

# THE MODERN PRODUCER

SUMMER 2022

## IN THIS ISSUE:

Greenwald Colony Highlight

Robotic Milking At Deerfield

Safety Culture On The Farm

Regenerative Agriculture

Tech Tips

Kid Coloring Contest

& More



## FROM NEW STANDARD GROUP

Good Day, and welcome to the 8th edition of The Modern Producer. This is our biggest issue yet, and we have to say, it just keeps getting better!

We are excited to see the publication grow and expand. With our new partnership under the Agrihub umbrella, we've expanded our knowledge base to bring you even more quality content. Dairy solutions, nutrient handling, grain and crop topics, and much more!

Our access to industry experts has expanded exponentially, and we look forward to introducing you to these folks along the way!

We've also branched out in this issue with some topics for running the farm business, IT tips, financial planning and more new topics.

These articles don't end here; make sure you've subscribed to the New Standard Blog and the Modern Producer Podcast so you don't miss a thing. (QR links below)

We look forward to your comments and feedback as we strive to bring you relevant and timely information, covering every aspect and corner of the farm.

Sincerely,  
Tim, Kevin, and Kees



### **New Standard US**

Tim Kurbis  
605-496-9696  
info@newstandardus.com



### **New Standard Ag**

Kevin Kurbis  
204-485-4600  
kevin@newstandardag.com

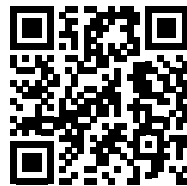


### **New Standard West**

Kees (Kase) van Ittersum  
403-650-5051  
kase@newstandardwest.com



SCAN ME  
**New Standard Blog**  
info.newstandard-group.com/blog



SCAN ME  
**The Modern Producer**  
themodernproducer.net

# THE MODERN PRODUCER

**Produced and Published By**  
New Standard Group & AGRIHUB Inc.

#### **Editors**

Tim Kurbis  
Kevin Kurbis  
Kees van Ittersum

#### **Design & Layout**

5j Marketing + Design LLC

#### **Special Thanks To Contributors**

Greenwald Colony  
Deerfield Colony  
Britt Roman & Munters  
Dairy Power  
ELO CPAs & Advisors  
AGRIHUB Team - Ashely Graye, Doug Redekop,  
Neil Armer, Leo Pauls, Avery Maunders

#### **Subscribe or Contribute**

[TheModernProducer.net](http://TheModernProducer.net)

#### **Advertising Inquiries**

[TheModernProducer.net/advertise](http://TheModernProducer.net/advertise)

#### **Cover Photo**

Greenwald Colony From Jason Hofer



The Modern Producer  
Copyright 2022 All Rights Reserved.

## SUMMER 2022 TABLE OF CONTENTS

4

Safety Culture on the Farm

6

Myth of the Meltdown

10

What is Regenerative Agriculture?

12

Manure Application - What You Need To Know

16

Tunnel Ventilation Hog Vs Turkey

18

Smoked Pork Belly

20

Wireless Tech in Barn

22

10 Simple Tech Tips

24

Word Find

25

Kid's Coloring Contest

26

Robotic Milking at Deerfield Colony

30

Sustainability Benefits of Variable Speed Cross Ventilation

32

AGRIHUB Overview

34

Greenwald Colony

40

Farm Accounting, R&D and Estate Planning

44

Smart Manure Aeration Systems



# SAFETY CULTURE ON THE FARM

By Neil Armer

Farmers are a different breed of worker—they do what has to be done, when it needs to be done. There is no punching the time clock and going off duty when the cows have to be milked and animals need to be fed. I think this is a commendable work ethic that we need more of in the world today, but it can also come at heavy cost. Over the past few years, I've read way too many news articles about fatalities and serious incidents involving farmers. From grain entrapment to being overcome by toxic gases in manure pits, all these share a common thread; none of them were "freak accidents" and all were easily preventable.

So, what is our motivation for working safely? Because we have rules we have to follow? While that may work when it's convenient, is it going to stop you when push-comes-to-shove and you think "it has to get done"? Probably not, and that's where a positive safety culture comes into play. I think a positive safety culture can best be described as having beliefs and values that influence proactive decisions to work safely. A good starting point to build this on the farm can be:



### KNOW YOUR HAZARDS

"What they don't know won't hurt 'em" we've all heard it and have probably all said it at one time or another. Well, the truth is it can hurt you—and on the farm, it might kill you! Learn and understand the hazards on your farm, ask questions and find answers.



### LEAD BY EXAMPLE

This is something I can't stress enough, actions speak louder than words! What might seem like a quick low risk shortcut can easily undo any progress to the culture you are trying to build. Someone is always watching and if you expect them to make safe choices you have to lead by example.



### COMMUNICATION IS KEY

Share your knowledge with others who have less experience and help them not only stay safe but learn what safety really means. Have regular safety meetings and keep constant open dialogue, talk to your workers/family about the hazards they may face around the farm and what preventative measures should be used to protect themselves.



### KNOW YOUR MOTIVATION

This is probably the biggest influencer to having a positive safety culture. I can't tell you what your motivation is, or what it should be. That is something you need find out for yourself. What I can tell you is, at the end of the day, someone wants you to come back home alive and uninjured.

Another common thread in all those articles I read was that the incident details were a small part of the articles. Most of the article content was about the lives the victims had lived and the devastated families and friends they left behind. As we contemplate our motivation, those we love should help us choose a safe course.

Ultimately safety is a choice that you make, not something that's legislated for you to follow. I hope you will make a conscious decision to choose safety as a personal value, one you share with others to make this world a better, safer place.



### MEET NEIL

Neil has fifteen years of Health & Safety experience spending the last five years working in agriculture. Neil attended Utah State University majoring in Political Science and has a certificate in Environmental Health & Safety Management. He has been the Health & Safety Manager for the AgriHub Inc since June of 2020. When not at work Neil spends most of his time hunting and fishing with his nieces and nephews on their farm and in the surrounding mountains of Northern Utah.



# MYTH OF THE MELTDOWN

By Jake Peterson

If you've been in animal husbandry for any length of time, you've maybe heard a story from someone who heard it from a friend whose uncle's brother-in-law... you get the idea of the fabled Barn Meltdown? But are these stories urban legend, a thing of the past or something to address? The topic recently came up in the office, and we decided to break it down and add our two cents to the worst-case scenario discussion.



## Kaboom Kaboom!

It goes something like this. It was a dark and stormy night, and the barn was just struck by lightning, taking out all the electronics. A complete meltdown, feed systems are down, ventilation has stalled, lights are out. Animals are in danger and losses are mounting quickly.

We may have painted it a bit dark, but hey, at this point the lights are out so you get the idea. Is this kind of catastrophic failure still possible? Are your barn or animals at risk? Let's break it down, starting with the most significant problems and how you can protect yourself.

## Loss of Power

There are numerous ways it can happen, a blown transformer, a power company issue, ice storms, a transfer switch failure or even a careless backhoe. Whatever the cause, losing power to your barn will affect pretty much everything—ventilation to controls to water and feed delivery.

You cannot guarantee it will never happen so the key to minimizing the effects of the loss of power starts with proper preparation. Here are a few key things that can prevent losses or buy the time you need to correct an issue.

Having on-site backup power (a generator) is a must and is usually required for insurance anyway. This seems logical enough and to be honest, most guys have this checked off the list already. What is most important then is to ensure that all components related to backup power are functioning correctly and are tested regularly.

Item number two is related to backup power as well. What do you do if your automatic transfer switch fails at the most critical of times? Without a question, there must be an alarm system in place that will notify you immediately if there is a power loss problem because in the case of transfer failure, you'll need to get someone onsite as soon as possible. Most power companies (or electricians) can provide equipment and training to allow manual transfer of power if needed, so be sure those protocols are in place.

If possible, incorporating chimney ventilation will also extend the amount of time you can be without power as the natural updraft on a chimney will provide some non-powered air flow and reduce the chances of suffocation.

As far as feed concerns during a power loss, most grower barns have opted for larger in-barn feed capacity (taller feeders) to allow more time to correct issues. With sows, this can be a bit trickier, so it is important to know (or have support from someone who knows) how to adjust settings temporarily to feed faster when power is restored.



## Loss of Electronics

In the case of an electrical surge, such as a lightning strike, there is a good chance you may lose some equipment, and the truth is, electronics don't last forever, lightning strike or not.

The best preventative way to reduce surge damage and increase the durability of electronics is to place a high-quality surge protection device in between your main power and the electronics. We recommend and typically install a commercial grade UPS (Uninterruptible Power Supply) in front of most electronics. The combination of the surge protection built into the UPS as well as the ability to eliminate brown-outs and flickers in the power supply will extend the life of all electronics even if a surge never happens.

If a surge does happen, the extent of the problems will typically be governed by the extent of the surge protection you have installed. With the right equipment protecting critical components, it is very easy to replace or temporarily bypass the installed protection devices and be back up and running.

Another layer of preparedness is to ensure that there are manual operation switches installed for equipment that

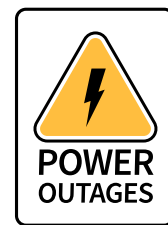
must run. This will allow anyone in the barn to turn on critical components if necessary.

## Warnings & Alarms

As mentioned above, we build barns with automatic and battery backup systems wherever critical system components exist. These are there to keep things running long enough to let you know there is a problem, to protect the important stuff from damage and to extend the life of your electronics in general.

Controllers like the Fusion allow for custom programming and easy-to-design notifications to let you know about anything you like. Text messages for issues that require attention are easy to configure and understand. Learning to trust your controls and what they can tell you can go a long way to preventing major issues from ever occurring.

There is no replacement though for a good alarm system. No matter what you have for controllers, there is always a scenario one can imagine where things do shut down. In that case, an alarm system that has its own built-in protection and battery backup so that calls can be made is essential; it is never advisable to rely solely on a single platform for notification of any problems.



## So, Should I Worry About a Meltdown?

In short, no, worry is unwarranted and rather non-productive. The best thing to do is understand what can possibly happen and what can be done for prevention and mitigation when an event occurs. Can things happen? Certainly, but preparation is what determines what happens next. Lightning and catastrophic events are a fact of life, but with some proper planning, putting alarms and alerts in place, and having a few essential backup components, you can rest easy knowing if or when disaster comes knocking, you'll be ready.

If you're wondering if your barn is ready for the worst, we'd be happy to chat about your set up, your needs and help you prepare. Contact your local New Standard location.





**NEW STANDARD**  
**GROUP**

TECHNOLOGY • TALENT • TRUST

TECHNOLOGY  
TALENT  
TRUST

[NewStandard-Group.com](http://NewStandard-Group.com)

# WHAT IS REGENERATIVE AGRICULTURE?

By Ashley Graye

By definition, the two separate terms are as follows:

**Regenerative** – adjective, relating to something growing or being grown again.

**Agriculture** – noun, the practice or work of farming.

Wait - isn't that somewhat repetitive? When we take a step back and look at Agriculture, the premise is to repeat and build on the successes of the past year. For example, dairy farming. Cows are bred to produce offspring but as a result they produce milk to collect. Those same farmers plant crops to produce feed for their dairy cows. This is a cycle that is repeated year after year.

Simply put, Agriculture itself is already a regenerative practice. Can it be improved upon? Absolutely. Should it be improved upon? Most definitely.

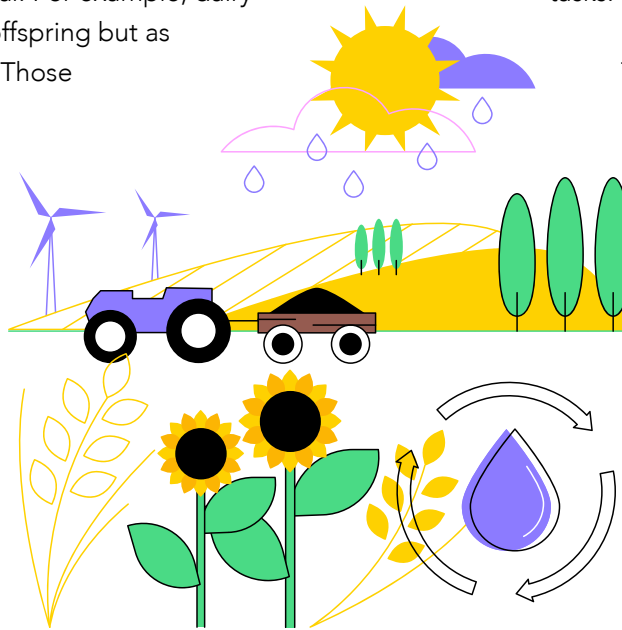
The world's population is growing at alarming rates and land is being reallocated for urban development. Producers are feeling the pressure to seek out options for increasing efficiency and output for their operations. Producers within Agriculture work hard to be good stewards of the land, with an understanding that what they put in will directly impact what they receive. Practices such as no-till or reduced till farming, cover crops, tailwater collection systems are already in place, but the need to be even more efficient is prevalent.

## SO, WHAT ARE 'REGENERATIVE AGRICULTURE' SOLUTIONS?

Creative solutions have entered the marketplace in the past 10 years, seemingly taking a page out of gardener's books. Vertical farming systems are providing an answer to \$100,000/acre farmland – condensing upwards of 50 acres into a 5,000sq ft tower, turning over a new harvest of fodder

every week while using just 5% of the amount of water needed in a field.

Electric vehicles are becoming increasingly popular on the road – and in the barn. Automated feeding systems are part of the green network, scraping manure, collecting deadstock, bedding stalls/barns, and mixing, delivering, and pushing feed. These electric powered machines negate the need for diesel powered tractors being used to do such tasks.



The idea of recycling water is far from new as towns, cities and municipalities have been employing this idea (especially in desert climates) for decades. Capturing water runoff from fields, buildings, or cooling processes negates the need to pull from a well for wash water or livestock watering, ensuring water availability regardless of drought conditions.

Repurposing by-product of production, such as methane from manure, is also considered an aspect of regenerative agriculture. Not only does it remedy an odor control issue some producers face when located near major centers, the biogas that contains methane can be collected to produce heat, electricity or hot water. While 'small-scale' producers can use this produced energy to supply their needs, large-scale farms are able to sell the energy back to the grid.

Further, to repurposing methane, aerating manure while in the pit under barn lends a hand to reducing diesel needed to agitate a pit, creates a safer environment for both livestock and employees, as well as increases the nutrient values for application onto crops. Not only does this reduce the need to purchase fertilizer, it reduces the need to run equipment to apply said fertilizer.

Of course, we would be remiss to leave out alternate energy sources such as solar power, electric vehicles (farm trucks, skid steers, tractors and more) as a potential addition to the solutions line-up.

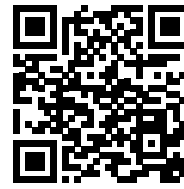
When we take a step back and look at the big picture, Regenerative Agriculture is essentially implementing technology, equipment, and methods to improve agri-food production systems, while reducing environmental or social impact, or in some cases, providing a net-positive impact.

Interested in learning more? Stay tuned for further articles, or visit [pennerfarmsservice.com/regenag](http://pennerfarmsservice.com/regenag)

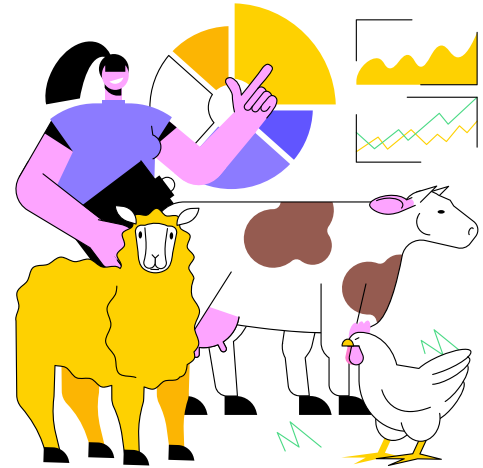


## MEET ASHLEY

Ashley Graye is the Senior Marketing Coordinator for the AgriHub group of companies. With 14 years of experience in Marketing, the last four years have been spent in agriculture. Growing up in Winnipeg, there was little to no exposure to agriculture so it's very much a newfound passion point. Ashley resides on a Dairy Farm with her husband of two years, and nine year old son. When she's not promoting agriculture, she spends her time gardening, knitting and travelling.



LEARN MORE!  
SCAN ME



### References:

<https://www.frontiersin.org/articles/10.3389/fsufs.2020.577723/full#B3>

<https://www.sciencedirect.com/science/article/pii/S2211912420300584>

<http://conservewaterforfood.org/water-reuse-in-agriculture>

WWW.AGRISYS.DK



AUTOPIG



DATA 24/7  
ON WEIGHT  
AND BEHAVIOR  
PATTERNS

AGRISYS  
PROTEIN AUTOMATION

CONTACT  
NEW STANDARD  
FOR PRICING  
& DETAILS

CORRECT DOSING  
OF FEED



LESS USE OF  
ANTIBIOTICS



TRACEABILITY



MORE ANIMAL  
WELFARE



BETTER  
ECONOMY



IMPROVE  
SUSTAINABILITY





# MANURE APPLICATION

*What You Need To Know*

By Doug Redekop & Jake Peterson



Today's topic is manure management.

Manure management isn't a common topic here at New Standard; however, we are now in partnership with Penner Farm Service, so this is one more thing we can offer.

We met with Penner Farms Doug Redekop to gain some valuable insight and knowledge on managing one of your farm's most valuable assets, shit.

Doug has been involved in the nutrient management business for thirty years and is a wealth of knowledge on this topic. Doug is based out of the Penner Manitoba office, and along with

selling manure equipment, he also has experience using the equipment he sells thru their Cooperative, Precision Pumping Ltd.

Now let's get down to the business of number two.

## THE SETUP

*Here is a typical manure application situation he runs into. Hog farmer Fred has been applying his nutrients with the help of a custom pumping company for the past few years, and he feels the cost is getting out of hand. As a result, Fred is looking to bring these services in-house. Where does Fred start? This is the scenario we discussed with Doug.*

# THE QUESTIONS

Where do we begin?

What type of livestock manure are we dealing with?

Today, many farms are species-specific, while some may also have dairy and other livestock. Please remember that hog and dairy manure are different in how they separate and have different parameters for handling them. Also, remember that the added element of dairy bedding, and what type of bedding, can further complicate the matter. The bottom line is not all shit is the same, and the more we know about your operation going in, the fewer surprises down the road.

What storage type, size, and design do you have?

Do you have above-ground, earthen, single, or multiple cells? If earthen, is it clay or poly-lined? These details are important to establish. Your answer to these questions will impact your future decisions.

Most storage is designed for either 240 or 400 days of storage. 240-day storages appear to be a great place to save costs during construction; however, this can create some unique challenges. For example, with 240-day storage, you'll need to apply at least twice per year. The 400-day option

allows for a single application each year.

Multi-Cell storage may allow you to non-mechanically separate valuable organic nitrogen and phosphorus.

How many gallons to you apply annually?

When thinking about how many gallons you need to apply annually, there are many factors to consider. The first is time; each gallon pumped takes time. How much time do you want to spend doing this job? Another thing to consider is the weather. Typically on open storage, evaporation cancels out precipitation. In wet years volume grows, and in drought years, the volume shrinks. Combine drought with a reduction in yields, and suddenly the number of acres required to apply may change dramatically.

When do you need to apply?

Spring? Most farms have worked hard to prepare a seedbed for planting and don't want it ruined by applying manure in spring.

Summer? Not an option for everyone unless you have alfalfa or grasses to apply to? Is in crop an undiscovered opportunity?

Fall? Post-harvest is certainly the most popular option.

Winter? The potential for runoff and losses of valuable nutrients is high. Environment/Conservation in some areas will not allow it!



## MEET DOUG

Doug has worked for Penner Farm Services since 2006, and specializes in manure handling equipment. Graduating with a Diploma in Agriculture from the University of Manitoba, he spent 14 years in the hog production industry and has considerable experience in feed production, barn construction, and market development. He also brings 25 years of manure application experience to Penner Farm Services. In his spare time, Doug enjoys traveling with his wife and son.

## How far are the fields that need an application?

It is critical to consider the application distance when designing a pumping system. Distance takes hose, pumps, reels, and time. This takes \$.

Now is an opportune time to bring in an experienced agronomist who understands manure's value to help review your entire operation.

They will do the following:

1. Take inventory of all on-farm nutrients.
2. Review all cropping rotations along with current soil test results.
3. Consider distance and how it impacts the value of manure.
4. Develop a strategy that is both cost-effective and efficient.

Other factors to consider:

1. Culverts for road crossings
2. Permanent obstacles like rail tracks, highways, and watercourses
3. Distance to neighbors



## SO WHAT'S NEXT?

This article was not meant to answer all questions. Instead, it was meant to stimulate thought and discussion.

We hope these questions have helped you spark some of your own and put you on the right path if you're contemplating adding self-application to your farm.

We highly recommend bringing in the pros when you're pondering these ideas. We've been able to help farms add efficiencies, cut costs, and more.

If and when you have questions about anything manure-related, please reach out. We'll be happy to talk through your ideas and questions.

Once you have taken the time to answer these questions, you will be able to figure out which equipment suits your current and future needs the best.

In Manitoba, 90% of all applications occur with a dragline, 10% completed with on-road spreaders.

Trucking manure is usually most effective when dealing with distances beyond 5 miles,

Both techniques come with their issues, communication, labor, fuel costs, environmental risks, etc.

## What crops are in your rotation?

Manure is a valuable resource that deserves proper thought before application. What crop rotation will best utilize this resource?

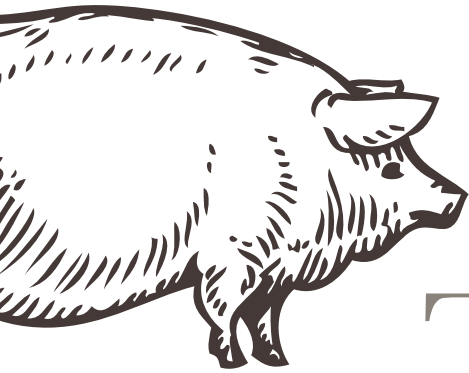
This is a great time to lean on your agronomist. Having an agronomist that is pro-natural fertilizer can be beneficial in getting the most out of your manure.



## HOW MUCH ARE YOU WILLING TO INVEST?

Please view purchasing this equipment as a long-term investment. Your decision to purchase should not be based just on saving money. With this investment, you will be able to best decide when and how this valuable nutrient is applied.

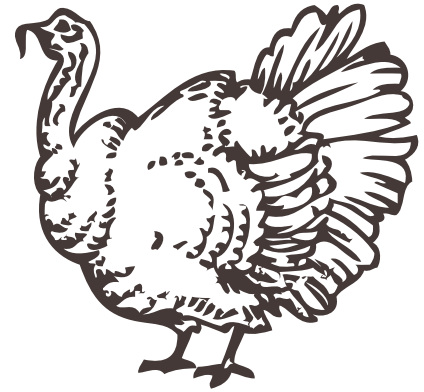
# T U N N E L V E N T I L A T I O N



# HOG

VS

# TURKEY



By Tim Kurbis  
New Standard Group

## ***Background and the Basics***

Over the years, New Standard has constructed countless tunnel ventilated barns and has engineered the remodels of many others. Truthfully, ventilation for livestock housing is part of the DNA of the New Standard Group as that is what we focused on in our early years. Things have changed a lot since that time and the Group has expanded greatly, yet ventilation engineering is still something we love to do and love to discuss.

Tunnel ventilation is used in Canada, but it is more common in the US. Where it fits the climate, large fans in some form of tunnel configuration are common for both hogs and poultry. The reasons for this are simple really; larger fans provide an efficient means of air exchange both in terms of capital and operating costs. As you move southward, the increased ambient temperature range allows more flexibility with less precision.

Tunneling a barn has been seen as a logical option for a greater length of time in swine than in turkeys; especially in the northern states and Canada. There are multiple factors that contribute to that but ultimately, the problem for turkeys

20 years ago was that the guys promoting tunnel ventilation in turkey barns just didn't understand that the reasons for tunneling turkeys and therefore the engineering was very different from hogs. Let's take the time to understand the difference.

## ***We Have a Need for Speed***

In 2007, roughly a year after New Standard incorporated, things changed for turkey producers in the Dakota region. It was at that time that a gentleman by the name of Mike Czarick, a poultry extension engineer, from the University of Georgia started to gain the attention of producers (and myself) with his discussions about tunnel ventilation for turkeys. With the knowledge that Mike brought to the region in combination with properly applied engineering for the climate, things really took a dramatic turn.

What had been missing from all previous attempts at engineering a well-functioning tunnel barn for turkeys was one simple difference. With hogs, tunnel ventilation is applied as an efficient method of air exchange and the math was based on that need only. Turkeys, however, are gifted with a feather blanket they wear year-round. Although we must change the air in a barn in 60 seconds or less, air



exchange is not enough, wind chill must be achieved when ventilating turkeys. Once that dynamic was introduced, it was off to the races for us guys who like to geek out about doing things the right way and seeing the success when complete.

Let's break it down a bit. I'm writing this to explain what makes turkeys different when it comes to tunneling so I'll largely focus on that for the remainder of this blog. (The principles mentioned here also apply to broiler chickens but as turkeys are what we do in the Dakotas, I'll use that as my common reference.) As mentioned, with hogs, air exchange is the sole factor that determines the amount of fan power needed but with turkeys, there is a need to achieve both the right base of fresh air and cool the birds with wind. Stated simply, to properly cool a 50-pound utility tom down, the air speed must be able to average 650 FPM (feet per minute) across the width of the barn when the fans are all running. For those who like to think in MPH, you can simply divide FPM by 88 so 650 FPM would be about 7.4 MPH wind speed. This air speed is never really seen in a hog barn.

## ***Making the Math and the Money Work***

Now, I've talked about the need for speed in a turkey barn and one could be forgiven for thinking that it sounds easy to calculate that. Some of the math is simple, area of cross section x 650 FPM should tell you what need for CFM, right? Well sure, but not so fast. Now, a person must calculate the correct opening and that has a couple of considerations as well. We want to ensure we bring the air in efficiently so that we don't have a pressure loss leading to reduction in fan performance but there is such a thing as too much opening or poorly positioned opening as well. We'll not delve into all of that as I'm limited on word count but briefly, one of the other key things we consider when calculating the correct opening is the air speed we want to pass through that opening because if done well, we can greatly reduce the flying insect pressure on the barn. In short, a high enough air speed at the opening can repel flies, etc from coming near enough to enter.

Another factor when spec'ing all the equipment, (fans, tunnel doors, controls), is what does the length of the barn do to the pressure drop and how will that affect fan performance.

In the best-case scenario, we'll likely see a .08-.10 in/w.c. pressure change from the tunnel opening to the face of the fans. This in combination with the pressure drop at the opening itself, must be factored in. When we start to discuss a pressure at the face of the fan that may be on the wrong side of .15 in/w.c., the Bess Lab report on fan performance becomes critical.

I've touched on some key elements of consideration when we do the engineering. It will have to wait for another day or perhaps a podcast to really delve into everything else we factor in. Topography and wind pressures are very important. Quality of water that can be used for evaporative cooling will determine what type of misting or sprinkling is added. Is it possible to use the gable for some opening or do we just do the sides? (That one is a bigger deal than anyone realizes). What does construction style and materials do to our calculations? What type of control is going to make this work as good as can be? This list isn't comprehensive, but I hope it helps explain how we've evolved to the point we are at these days.

## ***What's Next?***

The list of successfully tunnel ventilated turkey barns has grown satisfying long for our Group. While we take some pride in this, we never want to rest on the past. Our name requires that we constantly push to be better, to advance ideas and ensure that our clients and friends get the best we can give them.

There will always be new things that can improve how a barn performs. I do believe that one of the next big steps in improvement will be the full application of cool cells in combination with tunnel ventilation. This has been done to some extent with poultry in other regions but has yet to be adopted for large turkey finishing. The time for that is coming soon and the results will make it worth it.

Let me close this article out with a question. Given the calculations that I've mentioned, what are your thoughts on the most efficient barn size? The answer probably won't be a surprise but if you want to talk it through, stop in for a cup of coffee or have me drop by to discuss; it's a topic I love to dive into.

PROVIDED BY  
LEO PAULS

# SMOKED PORK BELLY

Summer is here and it's time to get together and enjoy some great BBQ. Your family and friends are going to love you for making this.

Start with a piece of pork belly. We used a 7lb piece for this cook. If it comes with the skin, remove it.

**Set your smoker at 250F.** We used a charcoal smoker from Dead Center Smokers, a Manitoba company that builds drum smokers. You can use any kind of smoker. For this cook we added a couple of Hickory and Pecan wood chunks along with 1/2 an onion for additional flavor.

**Cube the pork belly** into about 1.5" by 1.5" sized pieces. Although they look big, they will shrink throughout the smoking process.

**In a large mixing bowl**, add as many cubes as will fit without overlapping them, so you will get good coverage with the rubs. Depending on the size of your mixing bowl, you might have to repeat this step.

**The seasonings** used in this cook are from Toma-Hack BBQ, a Manitoba company. For the first layer we used Just Give'r Savory Rub.

**Evenly sprinkle the rub over all sides of the pieces.** Set those aside and repeat this process until all pieces received the first layer of seasoning.

**Wait for 15 minutes.**



## MEET LEO

Leo began working with Penner Farm Services in 2017 in the position of Dairy Equipment Sales. He graduated with a Diploma in International Trade from Brazil and has been working in agriculture for the past 7 years. His area of expertise is cow comfort and housing design, also holding experience in the construction industry. In addition to English, Leo is fluent in Portuguese and enjoys camping, building smokers, cooking and woodworking in his free time. Leo has been married for 15 years and he and his wife have 2 young daughters.

# PORK BELLY

## THE PERFECT APPETIZER

**For the second layer**, we used Eh Sweet Heat Rub. This rub adds some good flavor and color to your burnt ends. Repeat the seasoning process done for the first layer.

**Place all the pieces** onto baking cooling racks. Trust me, these racks will make your life much easier.

**Smoke for 3 hours.**

**Put all pieces into a foil pan.** Sprinkle 1 cup of brown sugar and 1 Tbsp of maple syrup, or honey, on top of the pieces. Add 1.5 sticks of butter, sliced.

**Cover the pan** with tin foil and bring it back to the smoker. You can increase the temperature to **275F**.

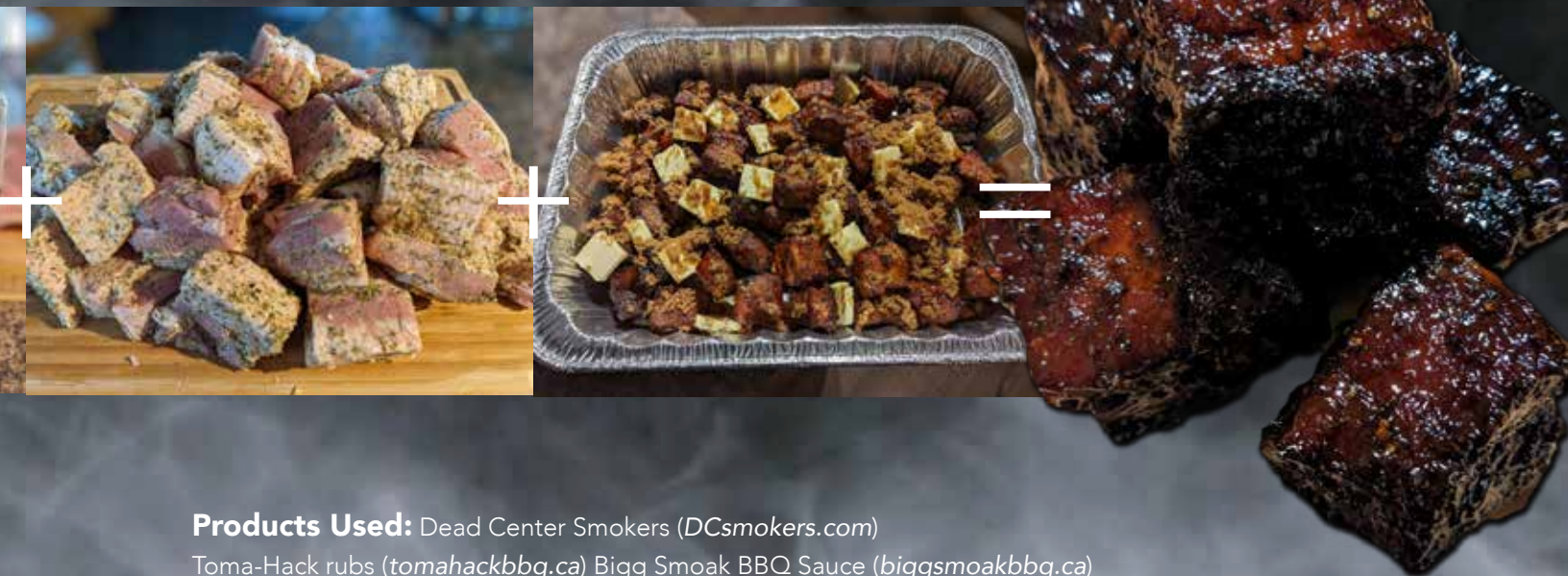
**Smoke for 1.5 hours.**

**Drain the fat and add your favorite BBQ sauce** to this dish. We used Bigg Smoak's Birds to Bones BBQ Sauce (another Manitoba product). Mix well for good coverage.

**Leaving the pan uncovered**, bring it back to the smoker for another **10-15 minutes**. This will create a glaze. The pieces will be tender and sticky.

**Pull from the smoker and let rest for 15 minutes.**

**Serve the pieces warm and enjoy!**



**Products Used:** Dead Center Smokers ([DCsmokers.com](http://DCsmokers.com))

Toma-Hack rubs ([tomahackbbq.ca](http://tomahackbbq.ca)) Bigg Smoak BBQ Sauce ([biggsmoakbbq.ca](http://biggsmoakbbq.ca))

The rubs and sauce can be purchased at Luxe BBQ store locations ([luxebbq.ca](http://luxebbq.ca))

# WIRELESS TECH IN BARN

By  
Jake  
Peterson

**W**e're involved in setting up more and more wireless systems in hog barns, new builds, and barn remodels alike. Now wifi is terrific with some planning and proper equipment. So how does it work? We spent some time with network pro Owen Gingerich who helped on our Honey Grove barn project, and New Standard's tech guru, Dwayne Morrow, to discuss the pros and cons and where wifi in barns stands in 2022.

## The Shift

We've been at a tipping point for quite a while now. Tech placed in barns from the '70s, '80s, and '90s is, to put it simply, obsolete. Most systems from these decades are based on a Motorola processor; it covers about 80-90% of the pig barns.

So why has this tech lasted as long as it has? These chips were mass-produced, incredibly reliable, and easy to develop. There wasn't the need for anything more. The main issue we're seeing now is these chips and systems are worn out. Replacements are no longer available, and support for 20-year-old software is not an option.

The tech boom has touched every part of our lives, including our farm. The internet, wifi, and the digital revolution have brought many possibilities to the table.

## Pros of Wifi in Your Barn

When you jump 20 years into the future, you will see some significant improvements. Going from a limited amount of sensor readings and features, a couple of pushbuttons, and simple digital text displays to wireless, 15" touch screens that can do pretty much whatever you imagine can be a humbling experience.

Instead of building the barn to the capabilities of the control, we can now design our controls for the barn, giving us enormous flexibility. Another leap is that controls are primarily software-driven instead of being limited to the hardware. Changes, updates, and more are done over the cloud, keeping you up-to-date always.

The connectivity we have now allows us to run our barns remotely and monitor animals, feeding trends, and more from anywhere we have an internet connection. This constant and consistent pulse on our barn allows us to address issues quicker and be more attentive to our animals—no more running across the barn to check settings. Instead, we

can grab a tablet or smartphone. Wifi has killed the pen and paper in barns, creating more efficiency we need.



Another benefit of these new systems is the speed of information. With old systems, you maybe see updates once per minute. With a high-speed wifi setup, we see updates every 10 seconds. So making fan or temp adjustments are seen accurately and almost immediately.

## Challenges

### Humidity and Ammonia

As with anything great, there are some exceptions. So what are the challenges and cons of wifi in hog barns?

Humidity and ammonia are two of the biggest challenges for using wifi in barns, and here's why. As most of us know, water and electronics don't often play nice. Barns are naturally humid environments and add in the regular pressure washing activities; it's a sure thing your equipment will get wet at some point.

Ammonia isn't much kinder when it comes to tech. Even small amounts of ammonia will corrode and crack copper connections, and it can be tough on the circuit boards found in every wifi router.

If you were to buy an off-the-shelf all-in-one solution from the local big box store, you'd be pushing your luck to get a year of the thing working, less, if the pressure washer gets away from you! So how are we getting around this?

Two solutions have proved to work well. The first is putting your equipment, access points, routers, switches, etc., in water and dust-tight enclosures. This is a great first layer of protection and has proven to be a great solution thus far.

A second option is opting for IP-rated equipment. An IP rating shows how effective an item is at blocking out foreign bodies, such as dust and water. We've found wifi equipment with an IP 67 rating that we've been using without boxes with success thus far. The equipment is standing up to the humidity, ammonia, and occasional splash.

### Getting a Strong Signal

Wifi technology has expanded by leaps and bounds in the last few years, and innovations continue to arise. Faster speeds and better coverage are undoubtedly welcome upgrades in the barn. However, one big challenge can be maintaining a solid wifi signal as you work your way through the barn.

The wifi system installed in our Honey Grove project is designed using individual wifi components. Instead of the all-in-one unit that includes your router, switch, and



The Fusion Controller excels with wifi connectivity.

antennas, we've broken out the individual pieces. With dedicated Access Points (AP), routers and switches, we can create better coverage with fewer or even no dead zones for seamless dependable wifi.

These components use handoff technology. To put it simply, a "handoff" is when a device's connection to one access point becomes weak and is then automatically transferred to a new connection point with a stronger signal.

### So Where Are We At?

In our opinion, wifi is a must. Going wireless makes sense if you really want to utilize today's tech to its fullest potential. Beyond that, the pros outweigh the cons; wifi components will only get better and more reliable, and getting your barn wifi ready today will pay dividends in the long term.

# 10 SIMPLE TECH TIPS



We asked the AGRIHUB IT team for some quick tips to ensure you're on top of your tech! You should find this quick refresh helpful in keeping your tech online and your hardware safe.



## **BACK IT UP**

Back up files and configurations - Have at least two copies of backups in different places. Ex. Backup Drive and Cloud backup, a copy in a safe deposit box or fireproof safe is not a bad idea either.

## **NO DEFAULT PASSWORDS**

Change all devices' default passwords – Routers, Switches, Printers, etc.

## **PASSWORD STRENGTH**

Passwords should be a minimum of 10 characters and include capitals, lower case, numbers/symbols (Passwords with less than 8 characters can be brute-forced in a matter of minutes)

## **HOW TO CREATE A STRONG PASSWORD**

No relevant info about you. Use two unrelated words together with numbers/symbols. Something that you can remember.

## **PASSWORD STORAGE**

Store your passwords in a password vault, not a sticky note or notebook.

## **UNTRUSTED WEBSITES**

Do not enter passwords into untrusted websites. Watch for the small lock symbol on your browser and if something seems off, do some homework before entering your password.

## **PROTECT YOUR HARDWARE**

Plug all electronic devices into a surge protector

## **IN CASE OF A POWER OUTAGE**

Plug critical hardware into a battery backup

## **REGULAR UPDATES AND REBOOTS**

Update & reboot computers at least once a week for maintenance

## **EMAIL PHISHING**

Be cautious about web links in emails, spelling mistakes, unknown email addresses, and attachments. Clicking on these can spell disaster. We recommend avoiding it or contacting the sender to verify if something seems off.





Every piglet deserves to be born and raised on a soft, warm and clean Nooyen Super Coated slat.

Highest level of comfort, welfare and hygiene

3 lbs higher weaning weight

50% less severe joint damage



PROUDLY MADE IN THE USA

INNOVATORS BY TRADITION

[www.nooyenpigflooring.com](http://www.nooyenpigflooring.com)

## Premium Ventilation Systems

Munters is the world leader in livestock ventilation systems. Our complete ventilation package will protect your animals and help you maintain peak production. Munters Drive provides up to a 40% reduction in electrical usage and is nearly maintenance free, helping to reduce your carbon foot print, save money and usher in a "greener" approach to ag-ventilation.



ATLAS 74



VX55 Munters Drive



CB Cooling & CELdek



BI Inlets

# WORD FIND

## ON THE FARM

ACREAGE  
BACON  
BARN  
BEAK  
CALF  
DUCKLING  
FENCE  
FIELD  
GOBBLE  
HEN  
HOG  
MOWER  
RAKE  
ROOSTER  
SHOVEL  
SNOUT  
SWINE  
TRACTOR  
TURKEY

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

# COLOR ME!

## KIDS COLORING CONTEST

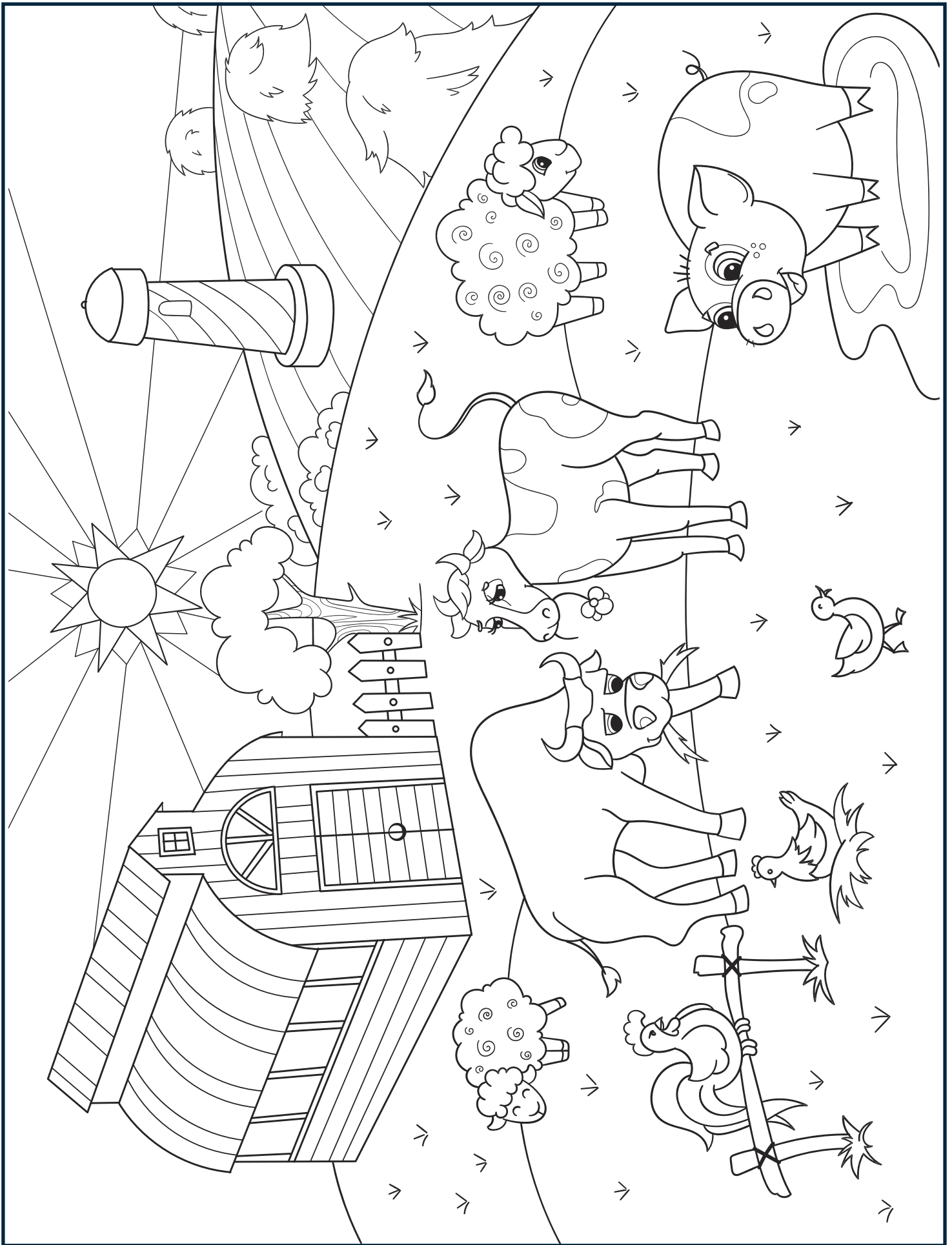
Color this for a chance to win a \$25 gift card. Have a parent scan the QR code and submit your entry by August 1st, 2022!

PARENTS ENTER AT: <http://info.newstandard-group.com/coloring-contest-summer-22>



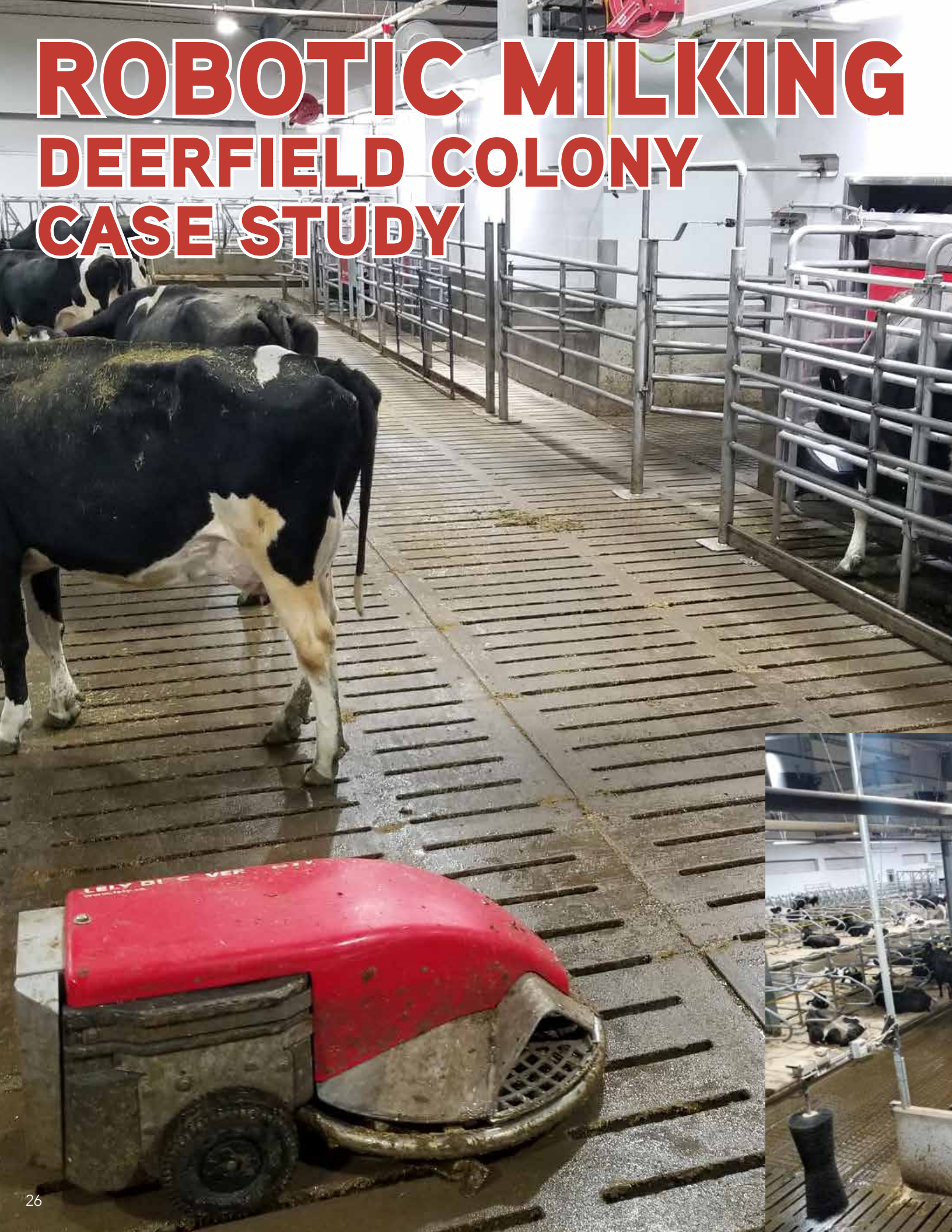
Scan to Enter!





Name \_\_\_\_\_ Age \_\_\_\_\_

# ROBOTIC MILKING DEERFIELD COLONY CASE STUDY



By Ashley Graye

When you've milked in a parlor for over 25 years, the idea of adopting robots can be daunting. From the thought of re-training your cows, learning new technology, and to be frank, re-training your people – ensuring you've covered your bases is important.

Touring over twenty-five barns with automated milking systems of different brands, evaluating set-ups, talking to herdsmen and owners will help ease your mind and make the decision a more peaceful one. That's exactly what Paul Waldner (Assistant Herdsman) and Andy Waldner (Herdsman) of Deerfield Colony (Magrath, Alberta) did leading up to their 2019 implementation of three Lely Astronaut A5 Robotic Milking System.

'When we thought about it, if we were a cow, we would want to be milked by a Lely Robot' said Paul Waldner, about their decision to choose Penner Farm Services and Lely North America as their partners. 'A cow does not like to turn', states Paul, referring to the Lely I-Flow setup, adding 'they're the only one that the cow goes straight in and out of the robot'. Cow Comfort was the foremost deciding factor for Deerfield Colony.

After observing many farms, the debate was still ongoing whether the existing barn, built in 1991, should be renovated to house the robots or a new barn should be built. Ultimately, a fire on the colony in the electrical and plumbing shop delayed the project and gave them more time to mull over their options, leading them to build a new barn and renovate the existing barn.





**'We help  
wherever  
we can  
– I think  
that's what  
farming is  
all about,  
helping  
each other'**

The new barn houses 170 milking cows (up from 110 one short year before they installed the Lely A5's). A conventional free-stall layout serves two of the Lely A5's, whereas a unique, and sometimes challenging, compost pack serves the third Lely Astronaut A5 Robotic Milking System. The renovated existing

barn houses the calves, close-up cows, and breeding bulls. When asked if he would make changes looking back, he's content with the layouts, stating 'I would not want a whole barn on compost, and would not want just a free-stall barn.' A unique statement, as we often see one or the other. Waldner mentions the compost pack can be a steep learning curve – deciding when to haul in shavings, adjusting your ventilation, how to manage your compost correctly are all hurdles they have overcome.

The new barn also houses three Lely Discovery 90SW's for clearing manure, and a Lely Juno feed pusher to provide constant access to feed. The Lely Discovery 90SW's went through some undercarriage modifications, enabling Waldner to use them on a solid floor, pushing manure to the slatted floors at one end of the alleys.

When asked about start-up, Paul was thrilled with the transition and encourages anyone

undergoing a start-up to consider following the same suggestions. The cows were transitioned into the new barn four days before start-up, allowing them to familiarize themselves with their new environment. All the gates were left open, they had free access to molasses blocks, they could walk in/out of the robot and find their preferred stall. After two days, the training mode was activated on the

Lely A5's, enabling the cows to 'visit' the robot, gates would close, and they received a special treat of robot pellets. Upon start-up day, 95% of the herd was going to the robot on their own. They actively pushed cows for three days, and after a week, 75% of the visits were voluntary.

Since then, Paul and Andy have enjoyed having access to more data on their cows than they ever have before. Between T4C and Horizon, the Lely software programs, they can see the signs of a cow not feeling well before she's very ill by monitoring rumination data, SCC, milk temperature, conductivity and more. They pride themselves on being good herdsmen, running a strict maintenance program with little to no downtime on the robots, firmly believing that 'robots will make a good manager, better.' While they certainly don't spend less time in the barn, they've been able to buy 80kg's of quota and increase the size of the herd with the same amount of labor since the install, all the while achieving excellent and very good with their purebred Holstein herd. They've also been nominated for Alberta breeder of the year many times over. Quite the nod to Andy and Paul, as it is Paul's goal to become a Master Breeder, after all.

Another perk of adopting technology in the dairy barn? More (younger) hands are willing to help, more often. 'Younger people like technology, they pick up on it very quick' says Paul, who has seen a spike in interest in working in the barn since the Lely A5's were installed.

The decisions for the 170 head dairy barn, 30,000 head free run layer barn, 320 head sow barn, and 8500 acres are made by the colony as a group. The 117-member community is very close-knit, where those who work in a specific barn are often found in other barns, helping others when needed. And that goes for off the colony, too, as many members are on the local volunteer fire department among other organizations. 'We help wherever we can – I think that's what farming is all about, helping each other'.



AT24 ridge vents  
exhaust air from the  
roof top.

# SUSTAINABILITY BENEFITS OF VARIABLE SPEED CROSS VENTILATION

By: Jonathan Chalupa and Britt Roman, Munters Corporation

The dairy operation at Vir-Clar Dairy in Fond du Lac Wisconsin is like many other dairy operations in the Midwest, a family-owned farm in its fourth generation. As a growing operation, Vir-Clar has evolved over time and they've added new barns, their most recent addition was a cross ventilation barn which now stands next to a naturally ventilated and a tunnel ventilated barn. Today they milk more than 2,000 cows.

The latest barn was built with cow comfort at the forefront. "Living in the Upper Midwest, ventilation not only has to perform during those couple of weeks when we get hot weather, but also it has to perform in the winter when temperatures can become pretty extreme," said Grant Grinstead of Vir-Clar farms.

Ventilation systems are engineered to provide precise control of the climate inside the facility, even when the climate outside of the building is extreme or changing. Heat stress can be a problem all year, or just for a part of the year. Providing proper ventilation has a dramatic effect on

overall productivity and comfort. Dairy cows not affected by heat stress produce more milk; have lower respiration rates, higher conception rates (resulting in more cow pregnancies) and overall better health.

As they began their search for what to build next, they toured many other barns evaluating ventilation systems and "Saw a number of barns that had clusters of fans running at full-speed, so you would find zones within the barn that had maybe too much ventilation," said Grinstead. He continued, "Cows will congregate where the air is better."

## The Design

Vir-Clar ultimately chose Munters for ventilation. They installed 66 Vortex 55" fans equipped with Munters Drive, which can be set to pre-programmed efficiency options or be customized to optimize airflow and ventilation depending on the season, size of the building, animal age, and other factors that affect production. Uniform climate inside the building means the cows can spread out among the available space, instead of clustering together inside the

building. Vir-Clar installed ten AT24 Ridge top fans which exhaust air out of the building as well.

Vir-Clar also installed sensors spread throughout the barn to get an average temperature reading so they know when to turn the fans on. The communication goes through a single line to their Farm Guard controller. "The internet-enabled controller is accessed with Farm Net software so Grant can log in remotely anywhere he has internet access and view any of the systems in the barn. He can view the temperatures, make adjustments as needed throughout the barn – he can do anything remotely that he can

do standing in front of the controller," said Jonathan Chalupa, sales representative for Munters Corporation.

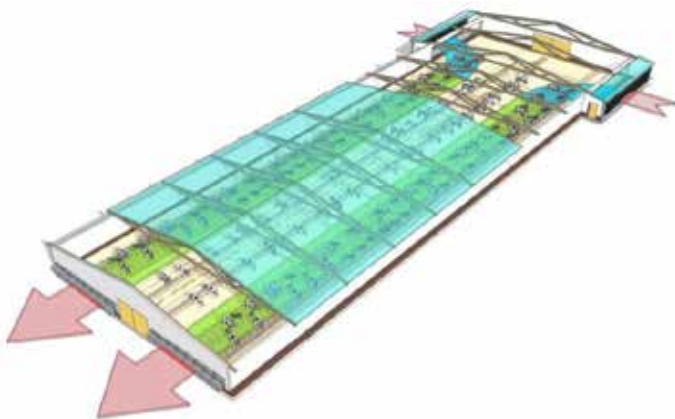
## Pay Back

Vir-Clar evaluated the initial cost, but also the overall lifecycle cost of the design. "Munters is a premium product, but when we look at the lifecycle, and base it on historical temperatures in Wisconsin, we are saving energy in the long run with many variable speed fans," said Grinstead.

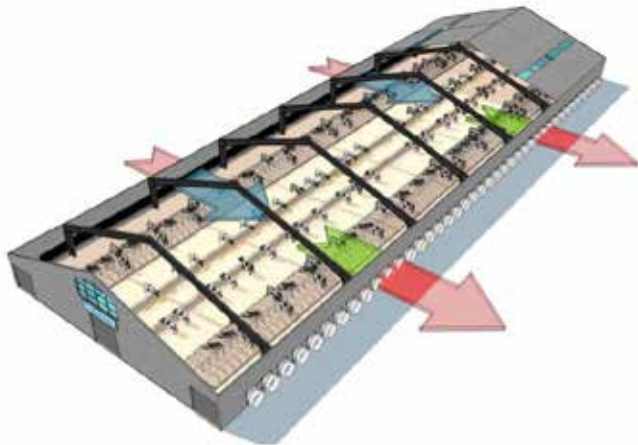
Grinstead noted, "Munters provided wiring diagrams that the electricians could easily follow. The Munters Drive allows flexibility and, allows us to capture energy savings which is at the forefront of our business. Instead of just shutting fans off to capture savings, the system ventilates the barn as designed and does the work for us."

Munters Drive also reduces noise levels and maintenance requirements.

Tunnel and cross ventilation are both forms of mechanical ventilation, using fans to supply fresh air to animals in the barn. Tunnel ventilation on a dairy barn directs air parallel to the feed lane and cross ventilation does the inverse, delivering parallel to the stalls.



Tunnel Ventilated Dairy. Typically, tunnel or cross ventilated houses are equipped with "wet walls" and exhaust fans.



Cross Ventilated Dairy. The climate system is regulated fully automated with a centralized control unit.

"Munters is a premier product. The upfront costs were high, but you have to look at the lifecycle costs. After 25 months, we're ahead of the game on energy usage. And that's assuming rates stay the same. If rates go up, it'll be an even bigger cost savings," said Grinstead.

The Munters Drive works with new installations or can be retrofitted to existing fans and control systems—even those of other manufacturers. With its straightforward design, there is no need for expensive, complex wiring.



Vir-Clar Dairy in Fond du Lac Wisconsin, their newest barn outlined in blue.

# GET TO KNOW AGRIHUB INC

AgriHub Inc is a leading edge group of companies supplying the Agriculture industry with Design-Build, Advisory Services, Equipment and Consumables across Western Canada and the United States.

While each brand offers similar competencies, they serve the markets in their own unique and complimentary way, creating a cohesive look and feel.

## OUR MISSION

It is AgriHub's mission to help our farming partners build and live their visions and dreams. We strive to be Canada's most trusted provider of total farmyard solutions.

- Providing high quality and technically advanced equipment
- Providing superior service and after sale support
- Developing a base of well trained professional and experienced staff
- Cultivating strategic alliances with industry partners, manufacturers, suppliers and customers who share our vision and goals
- Creating a work environment that provides opportunities for growth and career advancement

## OUR DIVISIONS

### **Design-Build**

We provide capital building, equipment supply and project management for facility construction, upgrades and site expansions. This foundational component addresses the design, building and equipment requirements for all types and scales of farm operations.

### **Advisory Services**

We help producers reduce the stress of day-to-day operational responsibilities by providing on-site farm management and consultation services. This may include equipment maintenance and repair, ongoing animal care, operational consulting or 24/7 crisis response.

### **Equipment**

We provide and oversee the installation, setup, training and maintenance of state-of-the-art farm equipment for large and small operations on a project basis. This includes systems and services for robotic feeding and milking equipment, grain handling and milling, and backup generators to ensure efficient and uninterrupted operation.

### **Supply**

We inventory and sell all types of farm supplies, including farm apparel, footwear and gear, tools and hardware, household products, animal medications and nutraceuticals. We supply farm products for any size or scale of operation, private or commercial.

## LOCATIONS

Winnipeg, MB (*Head Office*), British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, South Dakota







**HORIZON**

**UNITED AGRI**

**NEW STANDARD AG**

**PENNER FARM SERVICES**

**WESTERN AG SYSTEMS**

**DUNDAS Agri Systems**

**Penner Farm Services** is a leading provider of livestock equipment, supplies, and services. Since 1956, livestock producers have relied on Penner Farm Services to provide their entire scope of automated equipment for efficient farm management. *Locations: Blumenort, Brandon, Lacombe, Lethbridge, Thunder Bay*

**Western Ag Systems** established in 2005, has a strong following with the Hutterite Bretherin community within the prairies. While their focus has largely been Hog, Grain and Poultry, since joining AgriHub they have expanded to serve the Dairy industry as well with Lely Automated solutions. *Locations: Swift Current, Saskatoon*

**United Agri Systems** is a prominent name in the Poultry industry, setting standards for Poultry houses, controls, ventilation and more. Established in 1998, they are a well respected and pivotal partner in poultry, grain and dairy. *Locations: Abbotsford*

**New Standard Group** was founded in 2006 in Manitoba, Canada, setting the industry standard for group housing within the Hog sector. Since then, they have expanded into poultry, becoming the trusted providers to Hutterite Colonies in both Canada and the United States. *Locations: Winnipeg, Sioux Falls, SD, Rocky View County*

**Palmlite Industrial Services**, established in 2012, offers a wide selection of generators, transfer switches, pumps and electric motors for industrial, commercial, and agricultural applications as well as residential solutions for home and cottage owners. *Locations: Blumenort*

**Horizon Livestock & Poultry Supply** Since 1996, Horizon Livestock & Poultry Supply has provided quality products and services to the local agricultural industry. Our experienced and knowledgeable staff partner with you to select the best product lines to maximize animal care, operating efficiency, and return on investment. *Locations: Steinbach*

**Dundas Agri Systems** Is an established, family owned, and operated company launched in 1981 to serve DairyProducers of Eastern Ontario. As a prominent provider of Lely and Boumatic systems, and well-regarded expert in milking, DAS currently is privileged to serve over 250 dairy farms in the Eastern Ontario region. *Locations: Brinston*

# GREENWALD COLONY

BROKENHEAD, MANITOBA, CANADA



Greenwald Colony in 1961



You may recall, New Standard Ag recently remodeled a hog barn at Greenwald Colony. However, you might not know the family connection the Kurbis' have with Greenwald Colony. We recently had a chance to visit more with the folks at Greenwald, diving into their history, faith, industries, and more.

## Kurbis & Greenwald

Tim and Kevin Kurbis grew up about 3 miles (as the crow fly's) from Greenwald and have known many folks since they were children.

Tim and Kevin's mother still attends a Annual Christmas Concert put on at the Colony, where their school children perform the nativity scene, among other performances, singing, instrumental pieces, and various skits or dramas.

We visited with Jason Hofer and Calvin Hofer of Greenwald Colony to discuss their daily lives and jobs and what makes Greenwald Colony a great place to live.



Spring scenes at Greenwald Colony - Welcome signage, family housing and grain silos





The Brokenhead River just out of its banks in spring

## About Greenwald

The Colony currently has a population of 36 families and 165 people, and a daughter Colony is already in the works for the near future. This is not the first time Greenwald has expanded and split into a new colony. In 1982 Greenwald divided to found Willow Creek Colony located in Cartwright, Manitoba.

Greenwald is just part of a relatively sizable Hutterite community in Manitoba. The Hutterites originated from the anabaptist movement in the 1500s. The Hutterite name comes from Jacob Hutter, who was burned at the stake in 1536.

The third significant migration of Hutterites was to America, beginning around 1894. But in 1918, during World War I, many Hutterites in the United States experienced severe persecution as they were under suspicion of being "German," even though this was false. Hutterites refused to take up arms during the war, & were given alternative services as conscientious objectors, both in the United States & Canada. Some would work in the medical field, others in mines, forestry, on farms and in factories. They were paid very little, most of what they made went to Red Cross.

Hutterites are pacifists, and their strong faith and convictions have been passed on for generations with minor changes or influence from culture. Hutterites strive to remain humble and out of the spotlight.

Greenwald Colony was founded in 1955 as a split from Barrickman Hutterite Colony. Greenwald sits on and utilizes approximately 10,000 acres of land. "It seems like a lot of

land but once you divide it among our 165 residents it's easy to see why we need every acre to sustain our way of life" explains Jason.

Greenwald is located about 20 minutes north of Beausejour, Manitoba, Canada, nestled along the banks of the Brokenhead River. The colony members enjoy use of the river for recreation and leisure activities, including fishing, swimming, and canoeing.

## Faith

Greenwald Hutterites follow the Christian faith. One of Hutterites' core beliefs and values is to follow the community of good, derived from Act 4:32-35."

<sup>32</sup> All the believers were one in heart and mind. No one claimed that any of their possessions was their own, but they shared everything they had. <sup>33</sup> With great power the apostles continued to testify to the resurrection of the Lord Jesus. And God's grace was so powerfully at work in them all <sup>34</sup> that there were no needy persons among them. For from time to time those who owned land or houses sold them, brought the money from the sales <sup>35</sup> and put it at the apostles' feet, and it was distributed to anyone who had need." NIV

## Life At Greenwald

Greenwald is a self-sufficient community. "Our main source of income is our hogs and agriculture ventures," states Jason. Although, staying true to the Community of Goods, "the entire colony is run out of one bank account," everything is shared.

### Schools

"We have our school on-site with a few outside teachers provided by the local school district and one of our own," says Calvin.

### Meals and Food

Greenwald is blessed with a full-time head cook, other ladies help out on a rotating basis. Three meals a day are provided at the dining hall. "About 90% of our food is grown right here on-site", says Calvin. "We are currently working on building a brand new greenhouse."

### Technology

Technology at Greenwald is something that is adopted as needed. Most have their own phone and internet access,



BELOW: ATCO portable office trailers manufactured at Greenwald



ABOVE: Greenhouse full of produce for the coming growing seasons





Kevin Kurbis showing some new Nedap equipment



Freshly installed PanelTim waiting for pigs to arrive



Relaxed sows enjoying their new home

although most content is filtered, so people only get what they need. Barns and new technology are great examples of this. "The new tech in our hog barn obviously requires internet access to allow us to reach the full potential of the barn and tech. We try and balance what we need with obvious benefits to keep things up-to-date and efficient."

## Industries At Greenwald

### Skilled Workers

Greenwald has a very skilled labor force. "We have certified teachers, electricians, plumbers, welders, and carpenters," stated Jason.

### Crops

Greenwald is surrounded by fertile ground and grows various crops for use as animal feed and to sell. "We grow about 1,500 acres of winter wheat for feed and soybeans, barley, hard wheat, and canola." Most of the grain produced gets consumed by the colonies livestock.

### Hogs

We have a 950 head, farrow to finish hog operation. We recently remodeled and updated by New Standard Ag. "We are super happy with the new remodel," says Calvin.

### Laying Chickens

Greenwald has an impressive layer barn "we currently have about 11,000 laying hens, says Calvin," The eggs are sold to local coops and markets.

### Broiler Chickens

Broiler chickens are specifically bred and raised for meat production. The images that come into your mind when someone says chicken is precisely what a broiler looks like. Greenwald produces around 22,000 kg or just shy of 50,000 lbs of broilers each year.

### Trailer Manufacturing

The Colony stays busy year-round with its job shop and trailer manufacturing ventures. In addition, Greenwald is in partnership with ATCO and assisting in manufacturing mobile offices. These modular offices are used as office solutions on construction sites, special events, etc.

## The Hog Barn Remodel

Completed in 2021, Greenwald Colony did a complete overhaul of its hog barn setup. The old barn was starting to show its age,

and it was time to make a change. The ongoing maintenance and expenses of a stall barn were no longer making sense.

The final decision was to go with a group housing setup. New Standard's Kevin Kurbis helped with consultation from start to finish. "It has been very successful" states Calvin.

"When Greenwald approached me to come out and take a look at their barn, they were already aware they needed to do some work as they were going to be going through a de-pop of the barn to deal with a virus that had gotten out of control. As we discussed their needs and options, it quickly became obvious that the best plan would be to use the opportunity of the barn being empty to also modernize it and convert it to a loose housing setup. One of the biggest challenges that we face when converting a barn is what to do with the sows during construction, so this was a great chance to eliminate that issue. Greenwald's barn is now fully operational ready for the future."

The new barn has been wholly remodeled with updated flooring to handle manure differently and a new layout to accommodate the loose sow barn design.

Greenwald has also opted for electronic sow feeding. The Nedap system is completely automated and has been a great addition to the barn.

The barn remodels also incorporated new Fusion Controllers to help with all the other aspects of the building. The Fusion allows for tight control and instant feedback on barn conditions from light, ventilation, and heating.

### The Outcome

The decision to go with loose housing has turned out to be a good one. "the sows simply look so much happier, and they are so much calmer than before." states Calvin. One huge benefit of group housing and the added tech is the time it frees up from staff once things are running smoothly. "it takes about a half a year, but even now, we are seeing we need fewer hours in the barn, we have more time for other projects and to help where it is needed."

## In Conclusion

New Standard Group and the Kurbis family have been blessed to have Greenwald Colony as neighbors over the years. We hope you've found this tiny peek into the Hutterite culture exciting and insightful. If you ever have the opportunity to visit a colony, we recommend you accept.

# FARM ACCOUNTING, R&D & ESTATE PLANNING

The business of farming has evolved over the years to grow in complexity which has enlisted the need for enhanced planning, sophistication, and advisory services. As the amount of capital at stake in farming operations has continued to increase, so has the need for a team of advisors. At ELO CPAs and Advisors, we have an entire practice that specializes in Agriculture and seeks to partner with their clients to provide a holistic business approach to fulfill the farm's financial, succession, accounting, and tax needs. To be successful, the whole picture must be considered, and it takes a team of advisors to accomplish this.

In this article, ELO's Agri-business team will discuss three items that they work with and feel play an important part in the success of a farming operation. These items are Farm Business Accounting, Agricultural Research & Development Tax Credits, and Estate & Succession Planning. Accounting is referred to as the language of business and can be leveraged to make decisions to set the operation up for success in the challenging and cyclical nature of farming. Every year is a challenge and an experiment of its own, in the agricultural world, with an impressive amount of technology and innovation continuing to be used. Agricultural Research & Development credits can assist operations through financial incentives in the form of income tax credits for the things they are doing to continue improving every year. Lastly, we will place an emphasis on the importance of Estate and Succession planning to successfully carry-on the farm's legacy in an ever-changing political, legal, and tax environment.



## Farm Business Accounting

While Accounting is the language of business; on the farm, Accounting is often a neglected job. Proper accounting is the oil to your farm's financial engine. There are hundreds of thousands, if not millions, of dollars flowing through the

farm's account each year, yet there is a simple question that goes unanswered "Did the operation make money last year?". This cannot be determined by simply looking at the balance in the checkbook. Accounting will show the health and capacity of the farm's financial engine.

Most farms keep their accounting on the cash basis of accounting because that is how the Schedule F on the tax return is reported. This means that income is recorded as deposits are made and expenses are recorded when checks written. If the deposits made are greater than checks written, an operation made money that year, right? This is not always the case.

Let's look at how deposits and checks flow through in a crop year. Often, the farm is collecting income and writing checks that cover three crop cycles. For example, in 2021, operations had likely sold 2020 and/or 2021 crop, paid for 2021 overhead expenses such as insurance, repairs, utilities, and paid for 2022 crop inputs such as seed, chemical, and fertilizer. Couple this with the fact that an operation's revenue fluctuates daily with changes in grain and livestock prices – accounting on the farm is far more complex than it is credited for. Honestly, it is more complicated than almost every business due to the constant fluctuations of input costs, output value and the inconsistent flow of those expenses and revenues. So, what's the answer?

Accrual Accounting is the answer to this problem. To describe it simply, accrual accounting is the way an operation thinks about the "how was the farm's year?". If an operation completed harvest after harvesting a record crop with a profitable price, they would say it was the best year on record. At the end of the year though, why don't the financial statements reflect that success? That begs the question, what good is an accounting system if it cannot answer the simple question - "Did we make money this year?"

Moving to an accrual basis is the first step for an operation to allow its accounting system to start paying dividends for the farm. Accrual accounting transforms your accounting system from a purely compliance tracking system to a managerial



tool that increases visibility that allows an operation to make more informed decisions to drive profitability as well as manage the farm's balance sheet through the cyclical nature of agriculture. It answers these simple yet complex questions:

- *"Are we profitable?"*
- *"Which crops are making us money?"*
- *"Are we in a good working capital position?"*
- *"Are we cash-flowing enough to cover our debt payments?"*
- *"Should we take on that ground at that price?"*
- *"Where would our profits be best re-invested into?"*
- *"Is our balance sheet ready for the next downturn in the farm economy?"*

Getting your accounting system moved from cash to accrual accounting can be a tough task for those unfamiliar with the structure and process. Working with a trusted ELO Agri-business advisor that not only understands accounting, but also understands the business of farming, is critical to your success. An Agri-business advisor can be much more than just someone to manage your taxes, they can understand everything you go through as a farmer. They can be a key business partner to help provide you with accurate financial information that drives decision making in your operation. The Agri-business team at ELO can provide you with full-service accounting, tax and assistance with financial matters that range from A-Z.



## **Agricultural Research & Development Credits**

Much of the recent buzz around agricultural credits centers around carbon credits. While these have significant potential in the future, an incentive that your farm likely isn't taking advantage of currently is the Research & Development income tax credit. The Research & Development credit is an incentive in the U.S. tax code that allows operations to keep more of the dollars that are made by rewarding them for innovations and decisions that are already made on a daily basis. This credit can amount to significant tax savings for your farm (potentially hundreds of thousands of tax credits) and can be a tool for your farm's strategic tax plan for years to come.

If your farm is continually improving and looking for the best ways and products to increase crop yield, improve soil health, herd health, and rate of gain, you likely qualify for the research and development credit. It is as simple as trying a new corn hybrid, trying a new soybean trait package such as Enlist or XtendFlex soybeans, or adding DDGs to your feed ration for the first time. The costs associated with purchasing the new seed, chemistries, feed, etc. can be attributed towards the calculation of your research and development credit. Most of the producers we work with are surprised that they qualify for this incentive because these are decisions, they are already making on a regular basis to improve their operations. These changes on the farm cost a significant amount of dollars and this credit can help reduce the cost of those changes.

Like all things in the tax code, this credit is nuanced and complex. It takes a partner to be able to navigate the regulations and maximize the dollars for your operation. ELO CPAs and Advisors has helped operations keep more of their profits and can be your partner to get your farm started in the Research & Development Credit.



## **Estate & Succession**

Passing on a farm is difficult. A study conducted by the University of Ohio State, titled Number of Generations a Farm has been in a Family, indicated the following stats regarding the composition of generational farms:

- 36% - 1st Generation Farm
- 25% - 2nd Generation Farm
- 25% - 3rd Generation Farm
- 10% - 4th Generation Farm
- 3% - 5th Generation Farm
- 1% - 6th Generation Farm

As the old adage says about family businesses, "the first generation makes it, second generation maintains it, and the third generation loses it." As you can see, this saying may ring true in farming as passing a farm through the generations is extremely difficult. If succession planning is left up to chance, it is likely your farm will become a statistic. Intentional effort and planning are an absolute necessity for generational success.

You've successfully navigated the challenges that farming brings, you want to pass on a viable business to the next generation, but how do you do that in a changing political, legal, and tax environment? The first step is assembling your team of farm advisors that range from your CPA, lawyer, consultant, lender, and business advisor to navigate the challenges of farm succession planning. This team approach allows each advisor to work in unison in their area of expertise to develop a plan that best suits your farm. Each farm is unique and the tools needed to navigate a challenge successfully are different for each farm.

The average age of a farmer in the U.S. is 57.5 years old and a successful succession plan takes years to effectively implement. Don't wait to contact your advisors to get the process started.

In closing, farming is an extremely rewarding business and way of life. There's a saying that if you treat the farm like a business, it's a wonderful way of life. If you treat it like a way of life, it's a terrible business. Implementing tools that put an emphasis on financial stability can increase the odds that there is a viable and profitable operation to pass on to the

next generation. Farming is not easy, nor is the business of farming, assembling your team of advisors will help ensure your family farm's legacy and success.

#### About the Authors:



**Jonathan Guenther**  
CPA, Practice Leader  
Agri-business



**Aaron Moller**  
CPA, Manager  
Agri-business



**Adam Bormann**  
CPA, Sr. Associate  
Agri-business

*ELO CPAs & Advisors is a leading Accounting, Agri-business and Advisory firm with six offices throughout eastern South Dakota. You can reach any of the authors by calling (605) 996-7717 or visiting us anytime at [elocpa.com](http://elocpa.com).*

# Homegrown

## Experienced Agri-business Tax and Advisory Services for Every Agricultural Operation.

For nearly 40 years, ELO CPAs & Advisors has been a leading agri-business accounting firm with an emphasis on all facets of agricultural operations. Agriculture is so important to ELO, they have a complete practice focused solely on Agriculture and Agri-business.

ELO has been helping farmers and their operations throughout the region to protect, maintain and grow their operations. From accounting and business advisory to wealth management and succession/estate planning, we will make sure you feel at home every step of the way. Join the generations of farmers that have relied on ELO to be their trusted source for all things Agriculture.

To visit with one of our Agri-business Advisors, please contact us at [elocpa.com](http://elocpa.com), or call (605) 996-7717.



EXPERT TALK ON LIVESTOCK HOUSING AND ANIMAL HUSBANDRY  
LISTEN TODAY.

THE MODERN  
PRODUCER  
P (📡) D C A S T



# Don't Let Your Manure, Manage You!

# SMART MANURE

## AERATION SYSTEMS

- ✔ Keeps manure in a constant liquid state with uniform consistency and even nutrient distribution
- ✔ Eliminates the need for any form of tractor agitation
- ✔ Savings to be made on fuel, labor and fertilizer costs
- ✔ Better quality air for you and your animals
- ✔ Minimal maintenance and running costs
- ✔ System can be installed in concrete tanks, manure stores and lagoons. Including retro-fitting



### Cost-Effective, Eco-Friendly, Safer!

*"I'm 100% satisfied...  
low-energy consumption, simple...  
I think it's a great system!"*

*Dave V.B. - Ontario*

Brought to you by...

**DAIRYPOWER**  
EQUIPMENT  
MANURE MANAGEMENT SYSTEMS

SINCE 1973

Specialists in Manure Management Systems  
for Hog, Beef & Dairy for Over 45 Years

E : [info@dairypower.com](mailto:info@dairypower.com)

[www.dairypower.com](http://www.dairypower.com)

[f](#) [@](#) DairyPower [t](#) @DairyPower Equip

# Smart Manure Aeration Systems put you in control of your manure management...

Dairypower Equipment, the leading Irish designer and manufacturer of manure aeration and handling equipment, is now serving the North American market.

The company headquartered in Cork, Ireland has been serving the agricultural sector since 1973, with their high-quality manure handling equipment installed in over 40 countries worldwide.

Suitable for the hog, beef and dairy industries, the Smart Manure Aeration System is designed to keep manure in a liquid, pumpable state, year-round. High-volumes of low-pressure air is pumped through the manure from the base of the storage facility, mixing the manure, eliminating the build-up of toxic, volatile gases and the need for tractor agitation.

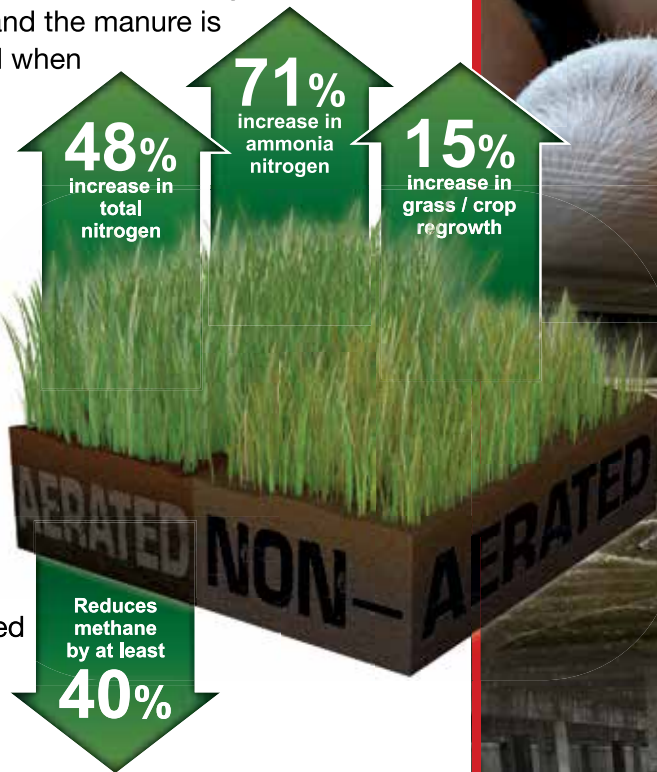
“With Smart Manure Aeration we’re creating an aerobic environment that reduces odors and dangerous gas emissions, while increasing manure ammonia nitrogen levels by up to 70%. Farmers are purchasing less fertilizer and fuel, never agitating, and the manure is ready to pump and spread when they are.

This creates a safer environment, resulting in better air quality for humans and animals and requires minimal energy consumption. It is the safest, most cost-effective method of managing your manure”, says Dairypower’s Rhys McLoughlin.

Thousands of aeration systems have been installed around the world with many systems across North America.

Dairypower’s expanding dealer network (including their newly-formed partnerships with **New Standard Group** and **Penner Farm Services**) are there to help serve and support hog, beef and dairy farmers locally.

To learn more, go to [www.dairypower.com](http://www.dairypower.com) or email: [info@dairypower.com](mailto:info@dairypower.com)



# The **FUTURE** of **BARN AUTOMATION** is **NOW**



**CONTROLTECH**

The Fusion Building Automation System is a modular, card-based control designed to meet the challenges of today's top producers. Each control is tailored to meet the needs of the specific application requirements. Innovative and powerful software tools allow the control to be easily programmed for day-to-day and complex tasks. The modular cards ensure your system can be upgraded – not outdated – as technology advances. Choose the Fusion to streamline your operation today.



# We Build Farms.

Our family of premier Agricultural Brands is growing - again! As of May 1st, 2022, Dundas Agri Systems has merged with AgriHub Inc and the rest of our Operating Brands. With 7 Operating Brands and 12 regional offices, our team of over 200 Agricultural experts are ready to assist you to build or further develop your operation.

Visit any one of our Operating Brands websites to learn more about projects, products, available scholarships, our photo contest, and much more!



We Build Farms.

agrihub.ca



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

### **New Standard Ag**

Kevin Kurbis:  
204-485-4600

[kevin@newstandardag.com](mailto:kevin@newstandardag.com)

New Standard Ag  
140 Panet Road  
Winnipeg, MB R2J 0S3

### **New Standard US**

Tim Kurbis:  
605-496-9696

[info@newstandardus.com](mailto:info@newstandardus.com)

New Standard US  
1200 E Robur Dr.  
Sioux Falls, SD 57104

### **New Standard West**

Kees (Kase) van Ittersum:  
403-650-5051

[kase@newstandardwest.com](mailto:kase@newstandardwest.com)

New Standard West  
243159 RGE RD 281,  
Rocky View County, AB.  
T1X 2C4



[www.newstandard-group.com](http://www.newstandard-group.com)