



Dr. Noel Williams
Chief Operations Officer
Iowa Select Farms

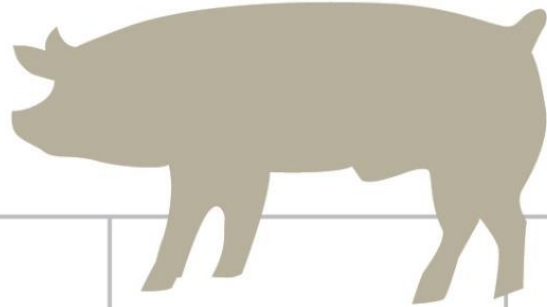




- Founded in 1992 by Jeff and Deb Hansen
- Started in Ag Manufacturing – opportunity for large-scale production
 - Feed ingredients readily available
 - Manure valuable to local farmers
 - Bring jobs to rural Iowa - quality labor force



MISSION | VISION | VALUES



OUR MISSION

To responsibly produce safe, nutritious and high quality pork for our customers and the food companies they serve.

OUR VISION

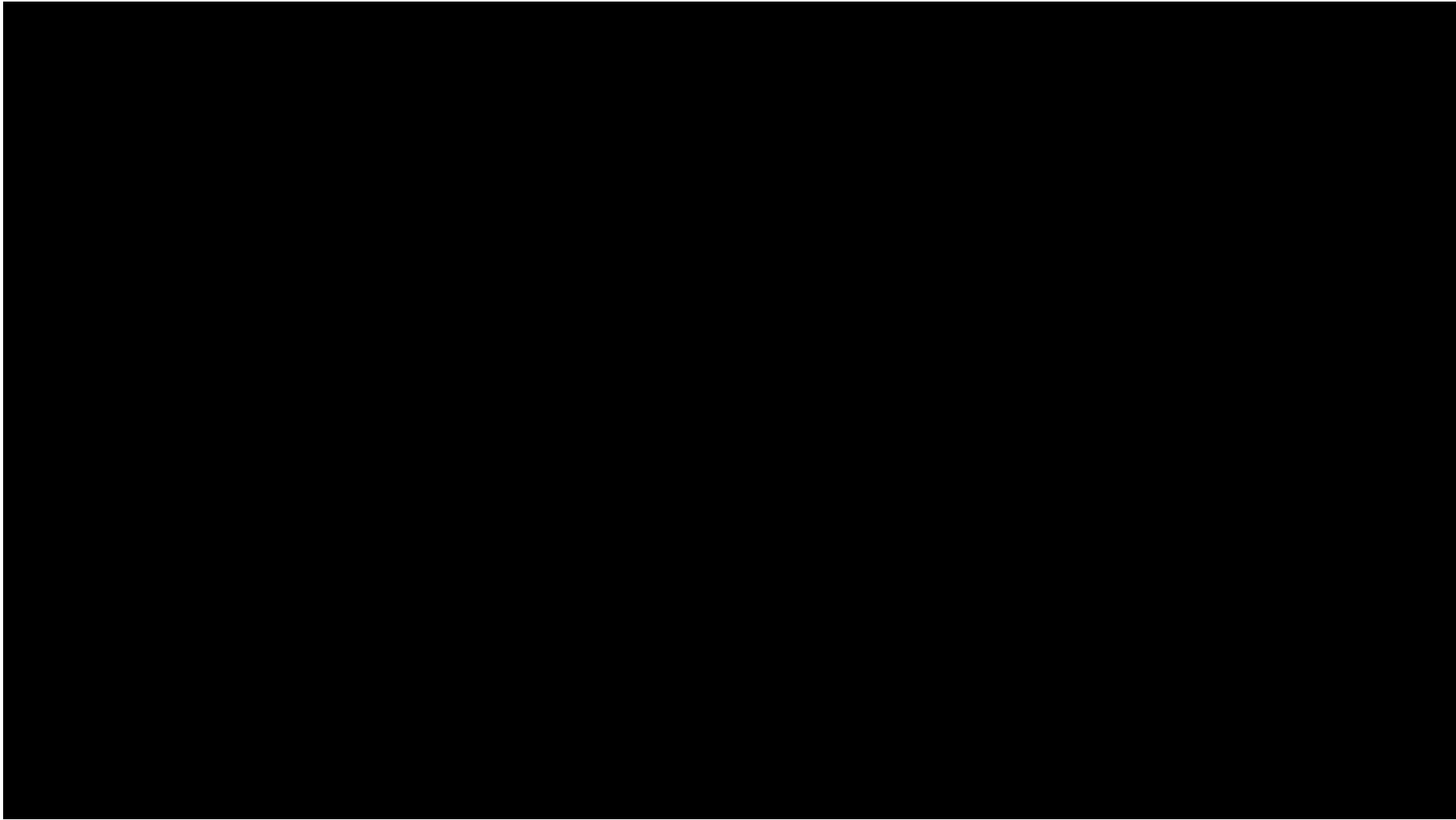
To compete in a global marketplace for protein production by fostering a culture engaged in operational excellence and innovation.

OUR VALUES

We believe in doing the right thing every day, operating with character and integrity, and being stewards of our resources. We fulfill our values every day through SelectCare, and believe by taking care of our people, our animals, our communities and our environment we will achieve our mission.

SelectCare™ Producing Pork Responsibly







SelectCare™ Producing Pork Responsibly



Iowa
**Select
FARMS**



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Iowa
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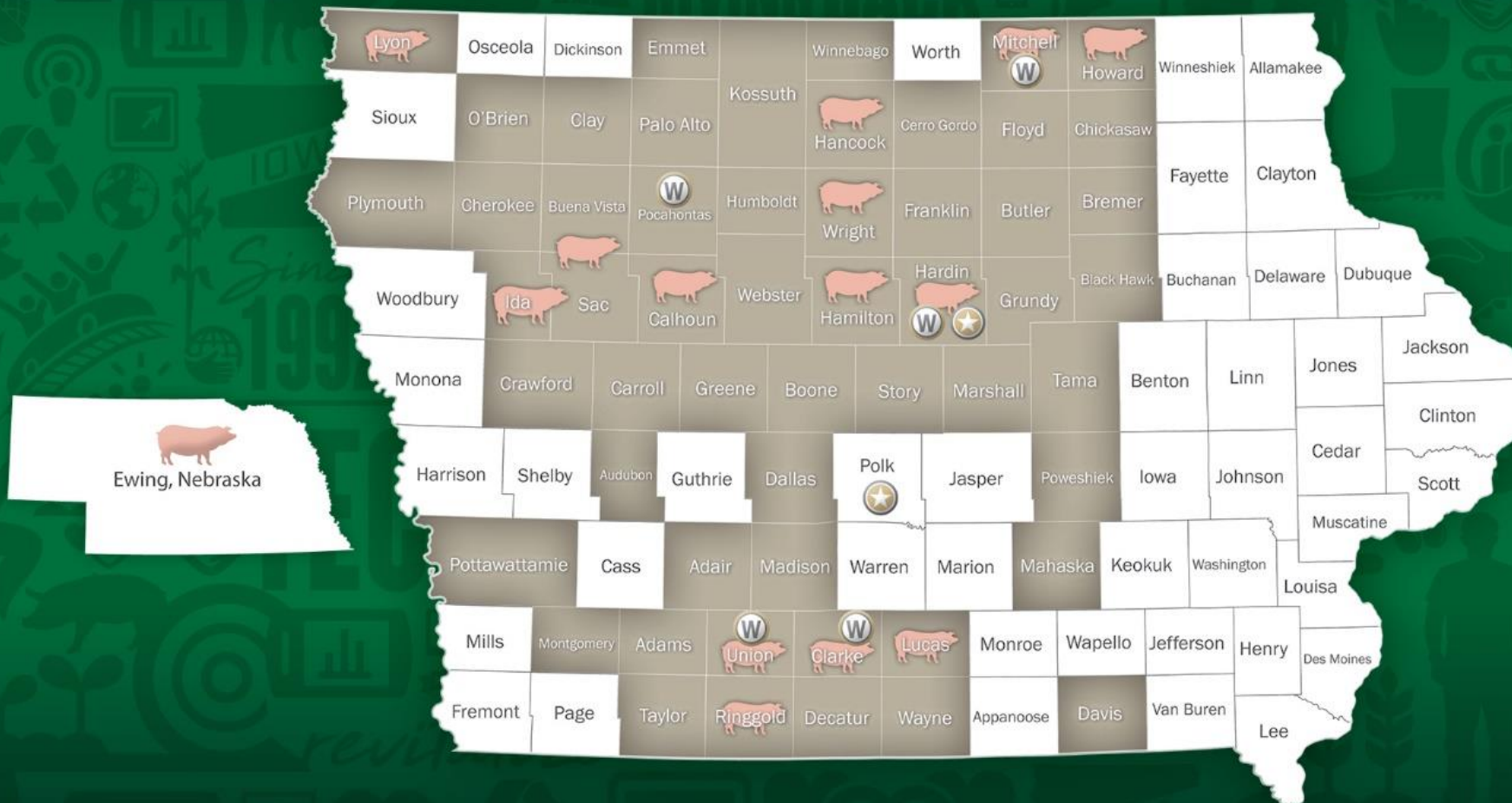




SelectCare™ Producing Pork Responsibly

HOMEGROWN IOWA

Growing Communities Growing Iowa

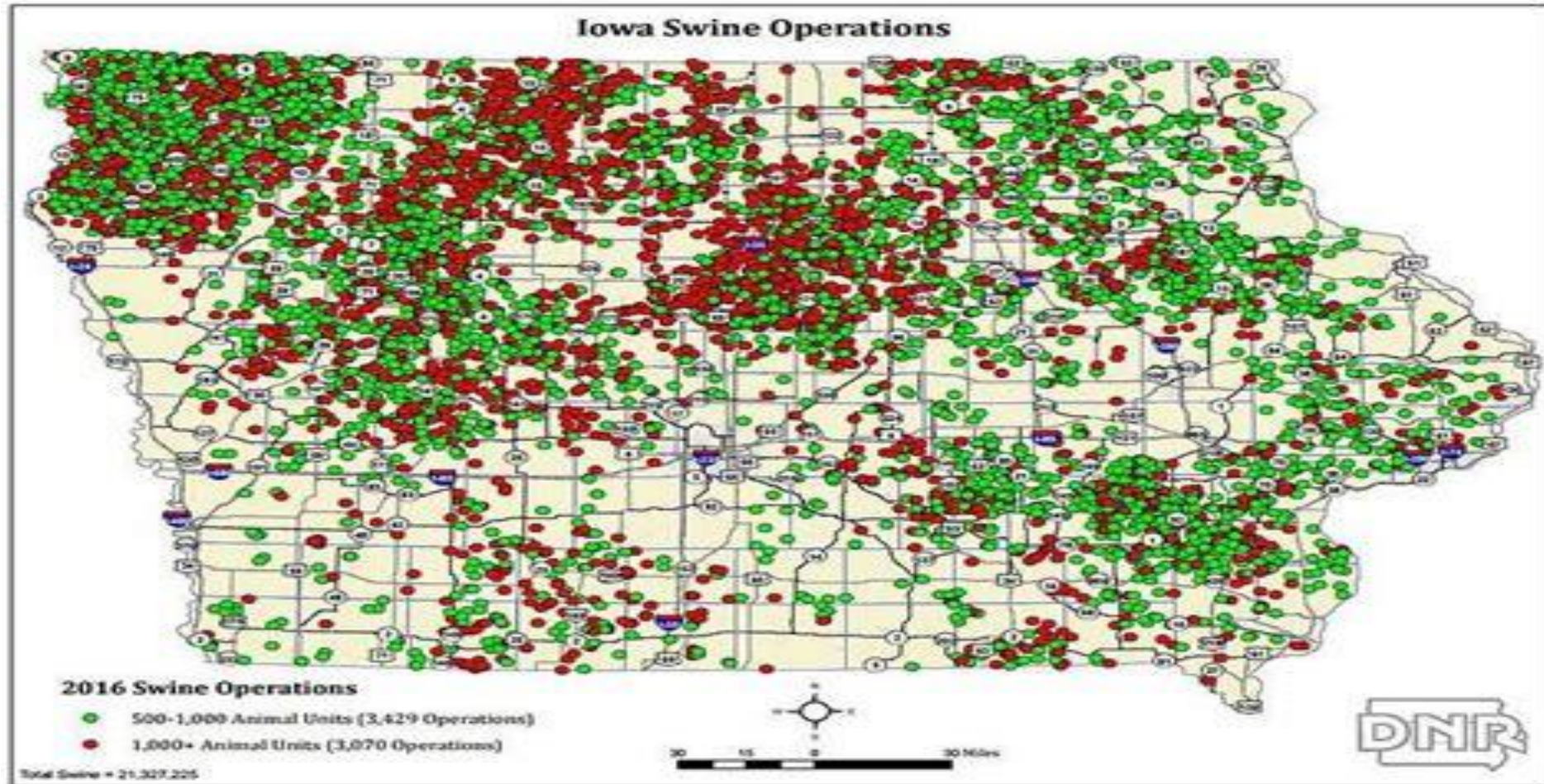


-  Sow regions
-  Office
-  Warehouses
-  Nursery, GDU and finishing region

Ewing, Nebraska

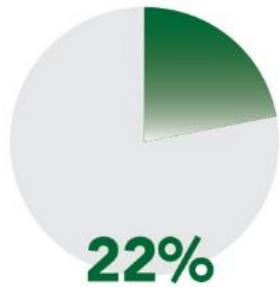


The World We Live In



OUR PLACE IN IOWA AGRICULTURE

IOWA'S SOW HERD
1M SOWS



242,500 SOWS

IOWA'S PIG INVENTORY
24M



SOWS AND MARKET PIGS

IOWA'S PIG MARKETED
55M



PIGS MARKETED

IOWA'S TOTAL IN-STATE LIVESTOCK
84M



IOWA SELECT FARMS

50,696,000
BUSHELS
OF CORN

22,748,000
BUSHELS
OF SOYBEANS

Employment Trends in the United States

- Iowa is currently the 3rd lowest unemployment in the country = 2.5%
 - Vermont is 1st with 2.1
 - North Dakota is 2nd with 2.4
 - United States overall is 3.7% - the lowest since 1969
- Ames Iowa unemployment rate = 1.5% = the lowest rate in the country currently

Iowa is Great Place to Live and Grow Pigs

- Inputs – feed ingredients, cheap energy
- Infrastructure
 - Processing Plants
 - Feed Mills
- Our geography minimizes our cost and improves operating efficiencies
 - State government
 - Transport, health, people, environmental regulations
 - Supervision efficiency
- Issues.....
 - Pig dense
 - No employees
 - Weather challenges

How do We Do it?

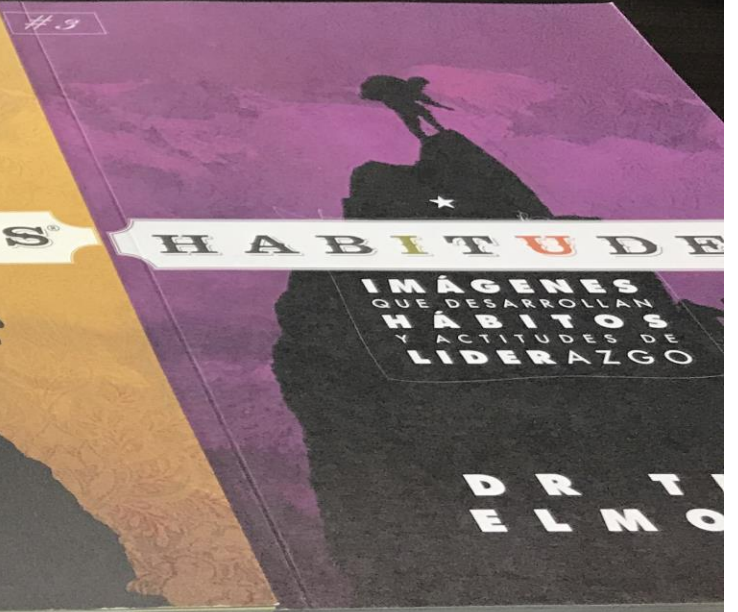
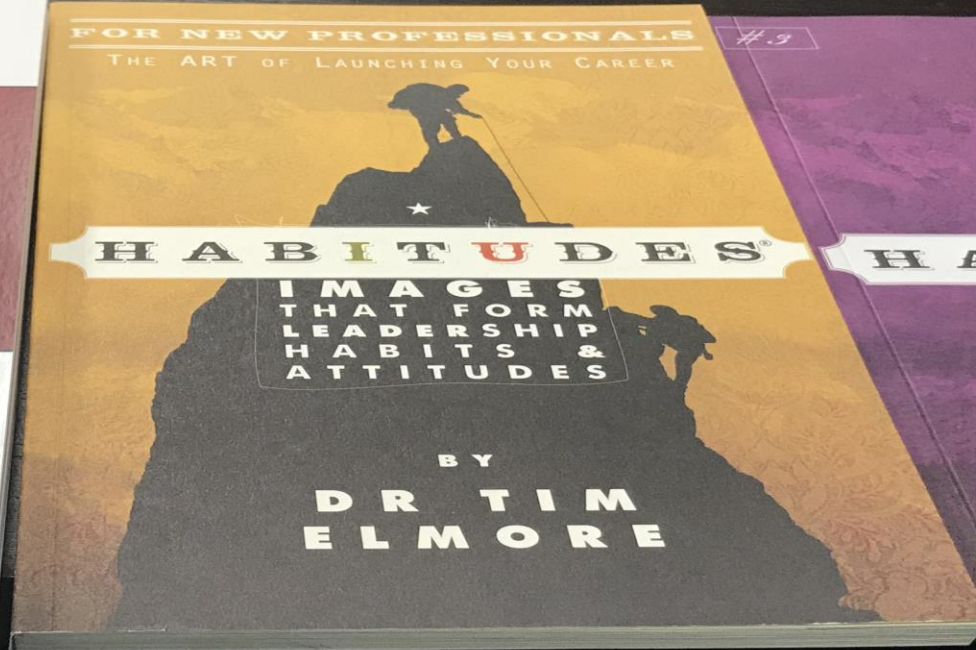
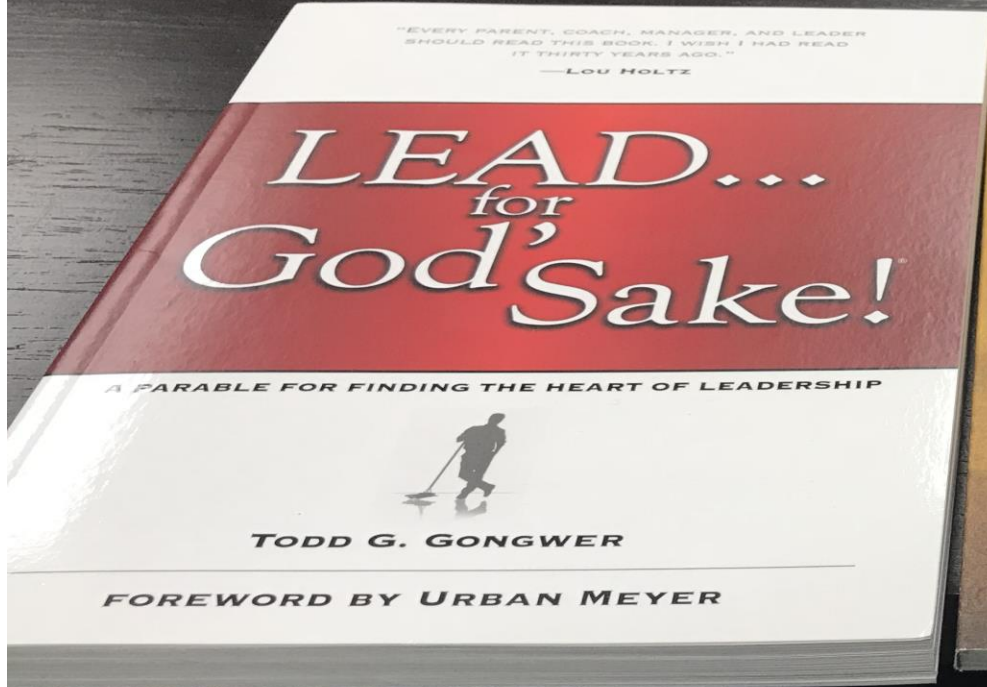


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Leadership Principle

- Leadership – no matter what your role, if you are around people you influence them by the choices you make. You are always a leader
- Leadership is not defined by position, by title or status
- Leadership is a selfless act where you put others before yourself
 - Good leaders don't do it to gain power
 - Good leaders don't do it to make more money
 - Good leaders don't do it to gain prestige or status
 - Good leaders do it because they are selfless
 - ***Selfishness. You have to make choices every day and if in those choices you demonstrate if you are selfish or not. If you think of others in those choices, you are selfless. If not and you put yourself first then you are selfish. People look at your choices and determine if you are selfish or selfless. Only selfless people make good choices***



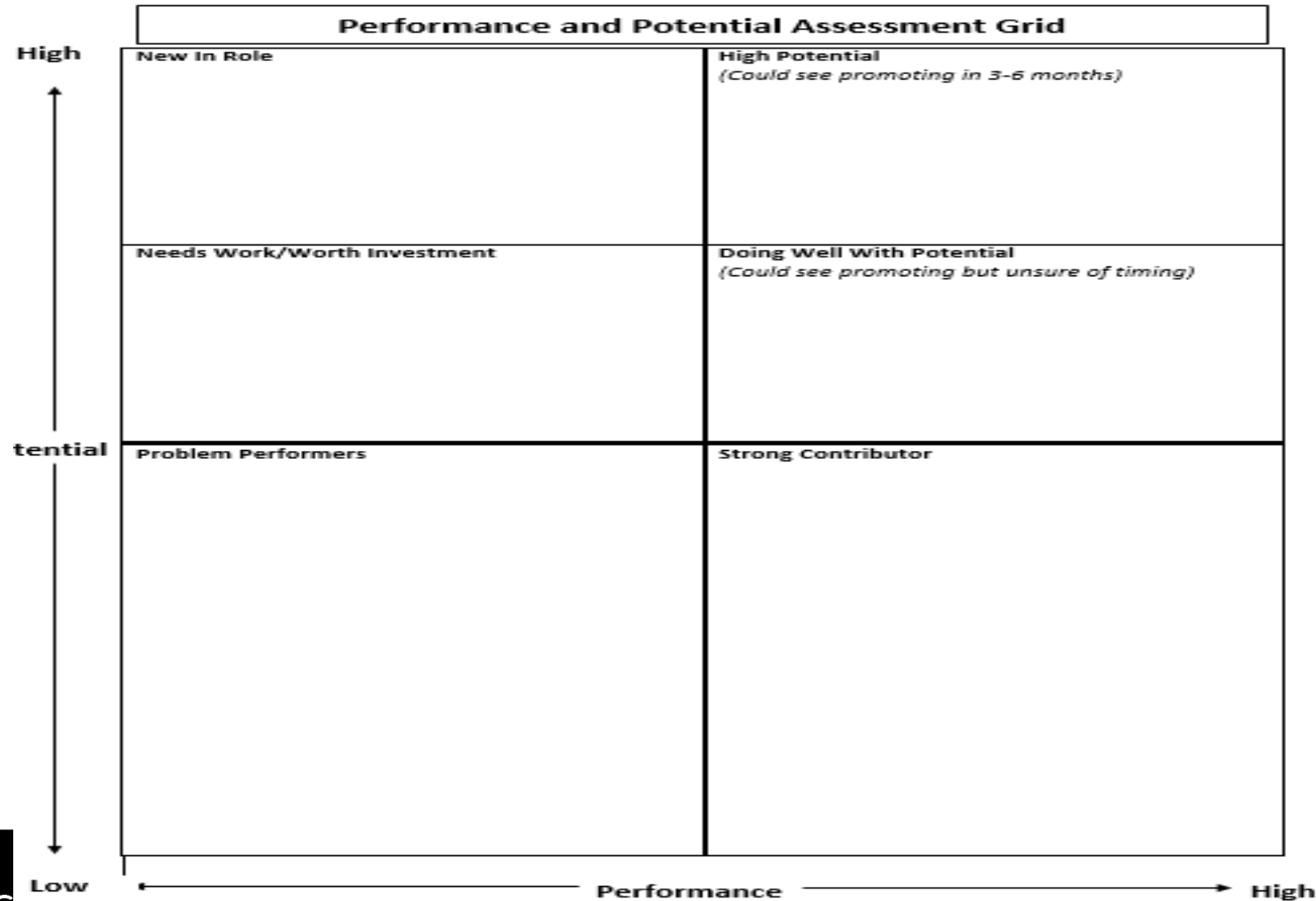
How do You Get to be a Good Leader?

- Malcom Gladwell book “Outliers”
- In depth study of people who are extremely successful at their skill
 - Bill Gates, The Beetles, Master Violinist
 - Common denominator
 - *Practice*
 - Takes 10,000 hours of practice to truly master a skill

Examples of Leadership Training

- Training & Developmental Programs
 - ***PPA – evaluate each person within the organization yearly.***
 - Interns
 - ***Production Leadership Program = PLP***
 - Ambassador group
 - Young Leaders group
 - PI training – HR
 - Habitudes/Leadership – Noel and is now trickling into a variety of other audiences in SOWS
 - 3 all-company meetings
 - Pig House Doctor
 - ESL classes
 - HR Training days 1 & 2

Human Resources –Employee Engagement



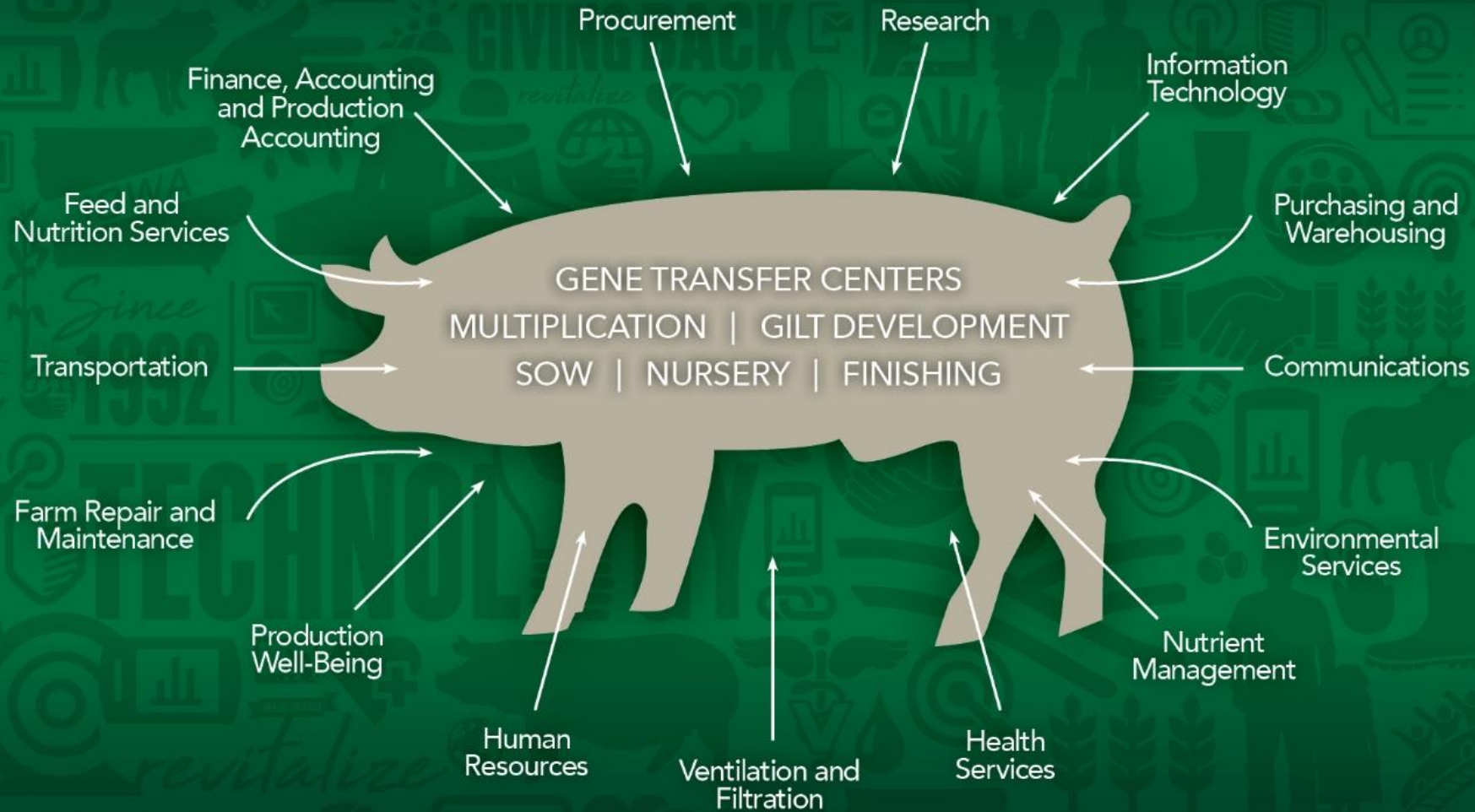
Production Based



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PRODUCTION SUPPORT DEPARTMENTS



Singular Goal



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Billion Pound Journey



Billion Pound Journey




Transparency


Our Goals and what we Do
***Above All -
Focus on the People***



How we Communicate



BEST PRACTICE



Biosecurity Update and Announcement

AFRICAN SWINE FEVER

As you may have read in news reports, China is currently reporting an outbreak of African Swine Fever (ASF) is a highly contagious foreign animal disease that results in high mortality and an immediate shutdown of pork exports. Until recently, ASF was only confirmed Africa, Eastern Europe and the Middle East.

This disease is characterized by symptoms of fever, red/purple skin discoloration, diarrhea, abortions—and most notably—high mortality rates. These mortality rates can range from 80-100% mortality in all age groups of pigs, including adult pigs.

ASF is spread in a similar fashion to other diseases—from exposed pigs, people, supplies/equipment and insects, and by way of some feed ingredients. There is no available vaccine and treatment options are minimal. ASF is classified as a foreign animal disease that would stop exports of our products to other countries. It is estimated that an ASF outbreak in the United States would result in a year one economic loss of \$8 billion to the swine industry.

Alarmingly, it has now been reported in China and has spread rapidly throughout its pig population in a short period of time. Because of the exchange of people and feed ingredients from China, we are more at risk from a disease introduction from China than from any other country. This disease is rapidly spreading and is predicted to continue to spread.

INDUSTRY AND GOVERNMENT AGENCIES ARE CURRENTLY IMPLEMENTING SAFEGUARDS TO MITIGATE THIS RISK INCLUDING—


1. Increased monitoring and inspections of people and goods transported from China and Russia (another country with ASF)
2. Potential implementation of a process to test goods from these countries


WHAT CAN WE DO AS A BUSINESS TO PROTECT OUR COMPANY?

Fortunately, we have all of the processes and procedures in place in our business today to mitigate risk. A few points to emphasize as it pertains to our farms and facilities—

1. **Biosecurity**—100% execution of our current biosecurity protocols for people, supplies, equipment, feed and animal entries into our farm is essential to mitigate our risk. We are diligent as a business for biosecurity protocols, but we must ensure we are achieving 100 percent compliance on all aspects of biosecurity. This includes not only sow farms and multiplication, but also adhering to wean-to-market biosecurity guidelines.
2. **No Visitors**—every person that enters one of our facilities today must have a completed Iowa Select Farms entry card. This is for all individuals and please review with all employees this process. Going forward, we will limit traffic to only individuals directly involved with farm operation and maintenance. *No outside visitors allowed.*
3. **Feed**—since the introduction, we have been diligent as a business on feed ingredient sourcing and supplies and we are re-auditing all mills to ensure processes are being met for a safe supply.
4. **Animal Movement**—if you see any suspect clinical symptoms (high mortality, rapid spread of fever, diarrhea or skin lesions) contact your health services veterinarian immediately and prior to movements. This will minimize potential transmission of disease. *Be diligent in reporting any unusual clinical signs.*

This is a serious threat to our business. We must follow all existing biosecurity processes and procedures. Any questions, please contact your health services veterinarian or you service manager.

 **BEST PRACTICE** — **NO VISITOR POLICY ENFORCED**



Growth Update

The wet summer and spring definitely caused challenges for our construction efforts as well. Since we started our construction season this spring, we have had record rainfall. Heaven forbid we ever have a drought, but if we do...let's just plan for aggressive construction and it will break the drought! Despite the challenges, Brian Blumhagen and his team has done a great job of providing the facilities necessary to meet our timelines for pig production for our contractual obligations to our partners. We will complete construction of three new sow farms this year—S038, S039 and S042. We will also build approximately 120, 2,490 head finisher buildings this year. Although space utilization is certainly a challenge, Brian, Ron Rush and Allen Whitley are communicating on a daily basis to find homes for our record (and growing) inventory of 2.6M pigs on feed.

Last week, we started farrowing at S038 and to date have farrowed 52 litters with a total born of 15.2 and born alive of 13.6. So far excellent results and hope they continue. Thanks to everyone involved in the start-up of this farm and all of the construction efforts.

African Swine Fever

Recently, we released a *Best Practice* training on the growing spread of African Swine Fever (ASF) throughout the world. I have received several questions on this and wanted to provide an update of current activity and what Iowa Select is doing to protect the business.

ASF continues to spread on a global basis. In China, it continues to spread across the country. Although it is difficult to determine the complete impact in China, we do know that it is spreading throughout all of the major pig producing regions in China and this week, it was reported in some larger, more modern farms. Bottom line, it continues to spread and result in an increase in mortality in China and risk for the rest of the world, especially Asia. It has also been reported in Western Europe in Belgium. Until detected in Belgium, ASF had been confined to smaller pork producing companies in Eastern Europe and Russia. With the confirmation of ASF in Eastern Europe there is now greater risk of spread into major pork producing countries of France, Germany and Denmark as they are in close proximity to Belgium. As a comparison, it would be similar to an introduction to South Dakota with the fear that it would get into the major pork producing states of Iowa, Southern Minnesota and Nebraska. ASF continues to spread.

So how do we protect our business? First and foremost, we have changed our process on procuring feed ingredients and supplies from affected countries. We have limited procurement of feed ingredients and supplies from affected countries and have quit using products and feed ingredients we deem non-essential to the business, or changed sources where we can to other countries on essential supplies. For those feed ingredients and supplies that we have to procure from affected countries we have reviewed biosecurity guidelines for production and packaging of these products and implemented a 45 day quarantine for these products before they can enter our farms. This quarantine period is based on research that has been done on virus survival of all foreign animal diseases, not just ASF, and we believe that this provides us a level of protection that dramatically mitigates our risk. Additionally, we have initiated feed sanitation





LAST CHANCE-S032. Home

Home Search Menu Idioma Translate Feedback

isf\jcoral1 2745.16.000.00 Friday, September 7, 2018 14:00

Site Calendar

September 2018

Sep 06 Fri	Sep 07 Sat	Sep 08 Sun	Sep 09 Mon	Sep 10 Tue	Sep 11 Wed	Sep 12 Thu	Sep 13 Fri	Sep 14 Sat	Sep 15 Sun
17155	17148	17149	17150	17151	17152	17153	17154	17155	

[Legend](#) [Feed Order Summary](#) [Site Wean Schedule](#)

Home Site Visits Reports Site Info

NWS ALERTS

Current Watches, Warnings and Advisories for Lucas (IAC117) Iowa issued by the National Weather Service

Flash Flood Watch
Issued September 07 at 2:30AM CDT until September 08 at 7:00AM CDT by NWS
Last Queried: 2 minutes ago Most Recent: about 6 hours ago

ALERTS

- Receive Order Items
Shipment #130883 has 1 item marked as delivered that isn't received.
- Ticket Awaiting Site Approval
There is 1 ticket ready for your review.

[About Alerts](#)

TO DO'S

- Feed Line(s) Without Feed Orders
Feed Line(s): *01-03 GLAC S032.
- Semen Estimates Needed
Days: Monday
- Semen Orders Needed

My Apps

- Data Entry
- Semen Ordering
- Supply Ordering
- Ticket System
- Biosecurity
- Dashboard
- Document Library
- MetaFarms
- Movements
- Mowing
- Nights Down
- Safety
- Sentinel
- Training
- Vet Services


Company Apps

- Company Directory
- Employee Referral
- Production Well Being
- Site Map
- Weather

COMPANY EVENT

- ANNOUNCEMENT
- WHAT'S NEW ON
- OTHER ISF WEB S

IOWASELECT.COM



Implement Cultures Not Process



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Herd Health History with ISF

- 1993-2013
 - Mixed bag of health issues
 - Lived with PRRS, tried various strategies to manage PRRS
 - Vaccine(s)
 - Live Virus
 - Various gilt introduction methods
 - Mixed results
 - Bottom line – 60 – 90 % of our sow farms had wild type introductions of PRRS annually
40 % more than one introduction

ISF Experience – PEDv

- 1st PEDv Case
 - 4200 head sow farm
 - PM May 15 – 2 litters scouring – oldest room
 - May 16 – 2 oldest rooms scouring
 - 6 am May 17 – ENTIRE farrowing house affected
- May 17th – PEDv confirmed in U.S. herd

ISF Experience - PEDv

- PED (+) Sow Farm Plan
 - Shut down initial sow farm to gilt entries for 20 weeks
 - Cleaned, cleaned, and cleaned
 - Farm returned to baseline weaned pigs in 7 weeks
 - Gilts entered farm in early October and remained negative to PED
- Handful of cases in finishing barns (most likely)
 - Marketing
 - Lateral Infections

ISF Experience PEDv

- Thoughts at End of Summer
- PED outbreak on the sow farm was similar to a TGE outbreak
 - Mortality lasted a couple weeks longer
 - Clearing virus from farm seemed to be a little more difficult
 - Shutdown, expose, and clean was a viable tool to control the disease
- Sow farm experience + low number of finishing breaks = SUMMER INTERVENTIONS were successful
 - But what about the reports from other areas of the country???

ISF Experience - PEDv

- Week 43
 - Sunday, October 20th – 3 sow farms scouring
 - October 22nd – 2 more
 - October 24th – 6 more
- By Week 48 - 25 positive sow farms
- Week 5, 2014 – southern Iowa break
 - Additional 9 farms
- Week 17 – Last sow farm in SW IA broke

PEDv Response

- Sow Farm Clean Up
 - 20 – 30 weeks no gilt entries
 - Clean, clean, clean
 - White washing
 - PEDv vaccine
 - Bio-Security Changes

PEDv Response Bio-Security Changes

- Feed
 - Sal Curb
 - Segregation of feed mills
 - Sows and Multiplication versus commercial finishing
 - FAD brought a new round of changes
- Transport
 - Every internal truck and trailer that moves pigs gets washed, disinfected and dried after every load
 - Unloaders for markets

PEDv Response Bio-Security Changes

- Nutrient Management
 - Tiered system for applicator entry
 - Site or farm manager inspects every applicator in to insure equipment is cleaned and disinfected
 - Sets barn up
 - Tremendous effort to get done
 - Filtered farms, new pump outs so that the pump never goes into the facility

PEDv Results

- Took the System Negative by summer of 2014
 - 3 breaks since then
- Post PEDv and herd shut downs had best performance that we had ever had
- Until.... 1-7-4 in fall of 2014
 - 80 % of system had introduction of 1-7-4 wild type PRRS
 - Almost back to the drawing board
- Depressing, but showed the potential was there

Production 2014

• Total Born	13.6
• Born Alive	12.3
• P/W/S	10.5
• WTM Mortality	10.8 %

Facility Overview – Sows

- Beginning of 2015
 - 38 Farms
 - 1 Filtered Farm
 - Negative Filtered Multiplier with long track record of PRRS stability
 - 2 OPG Farms
- We were at a cross roads
 - Older facilities which needed to be remodeled
 - OPG pressure
 - Emphasis on Antibiotic Reduction
 - Mediocre Production Performance
 - Profitable business with long track record with good customers
 - New packing plants being built or in planning stages
 - Had two extremely profitable years

What Did we Do ?

- Re-Modeled 24 sow farms with positive pressure ventilation and OPG
- Built and stocked 9 new sow farms with positive pressure ventilation
- Built and/or re modeled 10 GDU's
 - Gilts enter at 20-25 weeks of age
 - Gilts are managed for sow farm entry
 - Puberty Induction (HNS) enter farms at 30 weeks of age (35 %)
 - Bred and gestated until 11 weeks pregnancy, farm entry (65%)
- Embarked on 35 PRRS closures
- Built 900 K new spaces
- Built a new GTC

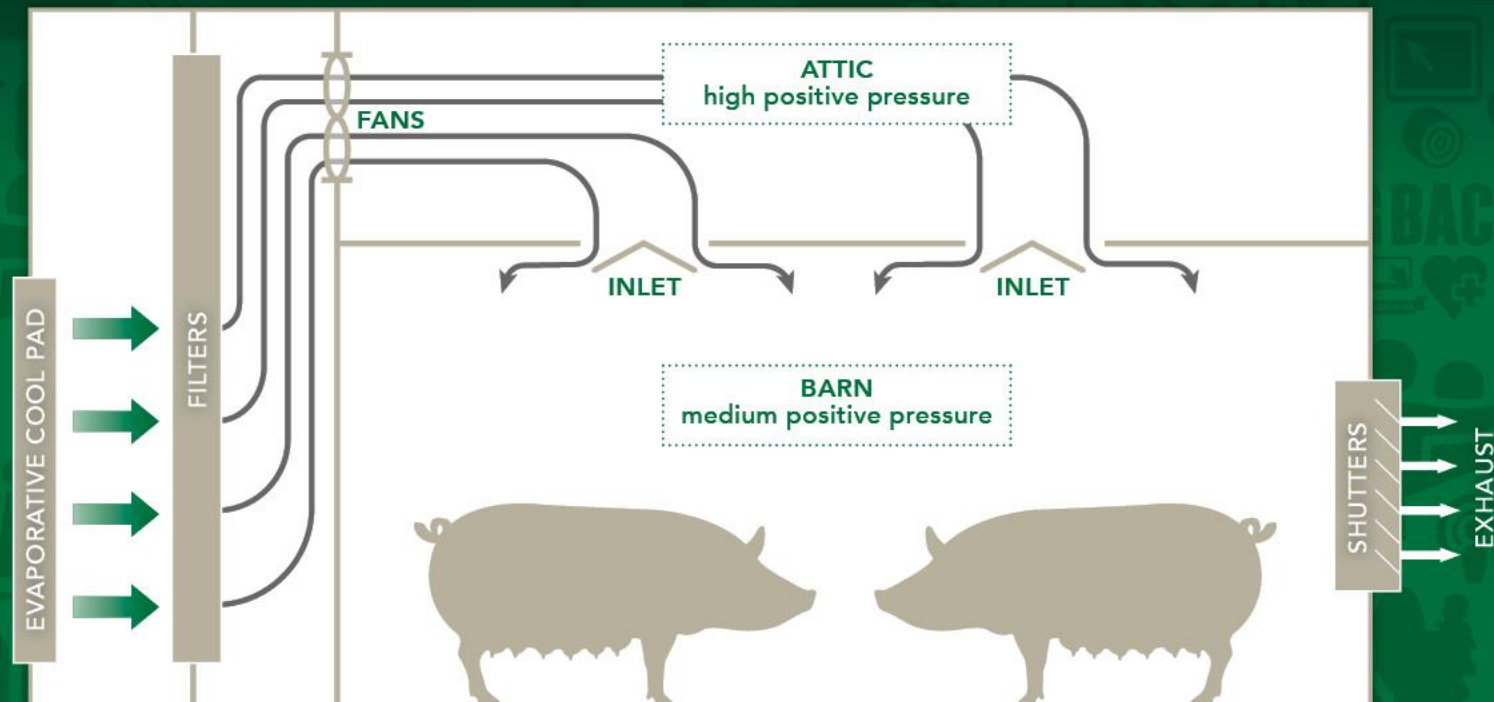
How'd We do it? Bigger Question Maybe Why



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POSITIVE PRESSURE FILTRATION (PPF)



EVAPORATIVE COOL PAD



FILTER BANK



INLET



SHUTTERS

Positive Pressure Filtration





SOW FARM LAYOUT





Breeding—up to 45 days confirmed PCP x 2



Filter Testing

Developed a filter testing trailer that can be taken to sites for testing rather than sent to third party lab.

- MERV Rating
- Airflow
- Test with clean and dirty pre-filters



UV Chamber

- Ultraviolet (UV) light chambers are to be used as a bio-secure way to enter **lunches, semen, personal hygiene/medical products, shipping reports and ID cards, and new tobacco products** into a farm.
- The chamber works by applying UV rays to the surface of items and eliminates most bacteria and viruses, such as PRRSv and PEDv.



Bench Entry

- Entry system between exterior door and shower rooms
- Avoids footwear contamination to enter the farm



Maintenance

- Dedicated staff schedule and farm tools and welders



Electronic Health Status Updates and Downtime Program

Health Status Chart

[Nights Down Lookup](#) [Print Version](#)

A Boar Studs B001-Hastings B002-Qualley
-1 night between farms

B Multiplication → ① G039-Shirley ② S029-Thayer
Sow/GDU
Visit in order

C Multiplication → ① N016-Patel
Nurseries
Receiving Pigs

D Multiplication TW003-Multiplication Truck Wash
Truck Wash

E Isolation Boars B004-Hefner

F PRRS Negative G018-Davis #1 [SVV] ✖ G019-Davis #2 G043-Lucas G110-Marton/Glenview G125-Jensen
GDU G500-Mott G501-Iso Pork G539-Sharpsburg G540-Conway G541-Gravity [Myco] ✖
(Filtered and Non-Filtered) G543-Rockwood G544-Brooks G686-Colfax [SVV] ✖ G688-Stamps G733-Saratoga G760-Wood
G948-Marton/Hunt

G PRRS Positive
GDU
(Filtered)

H PRRS Positive Group 1 → ① F215-Marton/Nelson
GDU Group 2 → ① G016-Stalker #2
(Non-filtered) Misc: Group → ① G562-Cyclone [SVV] ✖
1 night between groups. Groups
1-3: visit in order within group.

NIGHTS DOWN LOOKUP

From
Scott Twp. East-F005
Departing
Monday, November 19, 2018

NIGHTS DOWN
2
[Details](#)

To
Last Chance-S032 ▶
Safe to Arrive Date Time
Wednesday, November 21, 2018 5:00 AM
(a day from now)

[Show Search Options](#)

Training

- Training all farms on “Best Practices” for successful biosecurity
 - Filtered farms
 - Implementation of best practices at non-filtered farms as well
- On-farm training of the SOP with documented hands-on training
- Monthly “Best Practices” review materials

Training Videos

- Developed professional quality training videos to use with all employees
 - Seven videos in English and Spanish
 - 1:00 – 2:30 in length
 - Highlight all aspects of importance to each process

Video Reviews

- Video camera installation in 2016 to monitor:
 - Biosecurity on filtered farms
 - Animal well-being
- Decided to put in all sow farms and GDUs in 2017
- Review video on each farm monthly
 - Semi-annually with farm leadership
- Over 700 reviews now completed
 - Valuable feedback and training resource for biosecurity



Video Monitoring – Supply Entry



Video Monitoring – Correct Wean Pig Load Out



Video Monitoring: Farm Entry



Video Monitoring: Transition Room Procedures



Video Monitoring

Utilization of out Tools Website – System Communication

This screenshot shows the 'ADD VIDEO REVIEW' form. At the top, it indicates the user is logged in as 'Admin' and shows the current date and time. The form is titled 'REVIEWED BY: PETE THOMAS'. Below this, there are fields for 'Review Date' (set to 2016-10-31), 'Review Period Start' (set to 21:28:00), and 'Review Period End'. A list of review categories is provided, including 'BENCH ENTRY', 'WEANED PIG LOADOUT ROOM', 'FARROWING MORTALITY REMOVAL', 'CULL SOW LOADOUT', 'BREEDING TRANSITION AREA MORTALITY REMOVAL', 'D & D ROOM SUPPLY ENTRY', and 'PRODUCTION WELL BEING OBSERVATIONS'. A 'Comment' field is also present, with a placeholder text 'General comments about the video reviewed (in English)'. A green 'Save' button is at the bottom.

This screenshot shows the 'VIDEO REVIEW. Admin' page. It displays a list of reviews from 10/1/2016 and before 11/1/2016. The table has columns for 'Site', 'Reviewed By', 'Review Date', and 'Comment'. The reviews are as follows:

Site	Reviewed By	Review Date	Comment
Wright Sow-5025	Pete Thomas	7 days ago	Need the camera located in the gestation mortality removal area, cannot see this process. Would like to see the farm door in the gestation load-out from the camera. Will follow-up with IT on these items. Items were stacked and touching or in bags in the D&D room. Everything should be placed on the shelves. This is going to take more than one run in your room. Wean-pigs were packed pretty tight on one side, and had 2 pens still open. Make sure not to pack them too tight if they ever need to be held in the room. Cameras in farrowing and hallways were running basically all of the time making it difficult to assess animal handling events.
Stockdale-S011	Brian Herrmann	8 days ago	Good job Sows !!!
Wright Sow-5025	Brian Herrmann	11 days ago	Empty Culligan water bottles should probably not be taken out thru the farrowing mortality door. Full Culligan water bottles were brought in thru the D+D room, but the person who entered the bottles into the farm reached across the clean / dirty line to grab the bottles outside the D+D room exterior door to bring them into the room. These should be handled in by someone who is outside.
Arends-S014	Brian Herrmann	15 days ago	

At the bottom right, there is a 'Download as csv' button.

Transportation Infrastructure

- Four Truck Sanitation Centers
 - MTW (PRRS Free) Southern Iowa
 - Wash and Bake
 - Ponderosa Commercial
 - Wash and Bake
 - Iowa Falls Inter-sanctum
 - 5 Bays
 - 3 Dryers
 - Iowa Falls Market Wash
 - 3 Bays

Inner Sanctum Trailer Wash & Dryer



Wash and Dry Facilities

- For internal movements, all trucks and trailers are washed, disinfected and dried between all movements
- Segregate fleet based on health status of farms
- Trucks and trailers are dried for 20 minutes at a temperature of 160 degrees
 - Research has demonstrated that this time and temperature is effective against disease such as PRRS, PEDv, ASF, CSF, and FMD

Gilt Movements



Weaned Pig Movements



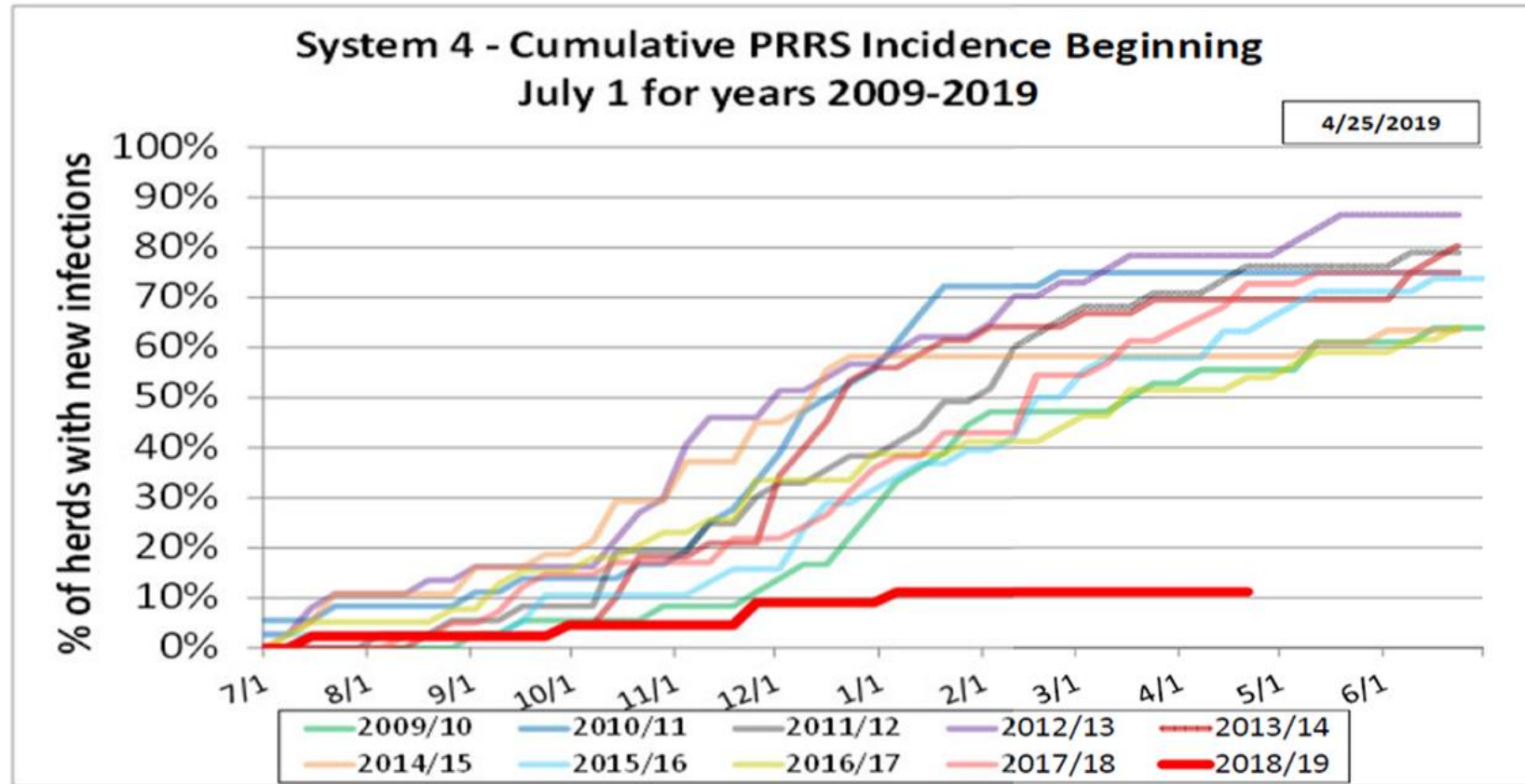
Warehouse and Distribution

Four warehouse and distribution centers to inventory and provide animal health and production supplies

- Cost
- Biosecurity



Overview of PRRS Mitigation



Production 2014 vs 2019

	<u>2014</u>	<u>2019 (YTD)</u>
• Total Born	13.6	15.2
• Born Alive	12.3	13.6
• P/W/S	10.5	11.9
• PSY	25.2	29.2
• WTM Mortality	10.8 %	7.20 %
• Vet Med, \$/Hd	\$5.80	\$3.52
• Ab Usage Mg/lb.	106 mg/lb	48 mg/lb

Why is Filtration Working?

- Collaborative Effort by Multiple Teams
 - Ventilation and Filtration Team
 - Inspections – Collaborative Effort (over 140 inspections this year of existing dormers)
 - Filter instillation – sand spray test
 - Change in filters and filter grids, continued modification of design
 - R@M Team – Continued Facility Improvements
 - Bio-Security Implementation by Every Group that Touches the Farm
 - Video Cameras and Video Camera Reviews
 - Diligence in Testing by Health Services/Multiplication/GDU Teams
 - Transport Infrastructure Bio-Security and Implementation
 - Filtration Technology Works – Demonstrated Results are Because of the People!

Other Cultures Implemented

- Our Values – People, Pig, Environment, Community
- Production Well Being
- Sustainability
- Safety
- Environmental Management
- Growing Pig Bio-Security
- FAD Preparation..... The Threat is Real