

PIPESTONE JOURNAL

Spring 2022



Data Driven Decisions







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Welcome to the *PIPESTONE Journal*, the premier pork journal featuring and serving farmers just like you. The challenges and speed of business that independent farmers face today are different than the generations before them. By utilizing PIPESTONE's world-renowned resources and expertise, we can work together to create the farms of tomorrow.

At PIPESTONE, we are committed to providing you top-notch, timely information in the areas of Health, Management, Nutrition, Marketing, Research, and Business. Please feel free to communicate with us, your input is appreciated.

Editorial Comments



Data. Data reporting. Data analyzing. We live in a world of data with data available right at our fingertips. Although it often feels overwhelming, it doesn't have to be. Here at PIPESTONE, and in the pork industry, reporting and understanding data is a valuable tool in ensuring your farm is profitable, efficient, and vital to drive your farm into the next generation.

Throughout this Spring issue of the PIPESTONE journal, key data managers will provide you with both valuable tools, as well as insights and helpful methods to ensure you understand and can apply your data results directly to the success of your farm.

The PIPESTONE Journal is designed to provide you with world-renowned resources and expertise to help you ensure your farm can play a valuable role in the future generation. In short, the PIPESTONE Journal is designed to help you! I would encourage you to provide feedback, so we too can continue to improve. The link below is a short (less than 2 minute) survey available for you to provide your thoughts and suggestions.

Please consider taking the time to complete. In return, we will carefully review your comments and make changes as necessary.

- Abby Hopp

We want your feedback!!

Scan the code below to provide feedback:



SCAN ME

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County Line Livestock, of La Porte City, IA, are featured as an outstanding customer in the field of data. Read more of their story on page 16.

Chief Veterinary Officer Comments



By: Dr. Joel Nerem
Chief Veterinary Officer
Pipestone Veterinary Services

We live in the so-called “Information Age”. Data is being collected all around us. Today, the power of computing and digital technology have made collecting, analyzing, and transferring data easier than ever. As a result, we have more information than ever at our fingertips. Good information for making business decisions can be invaluable, however it often feels like we are being bombarded with data. It’s hard to keep up. What information should you use? What information is accurate? What information is applicable to your farm? Who’s information do you trust?

To be a competitive pork producer today you need good information in a number of categories. In addition to data you can trust, you also need a reliable advisor to help ensure you are making the best decisions for your farm.

Production Performance		Financial/Business	
<p>Knowing and understanding the biological performance of the pigs on your farm is fundamental to continuous improvement and remaining competitive.</p> <ul style="list-style-type: none"> • How accurate is your performance data? • What are today’s industry standards? • Who are you benchmarking your farm’s performance against? • What are the top 2-3 key performance indicators that you are focused on for improvement? 		<p>Ultimately, the financial performance of your farm is the most important data. Good decisions based on good data should result in a profitable farm.</p> <ul style="list-style-type: none"> • Does your accounting system provide you with timely and accurate data on which to make the best business decisions? • Do you have an advisor to your farm that can help guide big picture decisions: Should I feed more pigs? • Should I buy more land? • Should I rent a barn or build a new one? • How should I bring the next generation into the farming operation? 	
Research	Health	Nutrition	
<p>Lots of research has been done on swine health, genetics, nutrition, etc.</p> <ul style="list-style-type: none"> • Are you basing your decisions on research done by people marketing a product or by independent 3rd parties with scientifically designed trials? • Who is helping you interpret the results of scientific data? 	<ul style="list-style-type: none"> • How healthy is your farm? • What swine diseases are most responsible for limiting the performance of your pigs? • How much is disease costing? • (How much “Health Tax” are you paying?) • What are you doing today to improve the health of your pigs tomorrow? 	<ul style="list-style-type: none"> • How do your diets stack up against others in the industry? • Are you optimizing ingredient inclusion rates based on cost and performance? • How is your nutritionist compensated? 	

At first, all of this data and all of these decisions might look daunting. Fortunately, there are many resources available to help. At Pipestone, our mission is to help farmers in all aspects of their pig production business. We have experts and service offerings in all the categories listed above and a team committed to helping farmers continuously improve their farm and business performance. Please contact Pipestone today if you would like assistance in using data to improve your operation.

Kids in the Kitchen

Piggy Bagel



Serves 1



5 Minutes

1 Plain bagel
4oz Strawberry cream cheese

2 Strawberries
2 Blueberries

1. Cut the bagel in half and spread the cream cheese on top.
2. Cut the stem off of the strawberries and cut one in half for the ears and one for the nose.
3. Place the blueberries for the eyes.



Pigs in a Blanket



Serves 8



30 Minutes

8oz tube of crescent rolls
8 hot dogs
1 egg - lightly beaten

1 Tablespoon water
Sesame Seeds

1. Preheat oven to 375°.
2. Separate crescent dough into triangles.
3. Roll up hot dogs, starting at the wide end of the triangle.
4. Place on an ungreased baking sheet.
5. Brush combined egg and water over tops of rolls. Sprinkle sesame seeds over top and press gently into rolls.
6. Bake at 375 for 12-15 minutes or until golden brown.



Bacon Grilled Cheese



Serves 4



20 Minutes

8 slices of bread
1 stick of butter
16 slices of bacon

1 tablespoon of bacon fat
4 slices of cheddar cheese
4 slices of pepper jack cheese

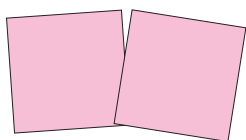
1. Pre-heat oven to 350F, lay bacon in even layer and cook until crispy. Save the bacon grease and place cooked bacon on paper towel.
2. Spread butter over the outside of each slice of bread.
3. Divide the cheese and bacon over 4 slices of bread and top with 4 remaining slices of bread.
4. Preheat a skillet over medium heat, add 1 tsp of bacon fat for each sandwich.
5. Grill sandwich until golden, about 4-5 minutes. Flip and grill the other side until golden.



Pork & Crafts

PAPER PIG

Items Needed:



2 Pieces of pink construction paper



Scissors



Glue



Black marker

Instructions:

1. Cut strips of paper. You will need 4 strips of paper for the body and 4 strips of paper for the head. Have the strips be as wide as your finger. For the body we cut the strips across the length of the paper and for head we cut them across the width of a sheet of paper.
2. Fold the paper in half.
3. Take the long strips and apply glue in the middle of one strip and glue another one on top.
4. Do the same with the short ones. (Image 1)
5. Now take the two ends of the same paper strip and loop them in a circle and glue them together.
6. Repeat with all strips of paper until you get a paper ball. (Image 2)
7. Continue with the smaller strips to create the head.
8. Glue the small ball on top of the big ball. Let glue dry.
9. Cut out a snout and eyes and glue them onto your head. (Image 3)
10. Cut out arms, legs, ears, and a tail and attach with glue. (Image 4)



Health and Wellness **with Pork**

Nutritious

Pork is versatile and can be used into a variety of active lifestyles.

Lean

Eight cuts of pork meet the USDA guidelines for "lean".

Heart- Healthy

Boneless pork sirloin roast or pork tenderloin are certified by the American Heart Association.

Egg Roll in a Bowl

✂ Serves 4

🕒 20 Minutes

- | | |
|-------------------------------------|---|
| 1 tablespoon sesame oil | 2 red bell peppers (sliced thinly) |
| 1 small red onion (diced) | 1 bag carrots (10 oz.) |
| 1 tablespoon minced garlic | 3 tablespoons low-sodium soy sauce (or liquid aminos) |
| 1 tablespoon ginger (finely minced) | 1 tablespoon rice wine vinegar |
| 1 pound ground pork | salt and pepper (to taste) |
| 2 teaspoons sriracha sauce | |
| 1 bag coleslaw mix (14 oz.) | |

1. Heat sesame oil in a large skillet over medium heat. Add red onion, cook 2-3 minutes. Add garlic and ginger. Cook until fragrant, about 1 minute. Add ground pork and Sriracha. Cook and crumble until pork is cooked through, about 7-10 minutes.
2. Add coleslaw mix, red bell pepper, carrots, soy sauce, sesame oil, rice wine vinegar, black pepper, and salt, to taste, and stir until well combined. Cook, stirring occasionally, until cabbage is tender, about 5 minutes.
3. Spoon pork-cabbage mixture in to a serving bowl. Drizzle with sauce of choice and garnish, if desired.
4. Optional for garnish: sliced green onions, sesame seeds, wonton strips. Optional sauces: hoisin or duck sauce, sriracha, hot sauce, or sweet chili garlic sauce. For a creamy sauce, mix together Greek yogurt, sriracha, lime juice and salt to taste.



Grilled Pork Tenderloin

✂ Serves 4

🕒 55 Minutes

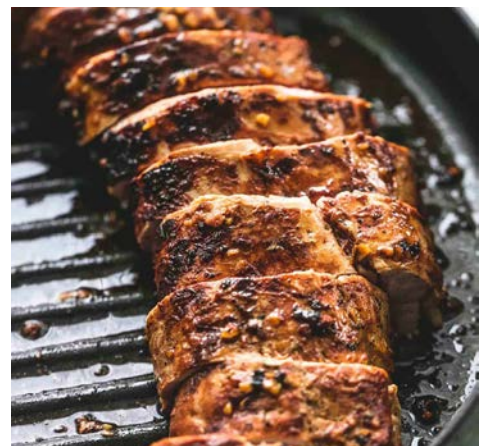
- ½-2 pounds pork tenderloin
- juice of ½ lemon
- 2 teaspoons minced garlic
- 1 teaspoon Italian herb seasoning blend - or ¼ teaspoon each dried basil, thyme, oregano, and parsley or rosemary
- ¼ cup oil
- ½ teaspoon salt
- teaspoon cracked black pepper - or a pinch of finely ground black pepper
- 2 teaspoons Dijon mustard
- 2 teaspoons honey

Marinate the pork

1. Pat pork tenderloin dry with a paper towel.
2. Stir together lemon juice, garlic, dried herbs, oil, salt, pepper, Dijon mustard, and honey.
3. Pour half of the mixture into a large Ziploc bag along with the tenderloin. Press out excess air, seal the bag, and chill for 30 minutes.

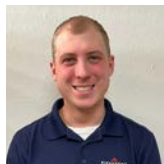
Grill the pork

4. Preheat grill to medium and oil the grates.
5. Using tongs, transfer pork to the grill. Close the grill and cook 15-20 minutes, turning every few minutes to ensure even cooking and brushing reserved marinade over all sides of the pork half way through grilling.
6. Transfer to a cutting board to rest for 5 minutes before slicing and serving.



A New Health Paradigm:

The Way to Reduce the Health Tax



By: Jacob Koepke
Nutrition Account Manager
Pipestone Nutrition



As swine producers, you all pay a health tax at the end of the year, whether you know it or not. This tax is paid on every pig and reflects the cost of less-than-perfect health in an operation. The health tax is often far larger than producers recognize and is consistently evident year after year in the FarmStats data. At PIPESTONE, we believe there are ways to help significantly reduce this health tax and it starts with recognizing a change in how decisions are made and how they impact farms. Decisions to first and foremost optimize health result in lower health tax and a new way of thinking. This is what we are calling A New Health Paradigm.

In this article, we will attempt to highlight the key steps to start lowering the health tax which are evident in those producers that have done so through adopting the New Health Paradigm.

STEP 1: Pathogens and Disease

We must start with defining the pathogen and disease status at our sow farm. We complicate things with multiple different “health levels” and classification schemes, but it does not need to be this difficult. In an Easy 1/2/3 system we can effectively classify and communicate pathogen and disease status.

Level 1

No Pathogen
No Disease
A Happy Place

Level 2

Yes Pathogen
Some Disease
Between Space

Level 3

Yes Pathogen
Yes Disease
A Bad Place

On a path towards living the new health paradigm, you should strive to have Level 1 sow farms. This must include PRRS, but goes beyond this to reflect the status of Influenza, Mycoplasma, PEDV, and bacterial status. We are fortunate that our veterinarians have great tools and methods to help improve the health status for these diseases.



STEP 2: System Design

The design of a swine farming operation is highly related to the expected outcomes for health and performance. This goes beyond just simply barn design, referring more to size of sow farm and pig flow, size of wean to market facilities, sow and wean-to-market area density, all-in all-out by site ability, transportation, personnel, and feed mill integration. There is not a perfect design, but there are bad designs or badly designed components that fail to optimize health and raise our health tax.

STEP 3: Wean-to-Market Biosecurity Standards

We are severely lacking on standards for wean-to-market biosecurity that we hold ourselves accountable to. As an industry, veterinarians and farmers have failed to outline standards and commit to adhering to them for wean-to-market sites. We take sow farm biosecurity to the highest level and have improved infection rates over time because of this. It is time to define, invest, commit, and audit to a new set of standards for wean-to-market biosecurity that will improve health.

STEP 4: Mitigate Risk

We have better tools and better data today than we have ever had to help mitigate disease risk and we should use these tools. Between air filtration, feed mitigation, vaccines, and others, we should use those tools at our disposal when appropriate to lower health risk to our farms.

STEP 5: Hire a Good "Accountant"

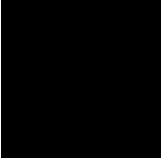
Every farm has a skilled accountant (often more than one) that helps to identify all the areas to try and lower the taxes paid. This should be true in lowering the health tax as well. There are different areas that contribute to the health tax paid that you may not consider; genetics, nutrition, management, and marketing can all be areas that have influence on your health tax. Think outside of the box and make sure you have a good "accountant" when evaluating your health tax strategy.

Old paradigms are changing and the New Health Paradigm is shaping farms for the future. Pipestone is here to help you look at these key areas for "health tax planning" for your future and start moving towards a New Health Paradigm.

Time for a New Health Paradigm

- Pathogens and Disease:
Easy as 1,2,3
- System Design
- Raising the bio-security standards
- Mitigate risks with proven interventions
- Hire a good accounting firm

Audit Program



By: Francisco Cabezon
President
Pipestone Research

What have we found?

There is a large variation between sow farms. Between fast growth and a large geographic area, it is a day-to-day challenge to ensure consistency across all farms.

What is the solution?

Across PIPESTONE managed sow farms, standard operating procedures (SOPs) are standardized and implemented appropriately.

PROBLEM

Variation between farms:

- Fast growth.
- Geographically spread.
- Turn over rate.



SOLUTION

- Standardize our implementation and execution of SOPs.
- Less margin for deviation in the execution of critical processes to improve KPIs.

OPERATIONAL EXCELLENCE CONCEPT

PROCESS AND PROCEDURE AUDIT AS PART OF IT



- ☐ Gilt Management
- ☐ Semen Handling
- ☐ Breeding
- ☐ Gestation
- ☐ Farrowing
- ☐ Wean Schedule

CULTURE.

ACCOUNTABILITY.

DISCIPLINE AND CONSISTENCY.

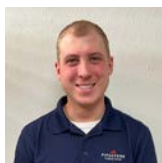
SUSTAINABILITY.

SUCCESS!!!



$$\frac{\text{Margin}}{\text{Feed Cost}} = \frac{\text{Biological response}}{\text{Economic outcome}}$$

Balancing Act: Biological Performance & Feed Cost



By: Jacob Koepke
Nutrition Account Manager
Pipestone Nutrition

There are several ways to evaluate feed cost and feed performance in wean to market pigs. Each method can provide a very different answer for the producer on what is the “BEST” way to feed a pig. In a perfect world we find the ideal marriage between biological performance and feed cost. However, the equation isn’t so simple and in fact it may change throughout the year as input prices change or the pig market fluctuates. We generally see 3 basic economic evaluations of feed cost: cost per ton, cost per lb of gain, and margin over feed cost (MOFC). The following scenario shows how each metric can provide a very different answer on the most appropriate feeding method.

Cost per ton of feed is a simple way to look at feed cost. For example, if we add 30 lbs of fat

to the diet at \$0.60/lb we clearly see an increase in feed cost per ton compared to a diet with no fat. I like a good deal so given this limited information I would likely choose the cheaper of the two diet sets which would tell me I am saving ~\$4.75/pig to NOT feed fat. However, this data fails to account for the biological response of pigs when fed fat and market conditions.

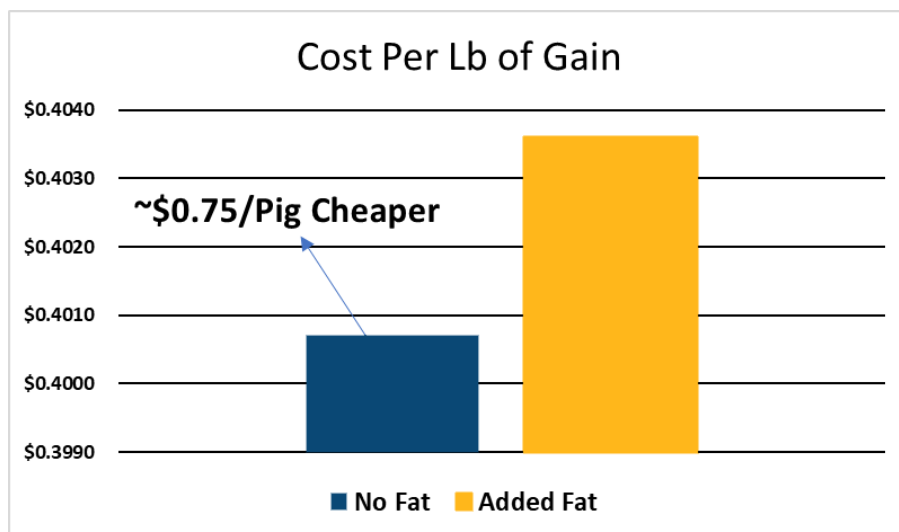
	No Fat	Added Fat
\$/ton	\$324.89	\$339.27
Difference/ton	(\$14.38)	
Difference/pig	(\$4.75)	

Analyzing feed cost per pound of gain is a better choice when making the decision to add fat to the diet or not. Our internal research data would tell us that added fat will increase ADG and decrease (improve) FG; therefore, we have begun the process to more accurately account for the biological response of the pig. It still appears advantageous to feed no fat, to the tune of ~\$0.75/pig, but we have not yet accounted for market conditions.

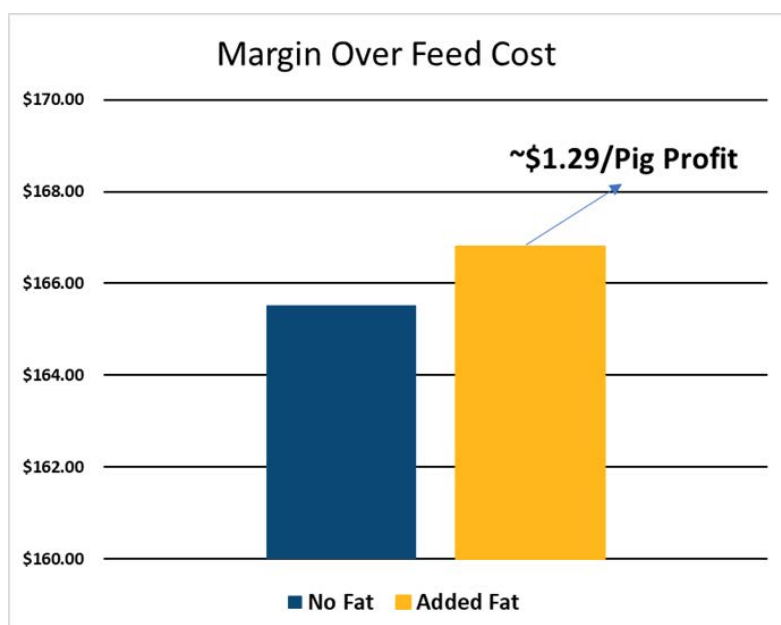


In this scenario the added cost of fat would not be beneficial when looking at cost per ton or cost per lb of gain. However, when we analyze MOFC we find that we were leaving \$1.29/pig on the table or \$3,096 on a group of 2,400 head by not using fat.

As the market changes, understanding the biological response of pigs under different conditions and nutrition programs is critical when paired with ingredient cost and the hog market. Pushing pigs too fast by feeding a high energy summer diet too early, may mean the difference between hitting the May contract instead of the June. On the other hand, not feeding a high energy summer diet early enough may push hogs that could have marketed in August into the October market. In addition, it may be more profitable to feed lower energy, lower cost diets throughout the winter when hog markets are low even though pigs will knowingly have poorer ADG and FG as a result of the lower energy diet. Margin over feed cost allows us to find the "BEST" balance between biological response and economic outcome.



MOFC paints a picture in high definition that allows us to achieve the perfect balance between biological performance and economic outcome. It takes into consideration market pricing and allows us to evaluate if the cost of added fat is offset by the income from improvements in gain and feed efficiency.



County Line Livestock

Using Data to Lead the Next Generation of Thoma Family Farmers



Nestled on the outskirts of Independence, Iowa, are nationally recognized livestock and feed mill operations known as County Line Livestock and County Line Feed Mill. Established in 2002, County Line Livestock started as a feeder pig operation and has strategically developed into how it stands today. County Line Feed Mill is a more recent addition, created to expand the operation and help the farm grow as family involvement grows.

The Thoma families have been proud American farmers for 7 generations. At the forefront of the operation today are brothers, Joe and Matt, and their wives, Jennifer and Michelle. Each plays a unique and vital role in feed mill and livestock logistics. In the next working generation are their sons, Blake (Joe and Jennifer) and Jake (Matt and Michelle), as well as their cousin, Dan, and his wife, Ali, who are also heavily involved in daily operations.

"My goal is to maximize our facilities and see that the farm can be passed down to the next

generation," said Joe. "I want to include any family member that wants to be involved in the operation. Having my son farm next to me is like a dream come true. As it was with my dad and my grandfather, passing on the farm is of the utmost importance. Doing that is top priority here."

Their journey with PIPESTONE began when searching for a veterinarian. Currently, the Thomases utilize multiple service offerings from PIPESTONE to help them collect and track data, source their wean pigs and find labor for their barns. Dr. Bryan Meyers, veterinarian with Pipestone Veterinary Services, has been working with County Line for the last 14 of those years. "My role with County Line Livestock is to help them on the production and health side of raising pigs, all the way from the sow farms, through their wean to market operation," said Dr. Myers.

Dr. Myers witnessed growth and success firsthand while offering health advice to ensure every pig flow is profitable and valuable.

"I think it's a great privilege to work with County Line Livestock, County Line Feed Mill and the Thoma families in their multi-generation farm because it's completely fulfilling the mission of PIPESTONE in that we are helping family farmers maintain and be the farms of tomorrow."

- Dr. Bryan Meyers, Veterinarian

"We were looking for a veterinarian to help us with our continuous PRRS problems in our farrowing unit. We had 300 sows at the time," Joe explained. "It evolved into turning our farrowing unit into a nursery and investing into Pipestone Management sow farms. We have expanded rapidly from there."

County Line Livestock markets 60,000 pigs a year, sourcing all their wean pigs through PIPESTONE managed sow farms. County Line Feed Mill averages about 750 tons of feed per week. Through data driven decisions, the Thomas make practical decisions in order to see that their operation is running efficiently. Today, County Line utilizes all 5 service offerings of PIPESTONE to help achieve that efficiency: Pipestone Veterinary Services, Pipestone Management, Pipestone Nutrition, Pipestone Business and Big Stone Marketing.

"Data is important on our farm because if we don't know what the problem is, we can't fix it. We have to be able to look at the data and see what's wrong," said Blake, who works in the barns daily and helps track their data." On a daily or weekly basis, we use data to track mortality in the barn and on the truck, how much we are spending on medications and feed, water consumption, and temperature in the barn. All the little things that add up make a difference on whether it's a good group of pigs."

Through Pipestone Business, the Thomas are able to keep neat and accurate records and supply their barns with talented labor through Farm Stats and FarmTeam. PART (Pipestone Antibiotic Resistance Tracker) allows County Line Livestock to track their medication use throughout all of their sites in one place. Big Stone Marketing gets their finisher pigs sold at the right price, and Pipestone Nutrition has played a key role in feed mill logistics.

"To me, data analysis is one of the most important things to be doing," said Joe. "On our row crop land, we farm by the inch and make every kernel of seed count. Bringing that to the livestock side, every pig counts on an individual basis. The data helps us figure out how to farm better, all the time. The only way we know how we're doing is if we have good data."

The Thomas use data to adjust just about every aspect of pig farming accordingly. Using data allows them to verify they are making the best choice for their pigs everyday to keep them happy, healthy and comfortable.

"It's really important that operations keep good data so they can make good decisions," Dr. Myers explained. "The interesting thing about working with pigs is small changes can result in big differences. If you change feed conversion by 1/10th, it makes a huge impact to an operation that markets 60,000 pigs a year. Lowering mortality by half a percent leads to a huge



difference in the farm's profitability."

Data has been helpful not only on the livestock side, but also on the feed mill side. Jake Thoma currently serves as County Line Feed Mill's general manager.

"When we first started the feed mill, we weren't feeding any sows," Jake said. "Now, we've grown our own head counts as well as taken on some neighbors as customers. Our mill has grown a lot more than I thought we ever would."

Jake uses data programs on the mill's computer to track inventory and make individual feed orders. The different programs talk to each



other and send the ingredients to the machine computer where they are dropped down and added to the batch.

"PIPESTONE has helped us develop a good way to raise pigs," Joe said. "As we've grown and taken on more sites and pigs, FarmTeam has helped from a labor perspective. FarmTeam members have made it easier for us to manage other aspects of our operation. It has freed up a lot of my time to do a better job marketing pigs and working on the finances of the farm. It's also allowed my son, Blake, to move into a position of taking over more of what I do in the near future, so I can take over what my dad does when he decides to retire around 105 years old," Joe joked.

FarmTeam members assist grow-finish farms on day-to-day choring, load-outs and any other labor intensive jobs. The Thomas have made a point to welcome FarmTeam members with open arms and fit them into the family dynamic that exists on the farm.

"When you talk about the family tree and the family dynamic here, the first thing that comes to mind is sustainability," Joe said. "That's a buzz word; everybody wants to talk about sustainability. When I look at sustainability, my definition is being able to keep the farm going and passing it on from generation to generation. I am the 6th generation of the Thoma family to farm. I feel it's a noble profession to provide food and to do a good job at it."

Similarly, Blake is proud to be the 7th generation of Thoma farmers. He has returned full-time to the farm after graduating college and working off the farm for a few years. "My favorite part about pig farming is being able to feed people and see the pigs grow. When we get done with a group of pigs and see we didn't lose any and had good health throughout, it's really rewarding," Blake said. The Thomas set a great example for pig farmers nation-wide. Their success raising and feeding pigs is proven in the data they collect.

"The Thoma families, I say families because there's multiple families involved, embody what farmers should be and what they should strive to be. They're good stewards of the land, of their livestock and they're good proponents of our pork industry," Dr. Myers explained with a smile. "I think it's a great privilege to work with County Line Livestock, County Line Feed Mill and the Thoma families in their multi-generation farm because I think it's completely fulfilling the mission of PIPESTONE in that we are helping family farmers maintain and be the farms of tomorrow."

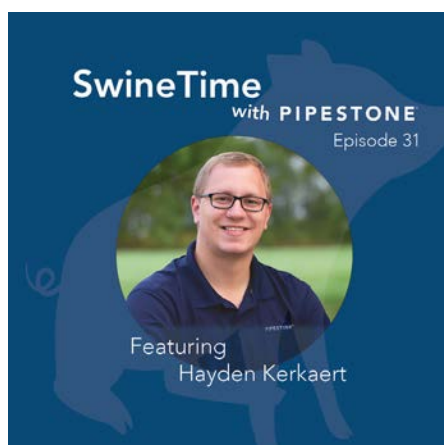
Article by: Kyra Flom, Website & Digital Specialist



SwineTime Podcast



Join Dr. Spencer Wayne, SwineTime Podcast Host, in the latest episodes! SwineTime Podcast is designed to provide you with world-renowned resources and expertise on swine health, management, nutrition, marketing, business and more! Join us at www.pipestone.com/news/ or on your favorite listening platform.



Basics in Nutrition

SwineTime Podcast Host, Dr. Spencer Wayne, sits down with Hayden Kerkaert, a nutritionist with Pipestone Nutrition, to start back at the basics of pig nutrition. Throughout the episode, Hayden drills down on the importance of a nursery diet and how critical a piglet's first three weeks of life are. Grow-finish farmers will gain tips on how to compare marginal feed costs in relation to cost per pig, how to properly present feed to piglets and more! Listen-in to hear Hayden's expertise on feeding pigs!



Getting Started in Pig Farming

Passion, commitment and networking; words used to describe the lifestyle of a pig farmer throughout this episode of SwineTime. Are you or someone you know interested in pig farming? In the 32nd episode, Dr. Spencer Wayne visits with Dr. Barry Kerkaert, President of Pipestone Management, and Justin Roelofs, Chief Financial Officer for Pipestone Management. Together, they discuss the steps and characteristics needed to begin a journey in pig production. Whether you are interested in starting your own operation or are in a position to take over a family operation, this podcast will prepare you with some simple do's and don'ts to take into consideration.



PIPESTONE Construction

On the 31st episode of SwineTime, Dr. Spencer Wayne sits down with the Head of Construction for Pipestone Management, Tad Woelber. Tad and his team strive to build pig barns that not only maximize production, but efficiency as well. Keeping barns cost effective while building them to last has always been the objective of building PIPESTONE constructed barns. Tad notes that efficiencies in barn equipment, layout and cost per square foot are what drive construction projects. Tune in for a discussion on the specifications that go into building a new facility, how far PIPESTONE construction has come and how they are improving pig flow with each new project.

Two reports to boost your confidence in decision-making



By: Brian Stevens
President
Big Stone Marketing

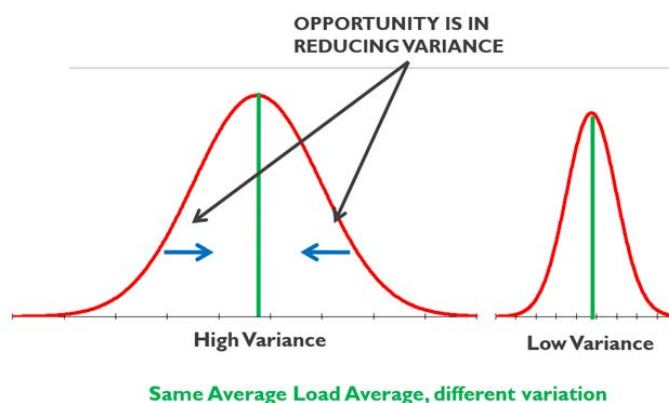
How can you use data to drive your decision-making process? Big Stone Marketing, in collaboration with other PIPESTONE business units, would like to share two reports to help you get there: Precision Marketing & Marketing Report.

Precision Marketing

The precision marketing reports allow producers to more specifically control the impact of day to day marketing choices by providing guidelines for optimal live weight and sorting performance. The Precision Marketing reports do this by:

- 1 Referencing each individual packer matrix
- 2 Returning a Target Weight for each packer by calculating Margin Over Feed Cost (MOFC) using current (and nearby futures) hog and grain markets.
- 3 Comparing each load of pigs to a top 20% sorter to determine opportunity for improvement.
- 4 Publishing a Lost Opportunity Value to show each market load's disadvantage (or advantage) compared to the top 20% performer.

Controlling weight variation and the average load weight can return considerable value to the producer. Weight variation, or standard deviation, should be managed to reduce sort deductions from the packer. If the correct load weight is achieved, keeping the variation of weight on the load close to the target is important to minimize loss of value. See figure to the right.



The table (at the top of the next page) is included as part of Big Stone Marketing's Precision Marketing reporting on the website each week and gives a nice visual of the economic disadvantage created by being in the bottom 20% of sorters. It shows the target weight for each Packer (based on current market conditions) using three sorting categories: Best 20%, Avg Sorter and Bottom 20%. Note the disadvantage ranges from -\$1.07/hd to -\$1.76/hd for bottom 20% sorters. Conversely, a top 20% sorter gains up to \$1.58/hd value depending on the packer. In this example, when delivering to Packer 2, an improvement from bottom 20% to top 20% results in \$3.34/hd additional revenue.

	Best 20% Sort		Average Sort		Bottom 20% Sort	
SD (live) on load	15		19		23	
Packer	Optimum Live Wt	Lost Opportunity/Hd	Optimum Live Wt	Lost Opportunity/Hd	Optimum Live Wt	Lost Opportunity/Hd
Packer 1	295	\$1.49	292	\$0.00	290	(\$1.62)
Packer 2	295	\$1.58	293	\$0.00	291	(\$1.76)
Packer 3	298	\$1.01	299	\$0.00	299	(\$1.07)

Marketing Summary

Making improvement can only be accomplished with a disciplined approach by first, collecting information and second, (arguably most important) evaluating the information.

Consistent marketing reports – recommended weekly – can help keep producers and their grower partners on track regarding marketing decisions. Understanding the value of these decisions is imperative to prioritizing changes in an operation.

Big Stone Marketing, offers a unique tool to calculate lost opportunity/head. This tool is designed to maximize margin over feed cost based on the current market and feed environment.

The extract to the right represents a set of loads sold within 1 day of each other. Utilizing this sample, we can see the worst load (boxed in red) missed the target live weight by 25 lbs (in the current feed/market dynamic) and had an average SD, resulting in a lost opportunity/head of \$11.47.

On the flip side, the best load (boxed in green) missed the target live weight just slightly and had a good SD, resulting in only a \$0.46 lost opportunity/head. In the real world, I understand not every load can be perfect, but the goal is to keep your lost opportunity/head as low as possible to maximize margin over feed cost based on current market values. NOTE: The top 20% have a lost opportunity/head less than 0.

In 2021, the Lost Opportunity/Hd range of results for FarmStats producers, representing approximately 3.2M market hogs sold, was \$9.18 per pig sold.

I think most would agree improved profitability of \$7/hd should capture attention and trigger strategic conversations regarding possible changes to genetics, space, caretaker labor, system design, and pig source.

Performance						
Avg Live Wt	Target Live Wt	Avg Carcass Wt	Yield %	Std Dev (Carcass Wt)	%CV	Lost Opportunity \$/Hd
287	296	213	74.3	13.4	6.3	5.40
267	295	197	73.8	10.2	5.2	10.72
270	295	198	73.3	14.0	7.1	11.47
268	295	197	73.5	12.1	6.1	11.09
313	297	234	74.4	13.1	5.6	1.56
301	297	225	75.0	12.6	5.6	0.46
307	297	230	74.9	12.9	5.6	1.00
284	295	212	74.6	14.6	6.9	3.80
285	295	212	74.3	15.7	7.4	4.35
284	295	212	74.5	15.2	7.2	4.08
287	296	213	74.3	13.4	6.3	5.40



Performance Impact of Pigs Weaned at an Elevated Age



By: Angie Homann
Data Management Director
PIPESTONE

Concept

PIPESTONE
Research

Implementation

PIPESTONE
Management

Validation

PIPESTONE
Business

The process of using data to make strategic production decisions is not new for PIPESTONE. It's a process that usually starts with a concept, sometimes born of intuition, but more often born of imperative need. It also requires a collaborative effort by PIPESTONE business units to bring the concept full circle. In 2016 Pipestone Applied Research set out to answer the following question: What is the performance impact of pigs weaned at an elevated age? The study was repeated in 2017 using more than one boar line to account for genetic variation. Both trials told the same story:

- 1** Weaning a pig with an elevated age significantly enhanced sow performance on subsequent litters with no increase in sow body weight loss.
- 2** Elevating wean age significantly reduced wean to market mortality and substandard pigs.
- 3** Although lifetime average daily gain was not reduced when elevating wean age, it did significantly improve wean to market ADG.

These were promising results. An older pig grew faster and was harder, therefore requiring less labor and overall production inputs on the wean to market side of the equation while also improving subsequent total born on the breed to wean side of the equation. An estimated value of \$0.60 per day of age was calculated. This triggered conversations between Pipestone and its partner shareholders to look at whether implementation of the concept made sense for their farms. For some it did, and the change was executed.

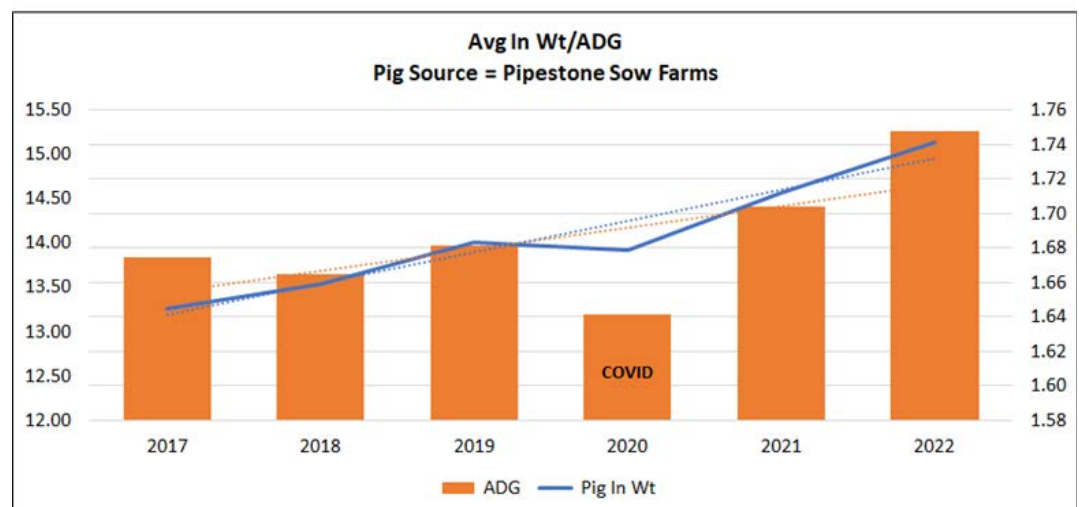
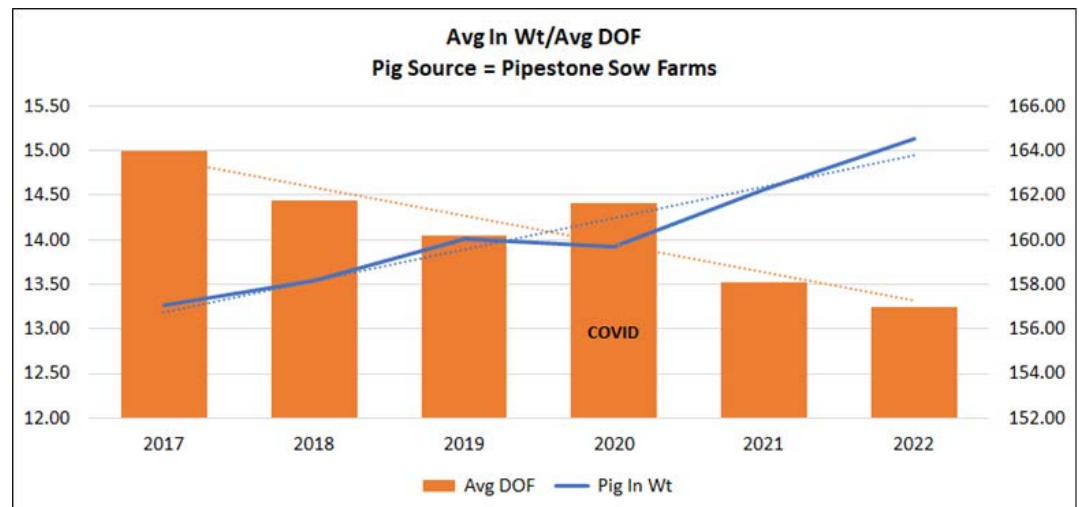
However, results from a controlled research environment, although essential, should not be the end of the story. Pipestone's sow information bureau, technical services team and FarmStats team played an important role in the next step: collecting and analyzing data from working swine production systems. This is a more challenging environment. Production variables such as: system design, production practices, geographical location, and nutrition formulation are all contributing co-founders which create a more complicated equation. Could the decision be validated across multiple production systems that included many of these co-founders?

Validation started with the total born results of the original trials. The Pipestone management sow data base was used to study the relationship between total born, wean to service intervals and previous lactation length.

The dataset confirmed the original outcome. As a general rule, for each extra day of lactation total born increased by approximately 0.1 piglet in the next parity. Confirmation of the decision to implement continued with a meta-analysis of the FarmStats data collected over several years. Here, pigs from Pipestone sourced sow farms were evaluated. As wean weight (age) increased both Avg Days on Feed and ADG improved gaining 0.07 lb of gain per day and reducing the average time in the barn by almost seven days. Assuming a revenue of \$75/cwt and a daily yardage rate of \$0.11 added value of just under \$8/hd was achieved from these improvements.

It should not necessarily be assumed that all the value growth came from a bigger pig. Over time there have certainly been advances made in system design, nutrition, and day to day health practices. However, it is difficult to deny the apparent impact of the decision to wean an older pig.

Next step: find a smart someone to apply some real data science to this information – ie a statistical assessment. (Wonder where I could find someone with those qualifications?) Maybe the Pipestone marketing team will find a spot in the next journal for that discussion.



Note: Analysis was performed on a single sire line to avoid genetic influence on the results.

Performance differences among progeny sired by Topigs Norsvin TN Duroc and TN Tempo under a PRRSV challenge



Background

Date of Completion: February 2022
Trial ID: 1042-RB2-22
Objective: Estimate differences in finishing performance and resilience/robustness to experimental PRRSV challenge between TN Tempo boars selected based on high experimental breeding value for robustness, TN Tempo boars selected based on low experimental breeding value for robustness, and TN Duroc boars.

Results

	Parameter	Sire Line		
		TN Tempo 1 - High Robustness	TN Tempo 2 - Low Robustness	TN Duroc
Wean-To-Finish Performance	Average marketing weight, lbs	298.32 ^a	296.80 ^a	289.57 ^b
	Average daily gain, lbs/day	1.79 ^a	1.78 ^a	1.74 ^b
	Average daily feed intake, lbs/day	4.69 ^a	4.60 ^a	4.42 ^b
	Feed conversion	2.63 ^b	2.59 ^{ab}	2.55 ^a
Carcass Performance	Yield, % (IND)	74.58	74.67	74.45
	Carcass average daily gain, lbs	1.33 ^a	1.33 ^a	1.29 ^b
	Carcass feed conversion	3.52	3.47	3.42
	Lifetime daily carcass gain, lbs/day (IND)	1.25 ^a	1.26 ^a	1.22 ^b
	Hot carcass weight, lbs (IND)	223.32 ^a	223.74 ^a	217.28 ^b
	Backfat, in (IND, adjusted for hcw)	1.02 ^b	1.01 ^{ab}	1.00 ^a
Final Outcome (Ind Pig)	Full value, %	90.04	88.42	89.75
	Dead or removed, %	7.52	8.39	7.03
	Cull light, %	1.93	2.50	2.55
	Cull defect, %	0.12	0.25	0.31
Antibiotic Treatments	Pigs treated with injectable antibiotics, %	9.41 ^a	13.10 ^b	19.44 ^c

Treatment groups not sharing a superscript letter significantly differ P<0.05



Summary

Proof of concept study demonstrated:

- TN Tempo-sired pigs have an inherent robustness to disease challenge.
- Experimental breeding values for robustness, derived for sires using data collected from a previous PRRSV trial, can be used to create differences in robustness among offspring.
- Data collected from this study will be used to further improve breeding value estimation for enhanced robustness to disease challenge.

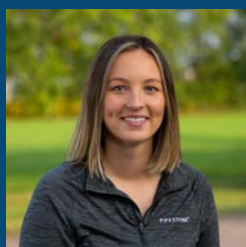
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Pipestone Research... Trials in the Barn

- 1** Armatrex 2 Study
- 2** BI PCV2d DEFENSE Efficacy Study in a PRRSV PCV2d coinfection
- 3** Fever Reduction Trial evaluating anti-inflammatory products in a PRRSV challenge



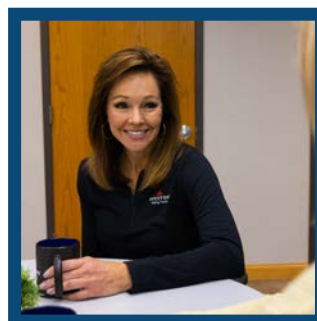
Questions? Contact:

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Data Driven PRODUCTS



The Kestrel Drop is a tool to monitor temperature and humidity in the barn and to graph and see trends. Seeing these trends allows us to make ventilation adjustments for periods when we are not in the barn which can prevent pig stress and even disease challenges.” -Dr. Even Koep, Swine Veterinarian



Kestrel Drop

This wireless temperature and humidity data logger easily monitors and tracks temperature, humidity, heat index and dew point. See, save and share data from multiple DROPs with just one phone or tablet.



Tulaven 25

Tulaven 25 is a generic brand for Draxxin. We have 100ml or 250ml bottles available for purchase. This product should be used as an antibiotic for pig respiratory illnesses.



Tulaven 100

Tulaven 100 is a generic brand for Draxxin. We have 100ml or 250ml bottles available for purchase. This full strength product should be used as an antibiotic for pig respiratory illnesses.



PCV2

d-FENSE is single-dose Porcine Circovirus Type 2 (PCV2) vaccine. It can be administered to pigs 3 weeks of age and older. This product is currently only available in 100ml bottles.



Underline Gel

Underline Gel Concentrate comes in 1 gallon size. This product is used to suspend nutritional ingredients and oral additives in farrowing crates. To be mixed with water before use. Read more about the benefits in our PAR trials.

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PIPESTONE CARES

As a core value of our company, CARING in the communities we touch is a focus. PIPESTONE CARES is an initiative where sow farm owners contribute farm funds to charitable projects in their communities. With the help of farm managers, supervisors, relationship holders and some shareholders, we placed over \$235K in communities where Pipestone Management managed farms are located. Nearly all funds were spent in the home or neighboring towns of our farms. In spite of the adversity in the past year, our farms has been blessed with great people, leaders and the ability to give back.

\$235,991
Total 2021 Donations



14
Hunger Relief Programs



36
FFA/4H Programs



47
Youth/School Activities



78
First Responders

“Every act of generosity helps us further our mission. Your gift will ensure that hundreds of youth in the community have a safe and positive place to go! ”

- Boys and Girls Club of Moody County, SD

To see the where all of the 2021 donations went, go to:
<https://www.pipestone.com/community-pipestone-cares/>

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Pipestone Discovery



Pipestone - Helping Farmers



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Helping Farmers

Locations

Pipestone, MN

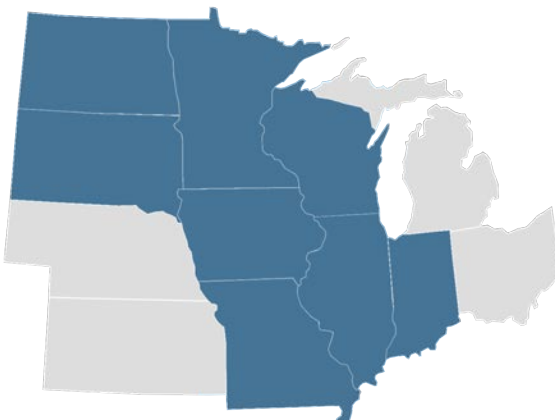
Independence, IA

Ottumwa, IA

Sycamore, IL

Rensselaer, IN

Orange City, IA





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Pipestone, MN 56164

