automated and responsive farrowing feeding systems address fluctuations in feed intake in two ways. First, these systems deliver snack-sized feed portions on a pre-set schedule, or when the sow triggers an electronic sensor in the feed bowl. Increased feeding frequency has proven to stimulate appetite and increase overall feed intake, which supports milk production.<sup>4</sup> Second, farrowing feeding systems gather eating activity data 24/7. That means producers can identify individual feed intake trends and adjust accordingly before body condition and milk production drop.

### 2. Find sows needing attention faster

The best way to know what piglets are consuming is to monitor what lactating sows are eating. Piglet malnutrition resulting from sow lactation failure can account for 6 to 17% of all pre-weaning mortality in commercial pork operations.<sup>5</sup> Metabolic disorders, endocrine imbalances and bacterial infections like metritis can cause lactation failure. But, sudden changes in eating behavior can be used to identify these conditions and proactively address them, reducing piglet mortality.

Farrowing feeding systems don't just collect data. They also send automated alerts when data indicates that a sow hasn't "asked" for feed by triggering the wireless activator for a predetermined period, signaling a reduction in feed intake. Barn managers don't have to monitor feeders for uneaten feed – allowing them to focus their time where it's needed most. Alerts also identify sows in need of attention faster to minimize challenges such as lost milk production.

### 3. Detect feed quality issues sooner

Weather-delayed spring plantings and variable crop maturity have resulted in an elevated risk for mycotoxins in feed. Mycotoxins and other feed quality issues can result in disease, lower feed intake, lost body condition and lower milk yields. Farrowing feeding system data can help identify a mycotoxin challenge.

Producers can use feed intake data to quickly determine if a reduction in feed intake is impacting one sow, a group of sows or the entire farrowing barn. These insights can help producers quickly identify the scope of feed quality issues and empower producers to make necessary management changes. Producers can also use data to gauge the impact of management changes in real-time.



Cheryl Day,  
Vice President  
of Business Development

### 4. Boost feed efficiency, reduce feed costs

Feed palatability is a key driver of feed intake. Automated farrowing feeding systems can reduce or eliminate unpalatable feed in the feeder and boost feed efficiency by giving sows access to fresh feed 24/7. Employees authorized by the farm manager can also adjust feed portions anytime, anywhere using a smartphone, tablet or computer. Adjustments can help maximize feed intake to support milk production. At the same time, farrowing feeding systems can reduce feed costs, which account for up to 70% of pork production costs.<sup>6</sup>

"Increasing milk yield requires us to focus on individual sows' feed intake – not merely herd averages," says Day. "Data can help producers pinpoint individual sow feed intake trends and intervene before potential problems with sow health or feed quality lead to lost body condition and lower milk yield."

Nedap Livestock Management is the global leader in farming automation using individual animal identification. Nedap's easy-to-use technology helps farmers manage millions of dairy cattle and pigs 24 hours a day, in more than 100 countries. Nedap empowers managers and personnel with dependable information to make operational and strategic decisions and has for more than 40 years. Nedap focuses on helping livestock farmers become the best farmers in the world. A publicly listed company, Nedap employs more than 700 people globally, across 11 locations and eight business units.

It's 4:23 a.m.

She's eaten twice since you left

She's eating on demand with automated Nedap Farrowing Feeding and wireless Activator

Stimulate feed intake. Minimize labor. Maximize control.

<sup>1</sup><https://www.wattagnet.com/articles/31938-how-sow-nutrition-impacts-gestation-milk-production>

<sup>2</sup><http://docsdrive.com/pdfs/medwelljournals/javaa/2007/76-86.pdf>

<sup>3</sup><http://docsdrive.com/pdfs/medwelljournals/javaa/2007/76-86.pdf>

<sup>4</sup><https://www.ncbi.nlm.nih.gov/pubmed/30246330>

<sup>5</sup><http://docsdrive.com/pdfs/medwelljournals/javaa/2007/76-86.pdf>

<sup>6</sup><https://www.feednavigator.com/Article/2019/08/12/Alltech-highlights-mycotoxin-risks-in-current-upcoming-feed-crops>





# You're Feeding Your Sows Too Fast & How to Fix It.

If you work in a sow barn, when is the last time you stopped to consider the feelings of the ladies you spend your days with?

This isn't simply an attempt to get your attention. How your sows feel has a direct impact on how they act and react; and how they feel, act and react to their environment will significantly impact their reproductive performance.

## Stress is Natural ≠ Stress is Good

When your ladies have their feelings ignored, stress is the most common manifestation. Stress is one of the leading causes of many of the reproductive issues you worked so hard to minimize.

Stress doesn't "just happen", it is a natural occurrence or response; but just because it is natural doesn't mean it is beneficial. Stress is a marker for you; an indication that something else is wrong. It can manifest itself in many ways but is usually seen in increased aggression and reduced reproductive health. Stress is never the problem! Whatever is causing the stress is!

Stay with me and we will get to the heart of a few key issues surrounding ESF feeding strategies and how these strategies can be used to mitigate feeding stress.

## Issues of Overeating

Controlling my own intake is also, rather challenging. We have all been told for years to eat slower and pause between helpings to reduce our overall intake.

*I knew the following concept, but admit to Googling the term to make my point.*

**Satiety [sə'tiədē] - feeling satisfied or full.**

There are a few triggers for satiety, but the most obvious is the fullness of your stomach itself, that sends signals to the brain that all is well. The beginning of digestion is also key, as it generates hormones that signal the brain in a positive way. When you eat too quickly, your stomach doesn't have time to send the correct signals before it is too late, and you'll likely overeat because you still feel hungry. Most can recognize this unsatisfied feeling and know if we wait a bit, the full feeling will

set in and we'll be fine. Sows unfortunately do not have this awareness and need a different approach.

## Satiety in Sows

This common principle of satiety should be understood and used with sows to their benefit. When we feed a sow slowly, and with enough water, her stomach starts to send the "full" signal to her brain before she has even finished eating. Eating slowly also means that digestion has begun before she is done consuming everything, which releases hormones that will alter her mood and help her feel full.

These same hormones are why we want to take a nap after Sunday dinner... and why she should want to take a nap after eating. If we feed her slow enough, she'll be willing to leave when asked, and will want to take a nap before ever thinking of checking out the station again. (Assuming a well-designed pen layout that separates the entrance and exit of the ESF feed station).

Lori Thomas, a PhD candidate from K-State, had this to say regarding the current research on sow aggression and feeding.

"As the industry has been transitioning to group sow housing and group gestation pens, ample research has been generated looking at sow aggression and stress factors. Research has indicated that adding fiber to gestating sow diets can increase gut fill and reduce aggression in pen gestation. This is a similar concept to satiety; allowing the sow to feel full and satisfied by increasing the amount of time available to consume her daily allowance of feed." Research shows, well-satisfied sows are less aggressive.

## Feed to Water Ratio

Water is a key element to improving the sow's interaction with the feed station. Water aids in consumption and increases the volume (not amount) of the food being eaten, thus adding to the full feeling; and most importantly it will help digestion begin. **It is an absolute must that water be added to dry feed in an electronic sow feeding system.**

The water to feed ratio should be checked and adjusted as needed and verified regularly to ensure water pressure or feed density has not altered the ratio.

So how do you find the perfect ratio of water to feed to make sure your sows are happy?

A good mixture of feed and water is easy to check. Simply collect a single dispensing of feed as it is metered out and a single dispensing of water. The mixture should remain watery for 20 - 30 seconds while being mixed in your hand. Feed, whether mash or pellets absorbs a lot of water but **if it still has some available water after 30 seconds of mixing, the ratio is good.** Below is a picture that shows an example of dry feed (left side) and feed with enough water added (right side).

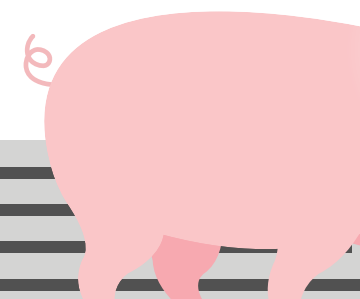


Lori Thomas had this to add, "Most gestation diets are fed in meal form. By adding water when dispensing feed, palatability increases as well as feed intake."

## Feeding Nursing Sows Well

Another feed related issue that producers face is getting a high enough quantity of fresh feed into nursing sows so that she can maintain body condition while producing large amounts of milk. In order to meet the unique needs of a nursing sow, Nedap Livestock Management created the Nedap Farrowing Feeder with an activator for sow engagement. This allows the sow to trigger the feed to dispense on her schedule so that she will eat whenever she feels the need.

It is a wireless Activator, giving producers more control to monitor and maximize feed intake during lactation. This new



way of feeding offers snack sized portions for the sows at regular intervals. This Activator is a great return on investment.

The Nedap wireless activator gives producers more control...

### Improving Performance

Since the sows nutrient needs are three times higher during lactation, the Nedap Farrowing Feeding with the Activator helps to increase feed intake. It does this by responding to the demand of the sow. It provides shorter farrow-to-feed intervals, and quicker return to service.

### Cutting Labor Costs

With the burden some producers face with labor, the Nedap Activator can reduce labor in many ways. One is the automatic alerts sent to the producer if there is no feeding activity detected. This allows barn managers to know which sows need attention without manual feeder checks. Second, with the set up of demand-driven feeding, it decreases time to clean out stale feed.

Nedap customers have saved up to \$28 per sow per year with reduced labor time. That means if you have 1000 sows, that is \$26,000 per year in labor savings.

### Increasing Feed Efficiency

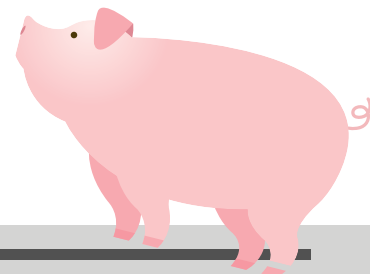
With the cost of feed being 65-70% of pork production costs, demand-driven portions can reduce waste and stale feed in the feeder. The Activator is located on the bottom of the feeder. This means, when there is feed in the feeder, it cannot be triggered. This helps producers adjust rations and delivery times to help fuel efficiency.

### Boosting Piglet Performance

The use of the Activator not only stimulates appetite and maximizes feed intake, but customers report a consistent and greater milk yielded in the sow. This has given results of a 50 % reduction in farrow pen deaths and 1.65 pounds of additional weight per piglet.

Cheryl Day, vice president of the business development- North America, Nedap Livestock Management, had this to say:

*"Nedap Farrowing Feeding with Activator has perfected the demand-driven feeding for lactating sows. Demand-driven feeding can help sows recover from farrowing faster, support BCS and promote reproductive health and rebreeding. Producers can also benefit from less feed waste and more efficient use of labor, maximizing ROI of Nedap Activator."*



## OTHER TECHNOLOGY ADVANCEMENTS



Pictured Dol 28 Sensor: Photo Credit: Dol Sensors

One of our vendors, DOL Sensors, recently introduced technology enabling producers to easily adjust sensor settings, directly from their smartphones. This sensor has a ton of different applications from poultry to swine, all at an affordable price point.

Before this, producers only had the ability to adjust two different parameters on their sensors, and usually with a screwdriver.

The new system, iDOL, allows producers to download the SmartAdjust app. Through the app, producers have direct access to the sensors' software, allowing them to adjust numerous settings.

# EXPERT TALK ON LIVESTOCK HOUSING AND ANIMAL HUSBANDRY LISTEN TODAY.



# How the Pork Industry Can Attract Younger Generations



If you've interacted with younger generations, you've likely observed that they communicate a bit differently.

For many of us in the industry, that can be frustrating, or even intimidating.

We look at younger generations and see people absorbed in technology and social media. It can seem like they have no interest in the way the industry operates.

But the truth is, we can learn a lot from young people in this industry. In order to do so, however, we need to show them what we have to offer.

## Technology

Essentially, the key to working with young producers and employees is to get on their level, systems-wise.

Younger generations—both producers and consumers—are serious about data. It's what they live and breathe and consume, every hour of every day via smartphones and smart technology.

If we resist the change that becomes available to us through technology, young producers will turn away.

That's why we're proud of the technology we use and develop here at New Standard. Systems like Nedap and Microfan are the perfect thing to showcase for younger generations to better understand the industry.

With a greater focus on transparency, openness about the technology used in our barns, and the rewarding nature of the career; producers should be able to attract young, tech-minded employees interested in the animal sciences.

## Transparency

Utilizing technology and fostering transparency go hand in hand.

And society, driven by the growing capabilities of technology, cares more than ever about how their food is being produced.

Think about it. People used to simply go to the grocery store, make their purchases, bring their food home and eat without a second thought. Now, as technology essentially shrinks our world, people have more ability than ever before to analyze where their food is coming from, and if it's being produced ethically, sustainability, and efficiently.

If they don't like what they're discovering, they'll simply go somewhere else. The world is literally at their fingertips.

In fact, over the last ten years, the EU has passed legislation mandating "food traceability" so that consumers are able to identify the origin and authenticity of products. Even in the U.S., the farm-to-fork mentality has begun to take hold.

The technology we're developing for hog producers allows us to foster the transparency younger generations are asking for.

## Young Producers Are Out There

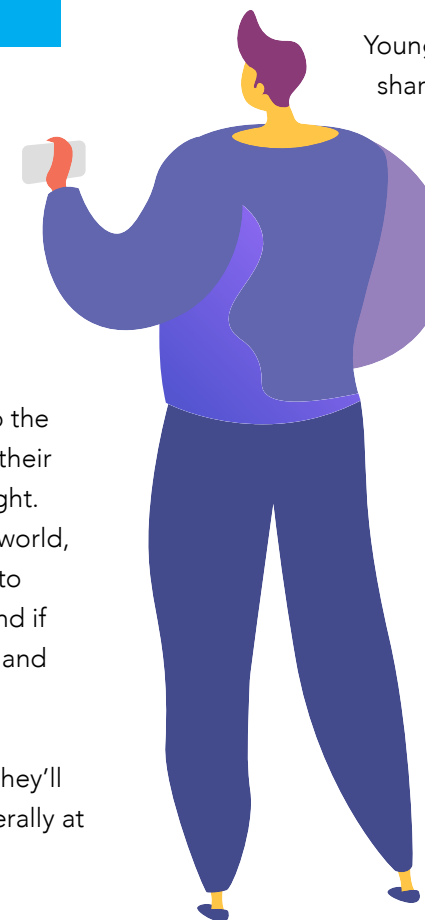
It's true. The problem we're facing today isn't a lack of young people interested in the industry. It's simply a lack of understanding between generations.

In fact, the younger generations are active and eager to get involved in production. They're using social media to connect with one another and share their experiences of working on farms and production facilities.

Take the hashtag, #realpigfarming, for instance. It has over 14.4k posts.

Young producers care about storytelling and sharing experiences. It's what social media is all about. They don't simply want to put in their day's work, go home and forget about it. They're passionate about the work they do, and they want to share it, both with their fellow producers and their customers.

Understanding social media can be powerful for producers, young and old. Platforms like Facebook and Instagram are where our consumers live. If producers would get online and share their stories with the help of younger generations, they could tap into a whole new way of reaching their customers. 🐷



Sorting scales are  
**not** what they  
used to be

# A.I. In Hog Finisher Barn It Does Make Sense

Sorting scales certainly have a mixed past. Love them or hate them, you should know with the application of recent technological advances, sorting scales should be something on your radar again.

Around 20-25 years ago, sorting scales hit the market. Lots of suppliers, lots of hype. The problem was, they didn't help all that much. Most ended up on the scrap pile outside the barn.

Farmers saw the benefits of the scales as mixed or voided based on: difficulties in training animals, lack of data (as only sorting by weight was happening), and poor unreliable electronics. Honestly, not enough upside to make it a worthwhile investment.

The alternative to sorting scales wasn't much better. The typical one size fits all approach, was dated and lacking. No route to get real-time information on pig weight and health. Accurate planning for delivery was stressful, leading to penalties at the packing plant. When the animals were ready, manual sorting and extra labor added to the expenses.

## Today is another story.

The past mistakes and issues have not gone unnoticed. We have entered a new generation with incredible AI-like technological advances, that have been implemented by Nedap in this third generation of sorting scales. Today, we believe that we can make a compelling argument to why owning a sorting scale in your barn, is the right solution, and why the use of the term "AI" needs to change in producer's minds.

## Let's get down to the benefits.

### Efficient use of square footage

Simply put, you get more animals in the same space.

Firstly, there is no wasted space or loss of feeder capacity during shipping. Unlike most designs, Nedap does not use the food courts for holding animals during shipping. Plus, a Nedap barn layout allows the center walkway to be removed, freeing up wasted space. This helps to create efficiency in the barn layout.

Second, is the ability to double-stock animals at a younger age, which in a standard 40x220 ft. barn can allow you to finish as many as 200 more pigs per year.

How?

The scales can have up to 1,200 animals during the training stages, and they can be separated into different pens later. This allows animals the proper square footage at all stages of growth while having more animals in the barn.

Third, is the efficient and smart training, using a combination of penning layout and software. Nedap technology is simple, allowing barn staff easier understanding of what needs to be done and when.

### Feed Intake

What if you could feed your pigs based on their actual current weight and growth trends?

Adjustments to feed type can be made on the fly with real-time monitoring capabilities. No more wasted feed, and no more guessing when it's time to change out feed types. The right diet at the right time.

### Animal Health

What if you could spot trend reduction of feed intake before illness takes hold?

This third generation of sorters can track the number of feeder visits, and send reports if there are sudden drops. This early warning to potential illness can help protect your bottom line.

### Supply Chain

What if you could stop those over and underweight penalties at the packing house?

Current scales can now help you forecast when animals are ready to ship. In some cases, up to four weeks out. With cloud-based data, you can also share this information with your processor so they know when you're

coming, and what they can expect.

### Labor Savings

"I love sorting pigs for market" said no one ever. All our scales incorporate three sorting doors. When animals are getting close, the machine sorts them into a market-ready pen. No more manual sorting.

### Path to these benefits

We are not all building new finishing barns every year. So, how does this work with current buildings?

We have remodeled plans for the most common building sizes. The most significant part of a remodel, is removing the extra gating. This can certainly be used elsewhere. Again, our efficient layouts eliminate the center aisle, allowing more room for animals.

### Are you planning a new construction?

Barns planned with sorting scales typically cost less.

Why?

Less penning and gating, therefore less steel. While the scale itself has an up front cost to it, money spent on a scale can be treated as an investment that has a clear ROI, which cannot be said for regular penning.

### It helps your bottom line.

We all want a healthy bottom-line. Nedap PorkTuner sorting scales have incorporated the newest technology to give you trackable, predictable results, time after time. With the ability to: reduce feed waste, avoid packing house penalties, and add more animals in the same square footage; this generation of sorting scales makes sense. 🐷

# Holy Smokes HONEY AND BROWN SUGAR PULLED PORK

## INSTRUCTIONS

Coat all sides of the pork butt with your favorite dry rub and let it sit for 20min.

Setup smoker or oven for 275°F. Once the smoker/ oven is setup and ready to go, place the pork butt directly on the grate and let it smoke for 3 hours. Use hickory, maple or oak.

After 3 hours, spritz the pork every 30minutes with apple juice. After 5 hours of smoke or if pork reaches 160°F internal, place it in a pan and wrap in foil to finish. Before wrapping add the Honey Brown Sugar Butter Bath.

### Honey & Brown Sugar Butter Bath

- ▶ 1 stick of salted butter
- ▶ 1/2lb of dark brown sugar
- ▶ 1/2 cup of apple juice
- ▶ 1/4 Honey
- ▶ 3 tablespoons dry rub

Wrap tight, and let the pork butt cook until it reaches 205°F. At this point we recommend placing the wrapped pork butt in a dry cooler and let it sit for 90 minutes.

After 90 minutes shred, mix in all the juices from the pan.

# W \_ R D S E \_ R C H

## OTHER WORDS FOR PIG

S A P N O T N N G Y H I P P P A F B I N  
 S Z T O D S Q A Y N O N S P N D Q T O T  
 V E L D R P W W H A I N K E J A I P C D  
 G I U E O K V K N R Y U K C G A I O P Q  
 Y P G L R V E C J L W L R A G F I U C E  
 J J A Q D I D R Y E B A L R Q T D A T D  
 C N E L Z E H H G G O E E D B D I J O M  
 D P Y T B I L S F B G U X N T L Y J Y O  
 B I W C K Q T S K R Z I Y A D E N I W S  
 Z G X Z R Q N Z E R N R P L U Y Q B X Y  
 I L F B X I Q T S J O B J C U F E D N U  
 U E P M Y J S B S M F Y M Z O R Y S E O  
 S T L B Z E U U M L R H C M K Z C U K O  
 P O O N H K U B B W K R H S G E P V U M  
 K J W C L Z S M N R Z V H D E Z O X F C  
 X H O G G K Z A P G R I H A N C Q O Z N  
 H W M C S H I O Q B R U X M B O K K A J  
 A K Z D C D Y V K E G R O T E R N Q A W  
 Z R R Y Z M E U S P O T T E D U R S V H  
 G F X I E R I H S P M A H J F D A B I F

BERKSHIRE  
 BOAR  
 CHESTER  
 DUROC  
 HAMPSHIRE

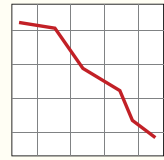
HOG  
 LANDRACE  
 PIGGY  
 PIGLET  
 POLAND

PORKER  
 SOW  
 SPOTTED  
 SWINE  
 YORKSHIRE



# 3 Things Barn Owners do during Difficult Times

Life as a producer doesn't come without its fair share of hardships. If you've been in the industry long enough, it's almost guaranteed that you've experienced difficult times in one form or another. We spoke to Chet Mogler (Pig Hill, Alvord, IA) about the best tactics for handling difficult circumstances as a barn owner. He details what to do and what not to do to keep your business afloat and most importantly, to care for your animals.



## Facing Economic Downturns as a Barn Owner

When finances are tight, efficiency is key.

If you're facing economic downturn as a barn owner, put a pause on growth, and simply focus on maintenance. Watch your spending, make sure the money you are spending counts, and find any way you can, to cut waste.

It's also important to remember that analyzing your spending is best practice at all times, not only when you're in periods of financial downturn. If you're always keeping a close eye on your budget and spending patterns, tightening up during downturns won't be as dramatic. This is where it becomes vital to have a good accounting process.

### **WHAT NOT TO DO**

"Avoid knee-jerk reactions to the flavor of the day," says Mogler. You must have a long-term outlook when it comes to economic downturn. The U.S. pork industry is one of the most efficient pork production industries in the world. We'll be able to compete in the long term.

"It may be tight now, but our future is bright," says Mogler.



## Managing Disease Both Locally and Globally

In this industry, health is always the main challenge.

To stay ahead of disease, it's vital to have a Plan A, B, and C, and maintain good relationships with qualified veterinarians, who also have good relationships with diagnostic laboratories.

"Biosecurity is always the number one priority," says Mogler. "You have to look back at what has happened in the past, and see what you can do to get better in the future."

Time of year is also a challenge. When crops come out, manure is being hauled, and that opens potential for biosecurity issues like improper ventilation.

When it comes to more global issues, like the spread of African Swine Fever, it's important to have different strategies. Be proactive in communication with national and industry representatives like the National Pork Board and Pork Checkoff. Encourage your industry advocates to be in communication with the federal government with concerns.

When we're hearing about countries we might import products from, proactivity is key. You have to look at all the different ways that those diseases could be getting in, and collaborate as an industry to make sure nothing slips through the cracks. Not everyone has the resources, but be willing to help wherever you can, no matter how big or small your operation.

### **WHAT NOT TO DO**

Do not overreact or throw up your hands in frustration.

"Providing quality animal care is not something you can compromise on," says Mogler. "You simply have to do it. African Swine Fever is sweeping China and Eastern Europe, but panicking isn't productive for anyone."



## Maintaining Culture and Quality in Spite of Understaffing

"We're never willing to compromise our core values, no matter what the staffing situation is," says Mogler. It's important to protect everybody, and maintain a good culture where people enjoy coming to work. Even if you're facing understaffing, there's no excuse for letting things slip. For example, if an employee is guilty of wrongdoing you still have to terminate them, no matter the staffing situation. Maintain culture before maintaining staff.

Eventually, that standard becomes a selling point for attracting good employees.

"People respect us because of our strong leadership in that area," says Mogler. "We encourage an atmosphere of teamwork, trust, attitude and results - those are our four core values."

But how do you handle the workload when you can't find quality staff? Mogler suggests bringing on part-time labor where possible, offering more hours to those who want them, and ensure that the essentials are being taken care of before anything else.

### **WHAT NOT TO DO**

Never let your culture slip. Do not lower your standards because people respect standards. It makes them feel good about what they do. 🐾



# BITCOIN TO BACON

Bitcoin, cryptocurrency, blockchain—it all sounds like made up tech lingo, right?

Well believe it or not, the technology fueling the cryptocurrency phenomenon is headed to a hog barn near you. As producers, it's time to get familiar with blockchain and how it's going to impact your operation.

## what exactly is blockchain?

Blockchain technology originated with cryptocurrency; a technology that allows digital information to be distributed, but never copied.

In its purest form, blockchain is a time-stamped series of permanent records of data, managed by a cluster of computers not owned by any single entity. Each block of data is secured and chained to another using other cryptographic principles. (Source: Blockchain and Finance: Two Peas in a Pod - Blockgeeks. <https://blockgeeks.com/guides/blockchain-and-finance/> )

In other words, blockchain is a digital ledger. The information cannot be altered, and it is all digitally linked. Utilizing this technology in packhouses, for example, would allow the packer to see when pigs will be ready for delivery to the plant. Additionally, vets could see health trends of specific animals right from their desk.

## what makes it so special?

A blockchain network has no central authority—it's the

definition of a democratized system. Since it's a shared and immutable ledger, the information can be opened for anyone and everyone to see while still remaining secure.

As such, anything on the blockchain is by nature transparent, and everyone involved is accountable for their actions. (source: <https://blockgeeks.com>)

## what does this have to do with pigs?

Blockchain technology is finding its way into numerous fields. From helping the world's impoverished, to preventing voter fraud; the technology has endless applications.

In the case of pork production, blockchain makes it possible to create a whole new level of transparency. This form of data sharing will not only make producers more efficient and productive, but it will also allow consumers to get the details on the food they are purchasing.

## where did it all begin?

Food safety has been a big driver in the push to implement blockchain.

In 2017, Wal-Mart and IBM teamed up to implement blockchain in the tracking of fresh produce like, kale, romaine, and lettuce. Blockchain allowed Wal-Mart to track the product's lifespan, from the planting of the seed, to the fertilizers or chemicals applied when it was harvested, to its shipping and delivery.

Every step of the way, data is being collected and shared. By gathering this information in one place, Wal-Mart can ensure freshness, safety, and spot issues before products even hit the shelves. Wal-Mart has since made it a requirement for leafy green producers to implement these reporting systems by late 2019.

The other primary driver of blockchain is the consumer's demand for information.

Pork producers in China are adopting this technology to meet the demands of their consumers. The level of transparency demanded by importers requires data to be shared.

Consumers want to know where their food is coming from, along with details on how the animals are: raised, treated, what antibiotics were used, and more. On a smaller scale, Europe is introducing labels that allow customers to scan a QR code and view a detailed timeline of the pigs' lives.

The technology is here. It's only a matter of time before we see a more extensive demand and rollout of this type of data.

## is blockchain secure?

Security is always a primary concern when it comes to data. Currently, blockchain is very secure and unable to be tampered with. Since the data cannot be altered after its entry, it will remain accurate.

As far as who can see the information, you're currently in charge of that decision. From employees to vets and genetics companies, you decide how your information is shared.

## why should I care?

Ultimately, blockchain will significantly improve your productivity and efficiency. If either of those things are important to you, take note. Let's look at some examples of how sharing data can improve your bottom line.

## genetics

When data is shared with genetics companies, they are able to track the best pigs and alter their breeding programs to create the most productive animal possible. With the amount of data being harvested, the idea of super-pigs is not far off.

## veterinarians

The ability to monitor animals and farms from afar will save a lot of time and energy. Being able to see trends in sow' watering and feeding habits, or even their temperature, can indicate warning signs of illness before the pig even knows she's getting sick. Additionally, the lessened amount of travel time and biosecurity risk may be reason enough to make these updates.

## processors

The possibility of seeing what animals are coming and going is a huge benefit, not only for processes but also producers. They would avoid fees for over and underweight animals, and there would also be transportation benefits: from seeing where trucks have been, to increasing efficiency in logistics, and finally, monitoring biosecurity and health issues.

## consumers

Information is powerful. End users will see a new level of transparency, not only in the quality of the meat they are purchasing but also their assurance that the meat is safe. Producers who are already experimenting with sharing this data on labeling are seeing increases in sales.

## how can I prepare for these coming changes?

You don't have to build a new barn to start getting the benefits of the blockchain. It really comes down to systems and equipment updates.

Data can be collected from farrowing feeders to fine-tune milk production, and from the finishing barns to fine-tune weights with diet control. Every barn is different, and all producers have their own needs.

Our biggest suggestion is simply to get started. Don't get left behind.

Change is coming faster than you might think. Producers can still get ahead of the curve, and there's no doubt that adopting this technology today will positively affect your bottom line.



New Standard has three regional offices to bring their expertise in sow and poultry housing directly to you.

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