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Michigan's Pork Producers source for information.

PORK



Pg. 12
**Pridgeon appointed
to Commission
of Agriculture**

Pg. 15
**In Memory of
MPPA board member
Bob Bloomer**

Pg. 22
**MPPA
Scholarships
Awarded**



MANAGING FARM STRESS WORKSHOP

WHEN:

April 17, 2017

10am-2pm

Lunch included

WHERE:

Van Buren ISD

Conference Center 490

South Paw Paw Street,

Lawrence, MI 49064.

COST: FREE

MUST RSVP:

https://events.anr.msu.edu/farmersunderstress_vanburen/

Farmers and those within the agricultural industry have a tendency to be eternal optimists, but with all of the variability in agriculture, there are times when we can become overwhelmed and stressed more than usual.



MSU Extension has developed a workshop specially designed for people who work with agricultural producers and farm families who want to know more about managing farm-related stress and learn ways to approach and communicate with those in need.

The workshop will include:

- Adam Kantrovich discussing the present agricultural market situation with an overview of how this has affected a farm's financial situation and cash flow.
- Roger Betz discussing his experiences working with farm families that are under financial distress.
- Suzanne Pish highlighting the detrimental impact of stress on our body and state of mind, providing information on how to recognize some of the warning signs of depression, self-harm and mental illness.

For more information visit:

msue.anr.msu.edu/managingfarmstress

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On the cover: MPPA scholarship applicants Emily Kittendorf, Kelsy Bloomer, Brady Littlefield, Catherine Majinska and Lauren Bickel gather for interviews and presentations.

SPOTLIGHT

27th Annual Taste of Elegance 4

DEPARTMENTS

President's Page6
Across My Desk8
MSU Pork Quarterlycenter
Capital Update..... 16
Pork Checkoff 18
Calendar of Events 23
We're Listening..... 25
Index to Advertisers..... 33

FEATURES

2017 Michigan Pork Symposium10
Pridgeon Appointed to Commission of Agriculture..... 12
Producers Provide Input on Checkoff Programs..... 13
Conservation Innovations Grants..... 14
In Remembrance of MPPA Board Member Bob Bloomer..... 15
Ag Day at the Capitol 20
Pig Farmers of Tomorrow Named 20
2017 MSU Green & White 21
MPPA Scholarships Awarded 22
Degner Receives Distinguished Service Award..... 23

27th Annual Taste of Elegance

Michigan Pork Producers Association recently held the 27th Annual Taste of Elegance in Lansing, Mich. The cooking competition was held in conjunction with the 2017 Michigan Pork Symposium (page 10) and featured original pork entrées from some of Michigan's top chefs!

This year's entries made for a competitive night with a variety of creative and delectable dishes being placed on the judges' table. Those judges included 2016 Taste of Elegance winner Paul Adams, Hawshead, South Haven, MI; Neel Sahni, National Foodservice Marketing Manager, National Pork Board; and Gordon Wenk, Deputy Director, Michigan Department of Agriculture and Rural Development Chair, Michigan Grape and Wine Industry Council.

The winning dish, *Thit Kho and Bun Thit Noug - "Soup and Sandwich"* was prepared by Chef Eric Batten from Brody Square & Heritage Commons, East Lansing. The judges described his preparation as having "great flavor and a beautiful appearance." They added, "Its spot on with some true authentic flavors coming through!" Along with the title he received \$1000 dollars.

In second place as Superior Chef was Kurt Kwiatkowski, Michigan State University, East Lansing. The judges called Kwiatkowski's dish, *Grilled BBQ Pork Steak Chop with collard greens, creamy cheese grits, and house BBQ sauce* perfectly cooked with great flavor.

Chef Joseph McCullough, Concordia University, Ann Arbor, took Premium Chef, third place, with his dish *Apple Wood Smoked Pork Belly with Parsnip Puree, Sugo Finto & Fig Demi Glace*. The judges called the dish tender and juicy.

Audience involvement has always been a key component of the Taste of Elegance competition with the People's Choice award. During the competition, the chef's dishes are displayed and the spectators are asked to vote on the most aesthetically pleasing dish. This year's award went to Chef Eric Batten from Brody Square & Heritage Commons, East Lansing, who was also the first place winner.



Pictured above, Brent Peterson's dish, Prosciutto Wrapped Pork Tenderloin with Root Vegetable Pave and Mushroom Ragout. Brent's dish recieved the award for best wine pairing with Black Star Farms 2013 Arcturos Pinot Noir.

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Pictured above, Chef Eric Batten receives an award from Michigan Pork Producers CEO, Mary Kelpinski.

Grape and Wine Industry Council also sponsored a wine sampling of a variety of award-winning Michigan Wines for the evening's attendees.

Over the years, Michigan pork producers have donated funds to the Food Bank Council of Michigan to help feed those in need. This year MPPA continued their support by giving \$2500 to purchase pork products along with a

bag of pork-themed grocery items.

Other participating chefs included Jimmy Hill from the Saffron Cafe in Coldwater; Joe Coudron from Bravo Restaurant in Kalamazoo; Frank Turchan from Michigan Dining in Ann Arbor; Matthew Nelson from Mission Point Resort on Mackinac Island; Jeff Baird from Divani in Grand Rapids, Cheyenne Galbraith from Bistro on the Boulevard in St. Joseph; Robert Shipman, Jr. from The English Inn in Eaton Rapids; and Lisa Green from Canal Street Cafe in Augusta. 🐷

Another component of audience involvement was the opportunity to participate as a guest judge, one was assigned to each chef. The guest judges ranged from legislators to pork producers. This engagement, along with the opportunity for spectators to sample the chef's dishes after judging, made for a delicious and palate-enticing event!



Pictured above, the competing chefs gather awaiting the announcement of the winners during the 2017 Taste of Elegance competition.

The Michigan Grape and Wine Industry Council again sponsored the event and selected several Michigan wines for the chefs to use with their dishes. The Pork and Wine Pairing award was given to Chef Brent Peterson, Camille's on the River, Mt. Pleasant. His entrée *Prosciutto Wrapped Pork Tenderloin with Root Vegetable Pave and Mushroom Ragout* paired with Black Star Farms 2013 Arcturos Pinot Noir. As winner, he received a wine and cheese tote. The Michigan



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“Pride for Agriculture”



By: Pat Hunter

MPPA PRESIDENT

For my last article as president of the board, I had planned on writing about the changes that have been going on over the last two years in the pork industry and review some of the issues that we have been dealing with. I even wanted to talk about some of the changes that MPPA has gone through and make some predictions for the future of our industry. But in light of the recent wildfires that have been burning in Colorado, Kansas, Oklahoma and Texas, I wanted to take a few minutes to talk about how the agricultural industry has really pulled together to help each other.

Wildfires have devastated millions of acres of pastures and farmland across the plains, killing cattle, hogs, and other animals and burning down barns and homes. With so much destruction and hardship, it is nice to see farmers donating what they can to make a difference. I want to say how proud I am of the agricultural industry in this country and especially Michigan. I know of several groups of farmers who have created convoys from Michigan and trailered out donations to help these farms and ranches that have lost so much. I know other states have people working to do their part to help the cause also. These farms are in need of hay to make up for the lost pasture land for their cattle and other animals, bagged feed, fence posts and fencing materials and anything else that can help rebuild their farms.

It seems that lately, the news has only been concerned about politics and what President Trump is saying or doing. I had hardly seen any coverage about the wildfires or the devastation in the plains, until now. And even now, I have yet to see much on the actual fires or the destruction, which is a bit disappointing. But what I have started to see is stories of what people are doing to make a difference.

I recently saw a story on the news about a group that donated pallets of work boots for those fighting the fires and working to save what is left of the farms after this devastating disaster. I think that how our industry has banded together to take care of each other in a time like this is amazing and something that we should all be proud of.

Farmers across the country have been willing to donate trailer loads of hay, even if they were planning to use that hay later in the season. Farmers have been making sacrifices

“ I am proud to be part of an industry and a family that will stand up for each other and take care of each other like this. ”



to lend a helping hand to strangers that they have never even met. What other industry takes care of each other like the ag industry? I can't explain enough how proud I am and in awe of the wonderful people that are taking action for this cause.

As a pork producer in the Michigan agricultural industry, I have always taken pride in my work. I am proud to take care of animals and the environment and to produce a healthy, wholesome product for consumers. But when something as devastating as these wildfires hit our industry, I am more proud of the reaction that people have had and the actions they are taking. I am proud to be part of an industry and a family that will stand up for each other and take care of each other like this. As a community of farmers, people have been willing to lend a helping hand to other farmers thousands of miles away and to share the fruits of their labor, even if that means more work for them in the future.

At a time like this, how our industry and our communities have reacted gives me hope for the future of agriculture and makes me proud to see my family working in this industry. 🐷

Above, trucks line up to convoy from Michigan to the plains with supplies. Below, photos of Ashland, Kansas, where wildfires destroyed houses, farms, livestock and acres of farmland. Photos courtesy of Elaine Bristol and Chelsey Clemens.



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“We Need You!”

As the new Chief Executive Officer of Michigan Pork Producers Association, I figured I needed to come up with a new title for this page. Sam Hines has been using this page for his “As I See It” article for over 30 years and I just didn’t think it would be right to have the same tag. Plus, Sam will be sharing his wisdom periodically and may want to continue to write under that heading.

As many of you know, I have been around the Michigan Pork Producers Association for a long time and have witnessed many changes over the years. Changes not only in the way we raise hogs, but also in the way consumers view their food and the farmers that produce it. In an effort to help facilitate a conversation on food and modern pork production methods, the National Pork Board launched Operation Mainstreet (OMS) back in 2004.



The program is designed to help set the record straight by telling the pork industry’s story of innovation, quality and stewardship starting at the vital local level. I became an OMS presenter in 2008 and have given over 130 presentations throughout Michigan, and even one in Florida. While most of my presentations have been given to civic organizations, like the Lions Club and Rotary, OMS is evolving to a national program.

The new focus will be on building demand for pork by stepping up outreach to dietitians and retail grocery associations from coast-to-coast. We are also expanding outreach to medical doctors and nurse practitioners to demonstrate the pork industry’s commitment to responsible antibiotic use. At the same time, we’re increasing outreach to veterinary medical students and companion veterinarians to reinforce those same commitments.

“The more we can get our message out there, the more we can build trust with consumers.”

By: Mary Kelpinski

MPPA CHIEF
EXECUTIVE
OFFICER

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These influencers are trusted by consumers, and by gaining their trust, they will help carry our messages to consumers.

I always enjoy making OMS presentations and have found it very beneficial and enlightening. When I am in the office or attending meetings, it often seems like we are fighting an uphill battle when it comes to antagonisms and getting our message out. When I give an OMS presentation I am refreshed by the response I get from the audience. I would say that the average person isn't out to attack modern food production, they are just uninformed about the way we raise food. Most people seem genuinely interested in the presentation and are full of questions. Since people are so far removed from how food is grown, they don't have a clue where to get accurate information.

After every presentation, the audience is asked fill out a survey. From all the surveys returned nationally, 73 percent of the audience left the presentation with a positive impression of the pork industry!

Now this is where I need your

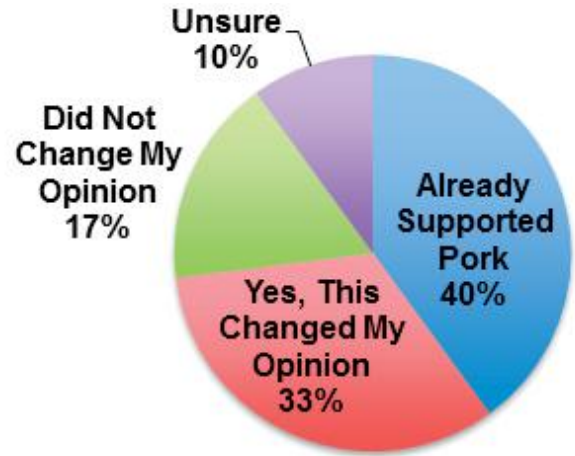
help!

Veterinarians, Madonna Benjamin and James Kober, are also OMS presenters, but what we really need is pork producers. People want to hear from farmers. They want to know how and why you raise pigs.

The National Pork Board makes the program as easy on the presenters as possible. They offer training, presentation materials and scheduling. All you have to do is show up and talk.

If you are interested in learning more about this program or would like to go through the training, contact me. The next training classes are during World Pork Expo, Des Moines, Iowa, in June. I am sure you will find it as rewarding and enjoyable as I do.

The more we can get our message out there, the more we can build trust with consumers. That trust will build awareness that Michigan pork is safe, nutritious, humanely raised and environmentally friendly. 🐷



Operation Mainstreet Milestones:

- 9000 Presentations Nationally
- 258 Presentations in Michigan
- 43 States
- Media Coverage Reaching 35 Million




Join us for an Open House!

Spartanwood Sow Farm is a new build that will house 6,000 sows and gilts. This operation will be open for public viewing Friday, April 21 from 11 a.m. until 6 p.m. Join us before the pigs arrive! With questions, call 517-282-0970.

410 Slisher Road, Bronson, MI 49208

2017 Michigan Pork Symposium

n February 16, 2017, the Michigan Pork Producers Association joined efforts with Michigan State University Extension to host the 2017 Michigan Pork Symposium. The 2017 symposium focused on how in the future producers may or should work together with other commodity groups, government, suppliers, veterinarians, university research and extension. The question has been asked, “How important will these relationships be to everyone in the future?” This year’s Symposium theme was “Pork Industry Sociology & Science”, and reflected that effective networks and new research are both important if the pork chain is to experience sustained desirable outcomes. The goal of the symposium was to provide producers with knowledge that will help them provide a growing human population an environmentally-safe, socially-acceptable, low-cost source of meat. The conference also allows producers to get an update on research being done in the industry.

The Symposium started with a welcome and introductions, followed by a Michigan Department of Agriculture and Rural Development (MDARD) update by Dr. Stephen Hussey, Veterinary Program Manager for Swine, Aquaculture and Invasive Species. A outlook on the hog industry was then given by Michigan State University Professor Jim Hilker.

Dr. James Tiedje, Distinguished Professor of Microbiology and Molecular Genetics at Michigan State University, then gave a presentation on Antimicrobial Resistance.

Following Tiedje’s presentation, Representative Dan Lauwers presented Michigan Pork Producers Association Executive Vice President Sam Hines with a Declaration of Special Tribute from the State of Michigan to recognize Sam’s many years of wisdom and service to the pork industry in Michigan and the United States (pictured at right).

After a short break, Dr. Ronald Hendrick, Dean of MSU’s College of Agriculture and Natural Resources presented an MSU update.

Don Buhl, a pork producer from Minnesota, past president of the Minnesota Pork Producers Association and the National Pork Producers Council, then spoke about his experiences in life and on the farm. Don reflected on his thoughts about effective networks and partners in the pork industry as tools for local producers to utilize.



At noon, attendees were treated to a delicious, captivating lunch of pork dishes prepared by the Lansing Center’s culinary staff and National Pork Board CEO Bill Even spoke about the pork board and the goals of the Pork Checkoff. Awards were then presented to Michigan pork producers for their dedication to the industry.

During the Awards Luncheon (pictured left), five individuals were recognized for their excellence in pork production and contributions to the pork industry. MPPA’s highest honor, the Distinguished Service Award went to Harley Sietsema, of Allendale. Sietsema is an ex-officio member of the MPPA Board of Directors and has made significant contributions to the industry through his service in Michigan and at the national level.



At right, Master Pork Producer Lee Carte is pictured with his wife, Margie. Below, Contract Grower Robert Veld stands with his wife Rachel. At bottom, Swine Herd Manager Harold Jensen stands with Pat and Colleen Albright.



Another honor went to Lee Carte, of High Lean, Huron Pork and Carte Farms, Remus. Carte received the Master Pork Producer Award.

MPPA also awarded Robert Veld of High Lean Pork the Contract Grower Award, and the Swine Herd Manager Award went to Harold Jensen of Albright Swine Farms.

In the afternoon of the Symposium, presentations were given by MSU researchers (faculty, graduate students, and undergraduate students) about recent research and extension work. Producers took interest in learning more about bacteria found in pig tonsils, nutrient fate during winter manure application, impact of pig wean age on gut development and more. The afternoon sessions were envisioned to be like the "Swine Day" programming experienced in decades past.



The 2017 Michigan Pork Symposium successfully provided pork farmers from around the state information about their ever-changing industries. Valuable impact is anticipated in the future as farmers use information from the symposium to produce food for the world. This event was also made possible by

many significant pork industry sponsors (see page 26). 

Gov. Rick Snyder appoints Pridgeon to the Commission of Agriculture and Rural Development

Gov. Rick Snyder recently announced the appointment of Brian Pridgeon of Montgomery to the Commission of Agriculture and Rural Development.

The five-member bipartisan board has the responsibility to recommend and in some cases determine policy on food, agriculture, and rural development issues. No more than three members may be from the same political party.

“I thank Brian for serving and I know his farming experience will be beneficial to the commission,” Snyder

said.

Pridgeon, a seventh-generation hog farmer at Pridgeon Farms that markets 70,000 animals annually. He is the secretary of the Michigan Pork Producers Association board of directors and the young farmer chair and executive committee member of the Branch County Farm Bureau. Pridgeon holds a bachelor’s degree in corporate finance and business management and a master’s degree in communication from Central Michigan University. He will represent Republicans.

Pridgeon will serve a four-year term expiring Dec. 31, 2020. His appointment is subject to the advice and consent of the Senate.

Other officers announced during the recent meeting include:


Chair: Dru Montri

Montri owns and operates Ten Hens Farm, a year-round farm in Bath. Montri is also committed to regional food system work. She has been the director of the Michigan Farmers Market Association since its inception in 2006.


Vice Chair: Bob Kennedy

Kennedy works for The Anderson’s as their Area Manager. He also owns and lives on a small farm in Saginaw County with his wife and two children, and is an active hunter and fisherman.


“I appreciate the enthusiasm and willingness of these individuals to serve Michigan’s growing food and agricultural community,” said Jamie Clover Adams, director, Michigan Department of Agriculture and Rural Development. “The members of the Commission are partners in identifying and supporting economic development and educational opportunities for consumers, farmers and agri-food businesses.”

For more information on the Commission, go to http://www.michigan.gov/mdard/0,4610,7-125-1572_2878---,00.html 

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Michigan Pork Producers Provides Input on Checkoff Programs

Bob Dykhuis and Brian Pridgeon, pig farmers from Holland and Montgomery, served as delegates to the Pork Act Delegate assembly March 1-3 in Atlanta, Georgia. Bob and Brian were appointed as delegates by the U.S. Secretary of Agriculture.

“It was important to me to represent pork producers from across the United States as a Pork Act delegate,” said Bob Dykhuis. “As an industry, we are committed to ‘elevate U.S. pork as the global protein of choice by continuously and collaboratively working to do what’s right for people, pigs and the planet.’ This was reinforced throughout the Pork Act delegate meeting.”


Bob and Brian were two of 168 appointed delegates who traveled from 49 states across the country to represent pork producers and importers who sell pork products in the United States. The duties of the delegate body include nominating

members to serve on the National Pork Board, establishing how much of the Pork Checkoff is returned to state pork organizations, and providing direction on pork promotion, research and consumer and producer education priorities funded by the Pork Checkoff.

To fund programs, America’s pork producers contribute 40 cents of every \$100 of sales to the Checkoff. Importers use a sales formula to contribute a similar amount. The role of the Pork Checkoff is to promote and enhance consumer demand for pork on a global basis, as well as invest in research designed to improve production practices and safeguard the pork supply, the environment and animal well-being. Building consumer confidence and educating America’s pig farmers about livestock production practices through training and certification programs are also key priorities.



The National Pork Board earlier approved a 2017 budget for national spending of \$55.4 million for promotion, research and education programs. The strategic direction of the Pork Checkoff is centered on building consumer trust, driving sustainable production and growing consumer demand in the United States and globally.

“It has never been more critical that we work together as producers, processors and food chain partners to make a collective difference to pork’s consumers,” Brian said. 



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USDA Seeks Michigan Applicants for Conservation Innovations Grants

The U.S. Department of Agriculture is seeking grant proposals for up to \$75,000 for innovative approaches


and technologies to improve conservation on agricultural land and private forests in Michigan.

“Conservation Innovation Grants

have an impressive track record of fostering innovative conservation tools and strategies nationally, and in Michigan,” said USDA State Conservationist Garry Lee.

Proposals for Conservation Innovation Grants are due by May 9, 2017. Individuals, businesses, local governments, non-profit organizations, colleges and universities and American Indian tribes are eligible to submit proposals. The USDA Natural Resources Conservation Service has \$225,000 available to fund grant proposals in Michigan.

Administered through NRCS, Conservation Innovations Grants are designed to focus on innovative conservation projects that promote science-based solutions to benefit both producers and the environment. Projects may include on-farm pilot projects and field demonstrations, and are funded to accelerate the transfer and adoption of promising technologies to landowners in order to address critical natural resource concerns. NRCS will accept proposals for single or multiyear projects, not to exceed three years, submitted by eligible entities for projects located in Michigan.

For more information visit the NRCS Conservation Innovation Grant web page at www.mi.nrcs.usda.gov. 



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In Remembrance of late MPPA Board Member Bob Bloomer

Robert Dayl Bloomer, was born April 14, 1951, in Mt. Pleasant to Robert and Alice (Demlow) Bloomer, the second of three children. He grew up in Elsie, Michigan. During his early years in Elsie, he was active in boy scouts and little league. Bob was always a hard worker, maintaining multiple jobs in addition to going to high school. During the summers, he worked on his uncle's dairy farm and developed a love for farming.

After high school, he moved to Winn, Michigan where he managed a sow farm. He met his wife, Kristy, in 1976 in Mt. Pleasant. They were married at St. Patrick Catholic Church on November 12, 1977. In 1979, they moved to Sebewaing to manage a hog operation and grew it into one of the largest in Michigan. He retired in 2016. He enjoyed many activities, including Jaycees, little

league coaching and bowling.

Bob was active in the Michigan Pork Producers Association and served on the board of directors for many years, including serving as president of the association. He held various positions during his tenure including a seat on the National Pork Producers Federation Council, and played a large role in fighting to keep the pork checkoff. Bob has received multiple awards at both the state and national levels. He was awarded the MPPA Distinguished Service Award in 2006 and continued to serve on the board for many years after. Bob was a great asset to the association and the pork industry.





He was an active member in the Catholic Church and a member of the Knights of Columbus. He was an avid supporter of USA athletics and schools.



Bob enjoyed raising his four boys, Jim, Rusty, Joe and Andy. He was an active grandfather to Zarine, Emilia, Gillian, Nathaniel, Vincent, Lucille, Elizabeth, Griffin, Lincoln and Harper. He was blessed with three wonderful daughters in law, Melissa, Stephanie and Allison. He always made his family his first priority. Even as he battled pancreatic cancer, he still made time for horseback riding, kite flying, backyard camping, dinosaur hunts and tractor rides. Although he had many accomplishments, his greatest was being a loving husband, father and grandfather.

Bob Bloomer, age 65, of Sebewaing, passed away February 5, 2017, at Henry Ford Hospital in the company of loved ones.

Though we mourn the loss, we are comforted by the knowledge that his fight/battle is over and he is at peace. 🐷

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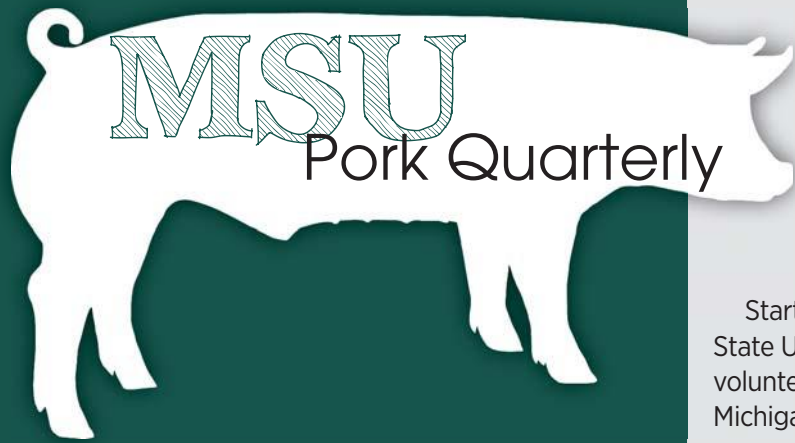


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Information for an Industry on the Move

March 2017

Vol. 22 No.1

All about the ladies...

Dr. Madonna Benjamin, Editor for the March 2017 Pork Quarterly.

Starting with this issue, every quarter, one of the Michigan State University (MSU) Extension Pork Work Group members volunteers to act as Editor for the Pork Quarterly within the Michigan Pork Magazine. This time, I find myself lucky.

With the assistance of Mary Kelpinski and Emily Schmitt, we are initiating an issue theme for each quarter. This quarter we are focusing on the girls – gilts and sows. Dr. Nathalie Trottier's research group is motivated to study sow nutrition, specifically during lactation. Nathalie shares her insight that, from the first lactation, every teat is sacred. In addition, Nathalie, along with nutritionist David Chamberlin reports on the findings for using crystalline amino acids to reduce both the cost of standard sow rations and reduce environmental footprint.

Dr. Janice Siegford, of MSU's Animal Behavior and Welfare Group, has shared a write up on how the work of her team may hold the key to "peaceful" pig grouping. Beth Ferry and Sarah Ison include the "nasty" side of girls in their article "Why MSU is focused on sow aggression".

My Soapbox: Pain mitigation in swine.

Perhaps the best part of acting as editor is the opportunity to rant. Tom Burkgren, Executive Director, of the American Association of Swine Veterinarians, wrote in his recent message *My view from the hospital pen*, that, "as a profession we need to do more to understand the relief of pain in pigs". I agree most heartedly. There is quantifiable evidence of behavioral and physiological indicators of pain in livestock such as lying behavior, huddling, leg loading and more. Pain relievers such as meloxicam and ketoprofen are Nonsteroidal Anti-inflammatory drugs (NSAID), which tend to persist in the synovial fluid. In Canada, meloxicam is approved for relief of post-operative pain associated with minor soft tissue surgery such as castration in swine, non-infectious locomotor disorders to reduce the symptoms of lameness and inflammation, and reduced toxemia. Ketoprofen is approved for reduction of fever and inflammation associated with respiratory infections. Flunixin e.g. Banamine®, the only NSAID approved in the United States, comparatively lacks adequate relief for both post-operative pain or musculoskeletal conditions such as chronic lameness in sows. Dexamethasone is a corticosteroid

In This Issue...

Pg. 1 Editorial: All About the Ladies

Pg. 2 MSU Teams Focus on Pig Aggression

Pg. 5 Improving Genetic Selection

Pg. 6 Critical Determinants of the First and Future Lactations

Pg. 9 Refining Lactation Diets



This newsletter is edited by:

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which will reduce inflammation but does not target pain receptors.

During my veterinary practice in Alberta, Canada, we had introduced an Standard Operating Procedure (SOP) for “off-feed or reduced feed intake” to sows during lactation to include meloxicam on farm. At the time, only ketoprofen was approved in swine. We compared and followed treatment protocols, records and estimated the number of injections on two 3,000-sow-wean sites (Farm A and Farm K) over 4 months.

Farm A treated 487 sows for 3 days with a traditional combination of dexamethasone and penicillin. **Farm K** treated 480 sows with ketoprofen - once.

Here is the math: Dexamethasone = 3 injections (1 injection X 3days) and penicillin = 9 injections (24-30 ml requires 3 injection sites X 3 days) for a total of 12 injections/sow treated or 5,844 injections.

Of the 480 lactating sows treated on **Farm K** with ketoprofen, there were 480 injections! During this short

observation, **Farm K** had 2% lower sow mortality rate over **Farm A**. The ketoprofen treatment cost then was \$8-10/sow treated and based on lower mortality the ROI was 3:1. Since then, meloxicam has been approved in Canada for swine. As with most multisite systems, it did not take long for **Farm A** to recognize and change their treatment regime to include ketoprofen (NSAIDs) because stockpeople liked the idea of a) fewer injections b) better perceived results to treatment and c) lower sow mortality.

I believe it is important that swine producers and swine veterinarians look to pharmaceutical companies and regulatory agencies to understand how we can encourage and assist them to provide options of pain mitigation for swine. When asked of her success to changes in policy, Temple Grandin admits that “Heat bends metal”, so let’s all turn up the heat.

For our next issue we are including letters to the editor. We appreciate your questions and comments.

Michigan State University research and extension teams focus on pig aggression

By: Beth Ferry, Swine Extension Educator, MSU Extension and Sarah Ison, Department of Animal Science, Michigan State University

Why pig aggression?

It is common knowledge on swine farms that when you house animals together that have no prior knowledge of each other that there will be displays of aggression and fighting. Studies of pig’s social behavior in natural settings have provided useful information about the role of these behaviors. Stolba and Wood-Gush, identified key features in the behavior of free-ranging pigs, living in social groups (sounders) of 2 to 6 females along with their litters, and juveniles [1]. Piglets are born in an isolated area, the nest, and begin social interaction as they slowly venture out with the sow to the point of communal living with other sows and piglets in the sounder. Sows and pigs form linear dominance hierarchies or pecking orders within the sounder, based on age and size, typically with one “boss sow” and the remaining individuals in order below. Since sounders typically consist of related individuals, the pecking order is established and maintained without or with very little aggression. Boars live as solitary individuals

or as sub-adults, in small groups that were formed when they were young. They come into contact with the females only for breeding, and when they do, they take top spot in the dominance pecking order. In wild or feral populations that live in home ranges, when overlap between groups happens the wild pigs generally adopt an avoidance strategy rather than overt aggression [2]. When sows are housed in large groups in a commercial setting, they often form smaller sub-groups, as they would in the wild,



Figure 1. Sows fighting shortly after mixing. Photo courtesy of Dr. Sarah Ison

occupying a certain space within the pen. It is found to be beneficial to provide the sows with barriers in the large pens, so that sub-groups can occupy these spaces. These barriers also help weaker sows to hide from the boss sow and move away from the acts of aggression.

Due to the nature of commercial production systems, pigs may have to be re-grouped at various stages, for example, entering the nursery stage, the feeder/finisher stage, for gestation in group housed systems, at transport and/or immediately before slaughter. On most commercial farms, nursery to finisher pigs are abruptly placed in new social groups of up to hundreds or even thousands of pigs. Due to replacement rates and other production factors, commercial breeding gilts and sows are housed individually, small groups of 8-10, or in larger groups, and breeding boars are housed individually. The innate need is to re-establish a dominance or pecking order and unfamiliar pigs engage in aggressive interactions and fight amongst each other. Vigorous fights associated with re-grouping events, causes injury [3], stress [4], altered immune function [5], and reduced average daily gain [6]. This means re-grouping events can be associated with a reduction in productivity and pig well-being. Work has been done to look at methods to reduce those acts of aggression, this has become especially important for Michigan producers as they look to implement new regulations regarding the housing of gestating sows.

MSU research project

By April 1, 2020, Michigan pork producers will no longer be able to house sows in individual gestation stalls from the point at which pregnancy is confirmed. Michigan is one of 10 States to put in place this regulation, several pork retailers are also requesting that their pork be from pigs raised in this manner, and several other countries globally have recently made this transition, or are embarking on the change in the next few years. Therefore, this is an issue of national and global importance.

Group-sow housing will enable sows to move around, engage in positive social interactions, and choose where to lie to improve thermoregulation. Housing gestating sows in this manner will involve several re-grouping events, and numerous potentially aggressive encounters. This leads to concerns from pork producers regarding sow well-being and productivity in group systems due to injuries and lameness from aggression. At MSU, a team of researchers are working on advancing the knowledge

relating to the genetics and behavior of pig aggression, to further investigate the possibility, including potential side-effects of breeding a less aggressive pig. The overall aim of the project is to reduce production losses using behavioral and genomic tools to identify pigs best suited to group living (see below).

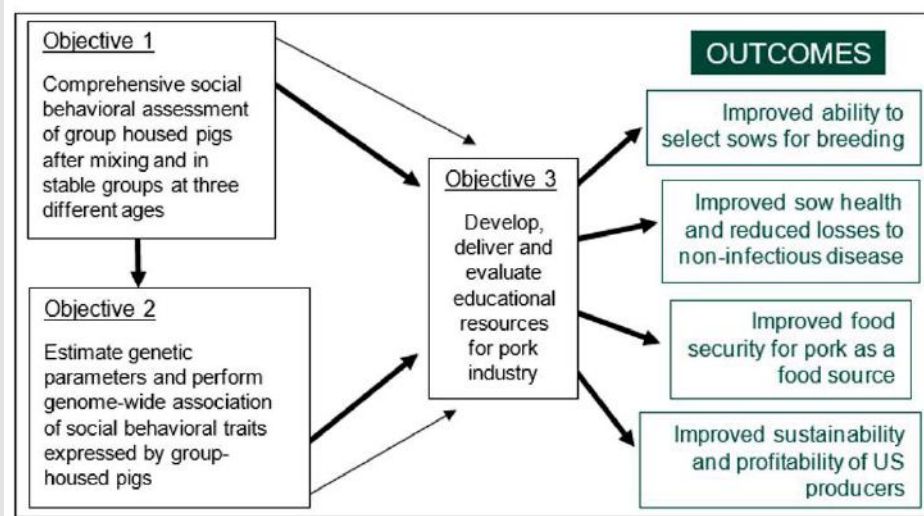


Figure 2. Grower pigs fighting shortly after mixing. Photo courtesy of Dr. Sarah Ison

MSU Research

The on-farm data collection phase of the project is now complete, including detailed behavioral data (phenotypes) for 1079 gilts and barrows. Individual pigs have been followed from birth, through re-grouping on entry to the nursery phase, feeder/finisher phase, and replacement gilts entering the breeding herd (Object 1, Page 4, Table 1). Researchers are currently studying the data to characterize the level of aggression at the different stages, as well as individual consistency of aggression. The researchers also obtained genotypes for these pigs, to conduct genome wide association studies (GWAS), associating variation in the aggressive phenotype of the pig, with regions on the genome (Object 2). This provides the potential for geneticists to incorporate selection against these 'aggressive' genes, without spending hours recording aggressive behavior of individual pigs, and ultimately create a pig better suited to group living. A third component to this project is to consider behavior in the development of on-farm management protocols to reduce production losses, by surveying pork producers, and pork industry advisers (researchers, extension educators, swine veterinarians). Survey results are being used to develop educational resources for pork industry stakeholders, including methods to better transfer and incorporate research results into on-farm management (Object 3).

Table 1.



MSU Extension resources

As Michigan prepares to implement regulations for sow housing, the pork team at Michigan State University Extension has identified it as an issue and area of education. The team conducted focus groups to identify strategic educational needs relating to the group housing of sows, which included: retrofitting existing facilities, feeding systems, employee training, new construction, genetics, and production scheduling [7]. In response to this, the team has put together factsheets outlining the systems available, which are published on the MSUE pork webpages, along with other industry information on gestation sow housing options [8]. Also available on the website is the Sow Housing Options Tool (SHOT), which allows producers to economically evaluate group housing options, including new builds and retrofitting existing facilities. The SHOT consists of a standard Microsoft Excel spreadsheet along with a guide, allowing users to input personalized farm data and cost estimates for various systems, in order to calculate a cost comparison for different systems, or directly compare the same system with equipment from different manufacturers. This enables users to complete an economic comparison of the GSH systems that they may consider adapting to, based on their individual production scheme. All materials are also available upon



request as printed copies.

To complement existing materials, the team is currently putting together video case studies of producers who have existing group sow housing systems. The videos will include a description of the system, and interviews with production staff responsible for sow management. Based on the outcome of the national pork producer, and industry advisor surveys, several educational materials will be constructed, relating to the breeding and selection of replacement breeding sows, and on-farm techniques to minimize aggression between pigs. MSU researchers will use the survey data to establish the best methods to communicate the latest research to pork producers, to better incorporate research advances into on-farm practice.

In summary

MSU research and extension are working together to use cutting edge knowledge of behavior, genetics, and industry education to reduce production losses in an evolving pork industry.

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Improving Genetic Selection May Hold Key to Peaceful Pig Grouping

By: Janice Siegford, Department of Animal Science MSU College of Agriculture and Natural Resources

Growing concern over the welfare of agricultural animals has led many states to pass legislation that mandates a fresh set of care practices. California did so in 2008, and many others have followed suit.

In 2009, the Michigan Legislature passed an amendment to the Animal Industry Act introducing a series of new standards for gestating sows, laying hens and veal calves. Included is the requirement of additional living space for gestating sows. By April 1, 2020, all producers will need to house pregnant pigs in stalls where they can turn about freely, something typically not found in most current operations.

The majority of agricultural producers don't have the physical capacity to give each sow an individual pen. And though pigs are social by nature, they don't always get along well in group settings.

Researchers at Michigan State University (MSU) and Scotland's Rural College are looking for ways to place pigs so they are more likely to live in harmony together. The basis for the solution may be rooted in genetics.

"Being cognizant of how we treat animals is a great thing, and the new standards sound really good in principle," said Janice Siegford, an MSU associate professor of animal science who's working on the five-year project. "But pigs are currently being selected for breeding with no respect to how they perform in social situations. There's a lot of evolutionary history that says it's best if the animals know each other and are raised together, but that's not often what is done in practice."

Pigs naturally live in small groups that consist of their mothers and other close relatives. There is a social hierarchy within these groups, which normally works to reduce aggression and fights because they know the social order. When unrelated pigs are mixed in a shared space, fighting can become intense.

"Unfamiliar pigs oftentimes fight like the dickens when they are put in the same pen," Siegford said. "This becomes problematic for a number of reasons. Obviously, the animals' welfare is adversely affected. And injured or stressed pigs don't perform as well, and they can even die from exhaustion or heat stress."

Breeding programs have traditionally focused on production traits and other relatively easy-to-measure physical characteristics, such as number of offspring, growth rate and depth of back fat. Though it's sometimes difficult to quantify, Siegford said that behavior should also be taken into consideration.

Siegford and the rest of the project team — which includes MSU faculty members Juan Pedro Steibel, Cathy Ernst, Ron Bates, Madonna Benjamin and Sarah Ison, as well as graduate and undergraduate students — are examining the heritability of social behavior using genetic selection. They are characterizing social interactions, relating those behaviors to health and productivity, and identifying the genetic components that factor into certain behaviors. They hope that the work will help to answer a critical question: Can pigs be selected for heritable behavioral traits that lessen the severity of conflict among grouped animals?

The MSU team is compiling behavioral and genomic data from more than 1,000 pigs at the MSU Swine Teaching and Research Center. The data will be combined with information from 3,000 pigs obtained by collaborators Simon Turner and Rick D'Eath of Scotland's Rural College, experts in analyzing aggression heritability in pigs.

Most previous research on heritability of aggressive behavior has been dedicated to the finishing stage of production when animals are being prepared for market. Siegford believes that monitoring interactions earlier could be useful.

"We've been studying behavior of the pigs beginning at the first time they are mixed in the nursery after weaning," Siegford said. "If we can predict behavior at an early age, maybe we can manage those pigs better throughout their lives."

"We're not just looking at fighting. We want to know about positive behaviors. Some pigs like to rest or feed with certain pigs, and we want to know what behaviors they use toward preferred social partners. All of that is extremely important to understand when it comes to selecting pigs for breeding that best fit the social environment we keep them in."


Ison is surveying producers and breeding companies to

determine how they manage their pigs and if they take social behavior into account during the breeding selection process. Early findings have shown that many producers receive information on behavior from their swine veterinarians. This knowledge offers insight into the best way for the team to share research findings for maximum exposure and impact.

Siegford said she wants to help ensure the sustainability of Michigan's pork industry, valued at \$500 million.

"These changes to animal care standards have been

made for positive reasons," Siegford said. "The idea of giving animals more space is wonderful, but when you allow for more behavioral expression, pigs will perform both good and bad behaviors. We need to make sure that we're giving producers information so they can meet legislative and consumer requirements in the right way for the pigs, and in a way that makes sense economically."

Funding for this project has been provided by the U.S. Department of Agriculture, the National Pork Board and the Rackham Foundation. 

Critical Determinants of the First and Future Lactations

Dr. Nathalie L. Trottier, Department of Animal Science, Michigan State University

Editor: Dr. Madonna Benjamin

The outcome of the first lactation will dictate whether the gilt remains in the herd or is culled. Our lab has focused our research efforts to understanding sow lactation and physiology. While our work is ongoing, this article represents a summary of what I believe are the most important goals for lifetime sow productivity and, it starts with the gilts.

Goal #1 - Prevent gilt obesity in gestation.

Setting body condition goals for gilts entering the breeding herd and monitoring body condition during the gestation period will optimize feed intake for lactation. The over-conditioned gilt coupled with limited mobility during gestation is far more susceptible to dystocia (difficult and extended length of farrowing) than her P2+ sows. Coming full circle, dystocia then results in lower feed intake in lactation, and higher rate of piglet mortality at birth and in early lactation. Over-conditioned gilts are less willing to stand compared to well-conditioned gilts and will tend to have more fat in their mammary tissue. Fat in the mammary tissue is linked to reduced ability of the alveoli (mammary milk-secreting compartment) within the mammary gland to produce milk.

We believe that objective methods to monitor gilt body condition, such as body weight, girth tapes, backfat thickness and Caliper can result in accurate determinants of an animal's true condition and reduce unnecessary feed intake costs. We are currently working on a large scale project using commercial facilities to assess the impact of gilt feeding with higher fiber-containing diets on their growth, body condition and performance over 3 successive parities. As part of this study, mammary tissue is biopsied from the first litter gilts and then from these same gilts as they

progress into P2 and P3. We will determine if the mammary gland composition (fat vs. milk-secreting cells) is affected by the developing gilt diets.

Goal #2 - Increase fiber intake during gilt gestation

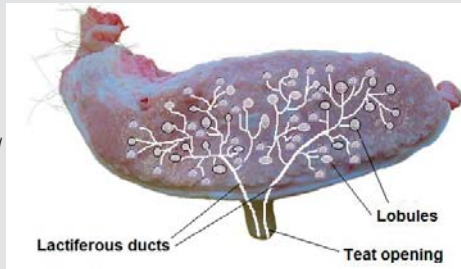
In addition to restricting caloric intake during gestation, increasing dietary crude fiber from 3.8% to 7% will benefit the gilt considerably. Increasing fiber will increase gut fill and stimulate bowel movement. Increasing fiber results in expanded stomach volume and feed intake capacity in preparation for improving feed capacity intake during lactation - as much as 2 kilograms more feed per day. Increased bowel movement is important in gilts because it reduces the time fecal matter remains in the large intestine and ultimately reduces the risk for bacterial endotoxin production. These circulating endotoxins may interfere with the secretion of prolactin, the hormone needed to initiate and maintain lactation. Sows fed higher fiber containing diets also drink more, with some studies showing increased water intake in early lactation by nearly 2.5 gallons per day. More water intake means more gilt mobility and subsequently, bowel movements. Quesnel and co-workers found that the effect of increased gestational dietary fiber - 7% starting d 25 of gestation - can offer a significant increase in piglet and litter ADG.

Therefore, it is advisable to include a good source of fiber, for example wheat bran, to ensure at least 7% crude fiber in the gestation diet. Other fiber provisions, depending on the facility type, include straw and/or shavings to stimulate fiber intake, foraging, nesting behavior and thus encouraging gilt mobility. Consider keeping the gilts on the high fiber gestational diet to the end of gestation and into the first

4-7 days of lactation to maintain the physiological benefits associated with feeding fiber.

Goal #3 - Optimize mammary gland utilization.

Figure 1. At right, a cross section of an actual mammary gland with the drawing representing the lactiferous ducts and the lobules (not drawn to scale).



Within each lobule (not shown here), thousands of milk producing cells line up the inside compartment of thousands of alveoli. Oxytocin stimulates each alveoli to “contract” to push the milk into the lactiferous ducts at time of milk ejection.

Of all livestock species, the female swine is the only one that give birth to a litter, which makes them unique in terms of how they regulate their milk production and interact with the progeny. The sow is equipped with 14 to 16 “complex” mammary glands or teats (Figure 1). They are termed complex because each gland is composed of two “simple” glands and two lactiferous ducts draining into two separate teat openings. Each simple gland is composed of lobules. Milk is freshly synthesized within these lobules, and unlike other species, the pig mammary gland has a very limited milk storage capacity. The lobules fill up with milk about every 50-70 minutes and must be emptied every 50-70 minutes by the piglets to optimize milk production.

Piglets are indeed programmed to nurse their specific teat, just about every hour following the transition of colostrum to milk. If the mammary glands are not emptied within that short time frame, intra-mammary pressure increases. If the pressure persists for 6-7 hours, involution (reduction of the size of the gland) will begin. Once involuted, the mammary gland will not come back to its original size, even if more piglets are placed on the sow. Nursing of all of the available functional glands is crucial to stimulate mammary growth during the first lactation. A study by Ford and colleagues first suggested that mammary glands which are suckled in a first lactation have enhanced productivity in the next lactation compared with glands that are not suckled. They reported that mammary glands at the end of involution period (seven days post-weaning) which are suckled during lactation are larger than un-suckled glands (Figure 2) and presumably have more mammary tissue available for redevelopment during the next pregnancy.

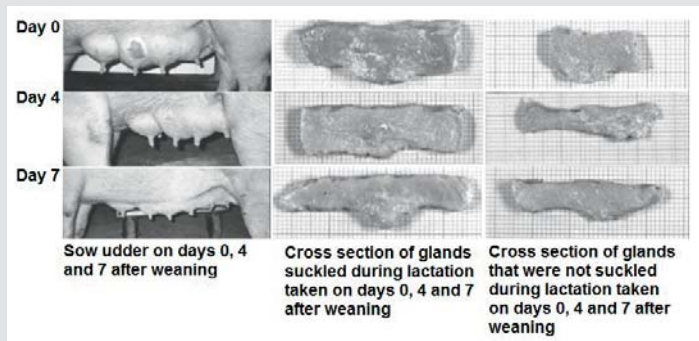


Figure 2. External and internal morphological changes in sow mammary glands follow weaning: Impact from nursing (Adapted from Ford et al., 2003)

Other research (Theil and co-workers) examined the impact of leaving a gland un-suckled for 24 hours from day 1 to day 2 of lactation on piglet growth until weaning. Still on day 28, Theil’s study showed that un-suckled glands for as short as 24 hours are never quite “rescued” for the rest of lactation (Figure 3).



Figure 3. (left) The second thoracic gland (II) was covered one day post-farrowing to prevent sucking; (right) The gland that was covered (II) completely involuted, and the involution was visually apparent within 4 days compared to gland I (Source: Theil et al., 2006).

There are, of course, many logistical issues that may prevent fostering as early as one would like, nonetheless, knowing the impact of a non-suckled teat assist in setting goals toward cross-fostering.

There is a good biological reason why adding one or two piglets to an existing litter to maximize the uses of functional glands by cross-fostering from another gilt or sow should be done well within 24 hours following birth if at all possible. While gilts tend to have fewer piglets at birth compared to multiparous sows, data from the studies of both Ford and Theil would indicate that it is wise to exploit all her functional glands through maximizing the number of piglets nursing on a gilt. It would appear that if we don’t take advantage of mammary cell proliferation during the first lactation, we may have lost the window of opportunity.

Dairy producers have long recognized the importance of udder conformation for milk yield. Does udder conformation

matter in sows? There is little published regarding the relationship between udder traits per se and litter performance. The status quo is that the sow udder should be equipped with 14 or 16 equidistant, well-defined, functional teats with no inverted nipples.

Goal #4 - Prevent teat injury

Unlike other livestock species, each gland will eventually belong to a single piglet. Consequently, for each malfunctioning teat, there is one piglet out of luck because piglets tend to associate with and nurse one particular gland. Figure 4 shows the effect of 8 piglets nursing from a sow with 12 functional teats following parturition. By the middle of lactation, the glands were completely involuted. Teat injury, as the one depicted in Figure 5, may unfortunately prevent nursing of an otherwise fully, well-developed functional gland. If at all possible, it is a good practice to check on gilts during late gestation for any teat trauma and attempt to allow healing with rubber mats, prior to lactation.

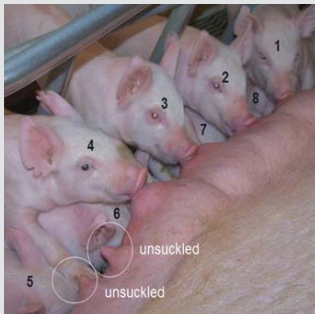


Figure 4. At left, the number of piglets in the litter was 8, with each piglet numbered 1 through 8. As shown, each piglet is nursing one functional gland. Piglets establish early on after birth a hierarchy and dominance for one gland in particular. The remaining, unsuckled mammary gland involute rapidly. Glands remaining unsuckled for 48 to 72 hours will never be rescued into producing milk again. (Photos courtesy of Kevin Turner and Nathalie Trottier, Michigan State University, Department of Animal Science).



Figure 5. Injury to a teat due to crate flooring in lactation. This teat lost its functionality and the mammary gland involuted. Such injuries occurring 48 hours post lactation means that the piglet "owing" this gland will only

have access, if any, to "free" glands that have reduced milking potential. Injuries occurring as early as after the 4th day in lactation will lead of a starving piglet since any free glands at this point into lactation cannot be rescued to produce milk again.

Goal #5 - Increase length of lactation period

There are a number of reasons why a longer lactation period is associated, in the long-term, to improved sow and piglet quality. Here I am listing 3 of them: 1) sows naturally have long lactation period and from an evolutionary basis, long lactation periods optimize socialization and positive

behavioral development; 2) extending the lactation period contributes to increasing stomach volume; 3) Longer lactation is beneficial for the mammary glands compared to weaning at an earlier age. Our research at Michigan State University showed that cellular activity in the mammary tissue is very high on day 17 of lactation, which corresponds to peak lactation. Weaning close to peak of lactation does not allow for the natural involution which usually takes place quite later into lactation, and the remodeling processes of mammary tissue to occur. The impact of weaning during this period on mammary "preparedness" for growth during the subsequent lactation cycle is unknown.

Conclusion

Culling of gilts following a poor first lactation represents an economic drain for producers. Preparing the gilt for a successful first lactation will impact lactation performance in subsequent parities. Setting body condition goals for gilts entering the breeding herd and monitoring body condition during the gestation period will optimize feed intake for lactation. Feed intake in gestation should be restricted to meet the amino acid and energy demand associated with products of conception and mammary tissue growth, and to maintain good body condition without causing excessive fat accumulation into the mammary tissue. In production settings whereby gilts are housed in gestation stalls it is advisable to feed several times a day to encourage gilts to stand up. Fiber is an underutilized production tool. Increasing fiber has many benefits, namely increasing feed consumption during lactation, reduced farrowing time, reduced pre-weaning mortality and piglet average daily gain.

Finally, understanding factors that lead to a dysfunctional teat in the first parity is crucial. An underused mammary gland is a lost opportunity toward improving sow lifetime productivity. Every Teat is Sacred!

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Refining lactation diets to reduce environmental impact

David Chamberlin, and Dr. Nathalie L. Trottier. Department of Animal Science,
Michigan State University

Modern swine production systems require highly productive animals. To ensure high productivity, diets formulated and fed to modern sows should meet the highest sow nutritional demand first. However, this often results in an excess of nutrients given to certain sows, with lower nutrient requirements. This nutrient excess, in particular nitrogen (N) or phosphorous (P), can negatively impact the environment.

At Michigan State University, we have spent a number of years developing and testing “green” diets that improve nutrient digestibility, or reduce total manure nutrient excretion to lessen environmental impact of sow diets. Prior to our work with sows at MSU, much of the efforts on green diets were centered on grower and finisher pigs. Fortunately, our interest in sows rations and environmental impact have provided an opportunity to combine our on-going interest in nutritional requirements for lactating sows to her nutrient role in our environment. For example, lactating sows consuming nearly 50 lbs. of dietary crude protein (CP) over a 21-d lactation period, will excrete around 18 lbs. of CP in total manure, of which 3 lbs. is nitrogen (N).

A recent study entitled: “Lactation performance in sows fed diets with graded levels of crystalline amino acids as substitute for crude protein at lysine requirement” was part of the graduate work of David Chamberlin (Nutritionist, Barton Farm Company). As background to the study, dietary reduction in CP has been shown to reduce ammonia emissions (Li et al., 2015), and crystalline amino

acids (CAA) are thought to be a cost effective substitute to a percentage of CP in the diet, as well as reducing nitrogen excretion to the environment. In addition, Huber et al. (2015) showed that reducing CP by 2.8% (from 16% to 13.2%) with supplemental CAA, increased sow milk protein yields and improved the utilization of N.

In his study, David monitored and compared the performance of two sow groups fed diets containing 3% and 6% less CP, supplemented with crystalline amino acids (CAA), to sows fed a diet containing the standard CP levels as the sole sources of amino acids. Multiparous sows were fed the following diets: 17.16% CP (Normal), 14.48% CP (Medium CP: Medium CAA) and 11.82% CP (Low CP: High CAA). Voluntary feed intake was measured daily and sow and piglet body weight were recorded every 3 days until day 21 of lactation. Milk samples were collected on days 4 and 16. The findings in this study are interesting. Production variables such as piglet average daily gain and feed intake of sows fed the Medium and Low CP diets were not different than that of sows fed the Normal diet. While the milk samples analyzed showed no difference in available protein for piglets (casein), the N excretion concentration in the form of milk urea had decreased by 20% of sows fed the Medium CP diet and over 65% in milk urea of sows fed the Low CP diet. In a separate study, David’s research found that these diets also reduced the sow urine urea concentration of N by similar folds as those found for milk and that the lower concentration of N in urine led to a dramatic decrease in ammonia emission rates.

More studies are emerging from our program as we continue to focus on refining diets to reduce feed costs, meet high nutritional needs of our modern lactating sows, and reduce the environment impact of pig production.

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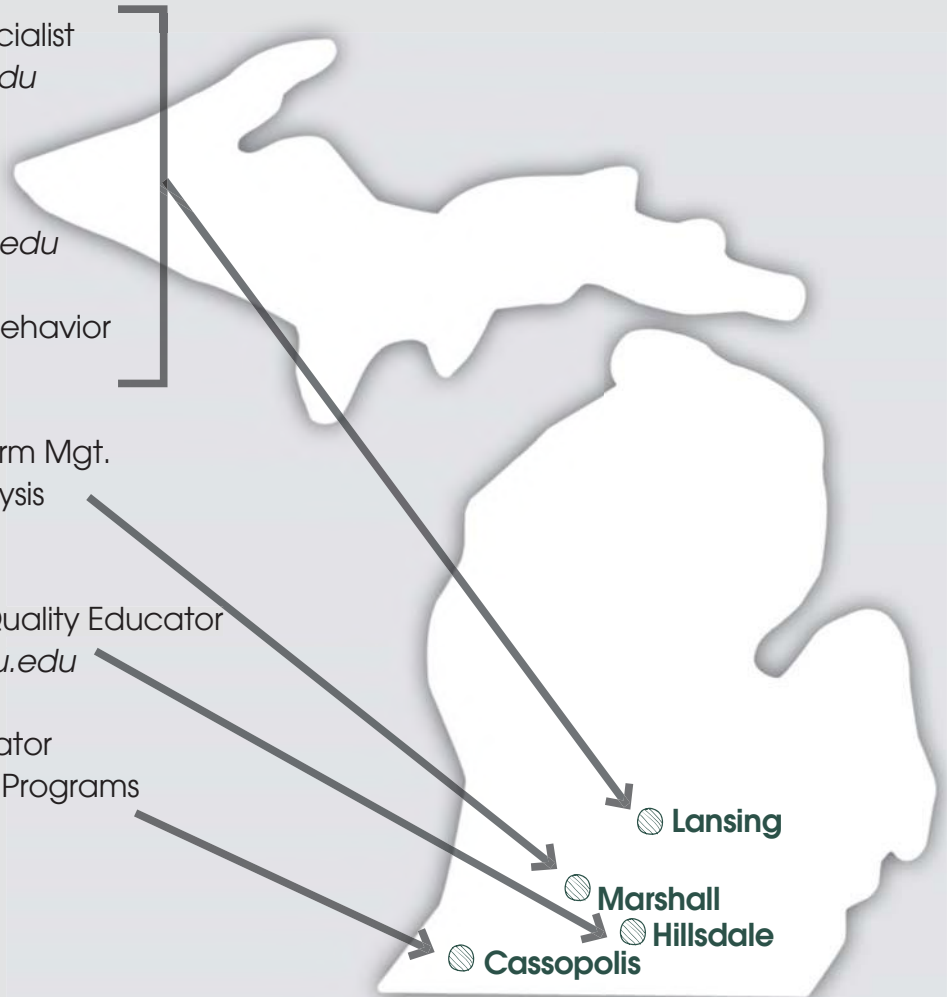
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Capital Update

All activities reported under this heading are financed by non-checkoff funds.

EPA NOW LIMITED ON FARM DATA IT CAN RELEASE

A federal judge recently approved a settlement agreement between NPPC and the American Farm Bureau Federation and the U.S. Environmental Protection Agency, limiting EPA's release of information on livestock farmers. Under the agreement, the agency only may provide under a Freedom of Information Act (FOIA) request the city, county, zip code and Clean Water Act permit status of a concentrated animal feeding operation. It also requires EPA to conduct training for its employees on FOIA, personal information and the federal Privacy Act. The settlement stems from the February 2013 release by EPA's Office of Water to several activist groups, which filed a FOIA request, of extensive private and personal information the agency collected on farmers in 29 states. (EPA gathered the information despite being forced in 2012 to drop a proposed data reporting rule for large farms because of concerns about the privacy and biosecurity of family farms.) Following the 2013 release and after objections from NPPC, the Farm Bureau and other agricultural groups, EPA requested that the activist organizations return the data, but the agency subsequently was prepared to release additional farm information it collected from seven other states. NPPC and the Farm Bureau also objected to the additional release, and in July 2014 filed suit against EPA in the U.S. District Court for the District of Minnesota. That court in late 2015 dismissed the lawsuit, but the U.S. Court of Appeals for the 8th Circuit in St. Louis reinstated it, and last September it ruled that EPA "abused its discretion in deciding that the information at issue was not exempt from mandatory disclosure under Exemption 6 [personal privacy interests] of FOIA.

NPPC, OTHER AGRICULTURE GROUPS CALL FOR ESTATE TAX REPEAL

NPPC recently joined a coalition of 31 other agricultural groups on a letter to House Ways and Means Committee Chairman Kevin Brady, R-Texas, and Ranking Member Richard Neal, D-Mass., asking that any tax reform package include permanent repeal of the estate tax. Sometimes referred to as the "death tax," the levy is imposed on the net value – less an exemption – of an owner's assets transferred at death to an heir or heirs. For the 2016 tax year, the exemptions for the estate tax are \$5.45 million for an individual and \$10.9 million for couples. Transferred estates valued at more than those figures are subject to a maximum tax rate of 40 percent on the amount of assets above those levels. "Family farmers and ranchers are not the only caretakers of our nation's rural lands, but they are also small businesses. The estate tax is especially damaging to agriculture because we are a land-based, capital-intensive industry with few options for paying estate taxes when they come due," the groups wrote. The coalition also asked lawmakers to ensure the benefits of estate tax repeal are not cancelled by eliminating or restricting the use of the step-up in basis, which limits the amount of property value appreciation that is subject to capital gains tax if inherited assets are sold. "Because farmland typically is held by one owner for several decades," said the groups, "setting the basis on the value of the farm on the date of the owner's death under stepped-up basis is an important tax provision for surviving family members."

USDA'S HOGS AND PIGS REPORT SHOWS INVENTORIES UP

All pork industry eyes were on the U.S. Department of Agriculture's National Agricultural Statistics Service as it recently released the Quarterly Hogs and Pigs report,

which presents data on the U.S. pig crop for major states and the country, including inventory numbers by class, weight group, farrowings and farrowing intentions. Overall, the report was relatively neutral, falling in line with pre-report analyst expectations. Inventory of all hogs and pigs on March 1 was 71 million head, a record for the time period and a 4 percent increase from March 1, 2016. Likewise, breeding inventory was 1.5 percent higher year-over-year at 6.07 million head, and market hog inventory was record large at 64.9 million head, up 4.4 percent year-over-year. Looking at production moving forward, the December-February pig crop was 4 percent higher from a year ago, and the average pigs saved per litter was 10.43, a record high for the December-February timeframe. Meanwhile, farrowing intentions indicate a 1 percent increase from last year for the March-May time period and a marginal year-over-year decrease in farrowing intentions for the June-August period (this slight decrease is the only major estimate that fell outside of pre-report trade analyst estimates).

FMD VACCINE BANK IS NPPC'S PRIORITY IN NEXT FARM BILL

The U.S. pork industry's top priority for the next Farm Bill is establishing a Foot-and-Mouth Disease (FMD) vaccine bank, the NPPC Vice President David Herring, a pork producer from Newton Grove, N.C., told a House Agriculture subcommittee in testimony recently. To address a potential FMD outbreak, which would cost the beef, corn, pork and soy bean industries alone an estimated \$200 billion over 10 years, NPPC wants the 2018 Farm Bill to direct the U.S. Department of Agriculture to:

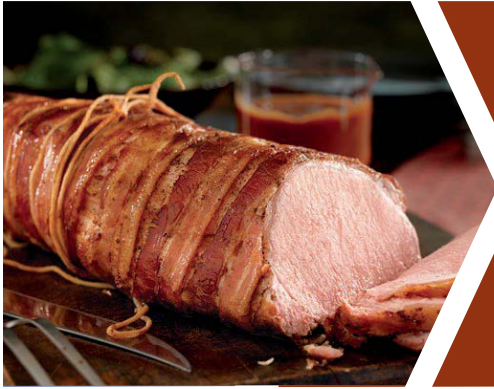
- Contract with an offshore, vendor-maintained vaccine bank that would have available FMD antigen concentrate to protect against all 23 of the most common FMD types currently circulating in the world.
- Maintain a vendor-managed inventory of 10 million doses of vaccine, which is the estimated need for the first two weeks of an outbreak.

- Contract with an international manufacturer or manufacturers for the surge capacity to produce at least 40 million doses.

Herring, who also is vice president of Hog Slat Inc., which makes hog farm equipment, told the subcommittee that pork producers want a Farm Bill that supports the U.S. pork industry rather than hinders its ability to continue producing safe, lean and nutritious pork for the global marketplace. In addition to an FMD vaccine bank, he said the next Farm Bill should include policies for disease surveillance, research and trade promotion, which would help pork producers. Among policies that could hamper producers, said Herring, are the pending Farmer Fair Practices Rules and the Organic Livestock and Poultry Practices Rule. NPPC wants the Trump administration to withdraw both regulations.

PERDUE WILL BE 'TENACIOUS' ADVOCATE FOR AGRICULTURE

Former Georgia Gov. George "Sonny" Perdue, President Trump's pick to be the next secretary of agriculture, during his confirmation hearing told the Senate Committee on Agriculture, Nutrition and Forestry he'll be a "tenacious" advocate for agriculture. NPPC supports Perdue to head the U.S. Department of Agriculture and earlier this year hailed him as someone who will be "very good for America's farmers and ranchers." Perdue grew up on a dairy and crop farm, became a veterinarian and ran agribusiness companies before entering Georgia politics. He was elected governor of the state, serving from 2003 to 2011. Asked during the hearing by committee chairman Sen. Pat Roberts, R-Kan., about USDA establishing strong trade policies, Perdue said, "Agriculture needs a strong advocate. ... [the Trump trade team] can all work together to establish a strong trade policy that benefits agriculture." On another important issue for pork producers, Perdue said USDA will have "ongoing communications" with other federal agencies to identify unintended consequences of regulations and address them "before they create challenges for agriculture."



Pork Checkoff

Reports on checkoff-funded promotion, research and consumer information programs.

PORK CHECKOFF TOURS THE NO. 1 CUSTOMER FOR U.S. PORK EXPORTS

With Mexico's hunger for U.S. pork continuing to grow, members of the National Pork Board spent March 13-18 in Mexico City building trade relations. The delegation invested its time immersing itself in Mexico, which is one of America's most important export markets. During the visit, the group emphasized the safety and reliability of the U.S. pork supply.

"Our visit to Mexico was eye opening. As board members, we were able to witness why Mexico is such an important trading partner," said Jan Archer, National Pork Board president and a North Carolina pig farmer. "The average Mexican family spends 30 to 40 percent of its income on food, so they appreciate the ability to access safe, nutritious and affordable U.S. pork."

The delegation received a warm welcome and were encouraged and enthused about the future of trade with Mexico. Within the next five years, economists predict Mexico may become the largest market for all U.S. goods, surpassing both Canada and the European Union.

During the week, board members saw firsthand the market opportunity and benefit of expanding trade with Mexico. The key objectives of the trip were to discuss and define areas of mutual interest, to extend appreciation to Mexico's trade industry for the high volume of U.S. pork purchased and to emphasize the reliability and availability of U.S. pork and the next steps needed to support expanding trade.

In 2016, Mexico was again the No. 1 importer of U.S. pork in terms of volume. Mexico imported more than 730,000 metric tons of U.S. pork last year. In terms of value, Mexico was again No. 2 at \$1.4 billion. In January 2017, which is the most recent data available, Mexico became No. 1 in both volume and value. The U.S. accounts for more than 90 percent of the total pork imported to

Mexico.

At a high-level, the trip agenda included opportunities for board members to:

- Meet with the USDA's Foreign Ag Service to understand Mexico's economy and its current political environment.
- Learn about new pork product development and innovation.
- Visit places where pork is sold and marketed to Mexican consumers. Those outlets include high-end club stores, regional supermarkets, fast-casual restaurants and a traditional wet market.
- Meet with Mexico's largest retail chain that sells and processes almost exclusively U.S. pork and hear about plans for further growth.
- Meet with some of Mexico's largest importers to discuss mutual interests and ways U.S. pork can maintain its role as a strong supplier.

"We saw that our investment of producer dollars in the U.S. Meat Export Federation returns great dividends as it develops relationships with importers and retailers," Archer said. "Our Mexican neighbors import fresh pork and ham, but also the products that have less value to the U.S. consumer. Pork byproducts, such as offal and pig heads, fill an important need in the Mexican marketplace."

More than 35 percent of the U.S.-produced pork hams are exported to Mexico and processed in Mexican facilities where they are transformed into deli meats and formed-ham products. These products are crucial for low-income diets. That is why the National Pork Board is committed to sharing information with the National Pork Producers Council as it works on trade access issues. This cooperation enables the entire U.S. pork industry to work together efficiently.

“Pork is a mainstay in Mexican culture – consumers appreciate it and know how to prepare it,” said Bill Even, National Pork Board chief executive officer. “The challenge Mexico faces is getting more protein-rich food into the diets of low-income residents and children. This requires a focus on new product development and education.”

The National Pork Board works directly with the U.S. Meat Export Federation (USMEF) to address this key issue, specifically through outreach to dietitians and other medical professionals in Mexico. USMEF also educates students on the role pork and protein play in the diet and, to Mexican consumers, provides point-of-sale promotional materials at retail stores.

Beyond these direct consumer messages, Checkoff-funded USMEF activities include work with trade representatives – importers, brokers and processors – to educate these trade groups on the benefits of U.S. pork and its quality, safety and availability.

“As a producer, I value our trade relationship with our neighbor even more after visiting this beautiful country,” Archer said. “Growth in our industry is the result of a strong trade balance.”

In 1989, the U.S. had very few trade agreements, but today has 20 in place. Free trade agreements contribute to increased exports and enhance the opportunity to distribute U.S. pork worldwide.

2017 PORK ACT DELEGATES ELECT CANDIDATE SLATE, APPROVE ADVISEMENTS

The U.S. pork industry held its annual business meeting, the National Pork Industry Forum, March 1-3 in Atlanta. At the meeting, Pork Act Delegates ranked eight candidates for the National Pork Board and submitted the list to the U.S. Secretary of Agriculture. The candidates, ranked in order by delegate voting results, are:

- Brett Kaysen, Colorado (second-term incumbent)
- Steve Rommerein, South Dakota (second-term incumbent)

- Scott Phillips, Missouri
- Heather Hill, Indiana
- Deborah Ballance, North Carolina
- Todd Erickson, North Dakota
- Kristine Scheller-Stewart, North Carolina (second-term incumbent)
- Charles Wildman, Ohio

The U.S. Secretary of Agriculture will select five members from the slate elected by the delegates to fill the roles of outgoing board members effective July 2017. The five nominees will each serve a three-year term. Fifteen pork producers serve on the National Pork Board, each limited to serving no more than two concurrent terms.


Delegates also elected Bryn Jenson, Iowa, and William Knapke, Ohio, to fill the two open positions on the Nominating Committee. The committee recruits and screens candidates for the National Pork Board and does not require approval by the Secretary. In other business, delegates approved two non-binding directives for the National Pork Board. The approved advisements read:

- 2017 – DE 1 Export – submitted by Minnesota Pork Board. In order to support the National Pork Board Strategic Goal and to offer more revenue opportunities for pork producers, the Minnesota Pork Board recognizes the National Pork Board for its efforts to increase investments in exports and encourages continued budget prioritization and spending on export programs in 2017 and 2018 budgets. (Approved by delegates)
- 2017 – ST 1 Research – submitted by Indiana Pork Producer Association. The National Pork Board is advised to facilitate and provide financial resources toward a comprehensive, multi-disciplinary research effort aimed at improving current industry livability rates from conception to slaughter. (Referred to Animal Science Committee)

Reports on advisement progress will be delivered to delegates attending the National Pork Industry Forum in Kansas City, March 1-2, 2018.

Pork Producers celebrate Ag Day at the Capitol

Farmers from across the state joined the leaders of agricultural commodity organizations in Lansing March 22 to celebrate Michigan's food and agricultural successes over the last 100 years while highlighting their vision for future growth of the industry during the 13th annual Michigan Food and Agriculture Day at the Capitol. This year's Food and Ag Day event featured 33 commodity organizations representing everything from pork to cherries to nursery plants to potatoes and more.

At right, Michigan pork producers and Michigan Pork Producers Association board members Dale Norton, Bronson, and Fred Walcott, Allendale, pass out ham-wrapped asparagus to attendees at the Capitol. While at the Capitol, Dale and Fred were able to talk with guests as well as legislators and staff about the pork industry. 



Inaugural Pig Farmers of Tomorrow Named

The National Pork Board announced recently that Kyle Coble from Minnesota, Logan Thornton from Idaho and Madison Schafer from Minnesota have been named the inaugural Pig Farmers of Tomorrow. They were recognized at the 2017 National Pork Industry in Atlanta.

"It is important for the Checkoff to recognize the future leaders of the pork industry," said National Pork Board President Jan Archer, a pork producer from Goldsboro, North Carolina. "We are excited for these young farmers to share their unique stories with consumers."

The new award recognizes farm leaders, ages 18-29, who intend to make pig farming their life's work and who are committed to raising pigs using the pork industry's We CareSM ethical principles. The winners will speak at Pork Checkoff events and

provide content on #RealPigFarming, which is the pork industry's social media program.

Coble is the senior manager of production strategies and a swine nutritionist with New Fashion Pork in Jackson, Minnesota. New Fashion Pork, a leading producer of high-quality pork, has farms in Minnesota, Indiana, Iowa, Illinois, South Dakota, Wyoming and Wisconsin.

"I'm excited to introduce the public to different types of pig farmers," Coble said. "For instance, I use math and statistics every day to help our team decide which production practices help us provide a safe, wholesome, affordable protein."

Schafer is the seventh-generation of her family to farm near Goodhue, Minnesota. The Schafers operate a 1,600-sow unit, a 600-sow unit and seven replacement gilt development barns.

"It is important that all pig farmers take every opportunity to start conversations about farming," Schafer said. "These connections help dispel misconceptions about our farming practices and show consumers how much we care about raising healthy pigs."

Thornton runs Flying Pig Farm, a farrow-to-finish farm near Kuna, Idaho. Flying Pig Farm markets 3,000 pigs a year. The Thorntons have a farrowing and nursery barn, and use hoop barns to finish pigs and for sow gestation.

"My family and I care for each pig individually," Thornton said. "Raising healthy pigs is important to us, and I'm excited to share our story with consumers, especially on social media."

An industry panel of judges selected the 2017 Pig Farmers of Tomorrow, who all have had a Common Industry Audit completed on their farms. 



2017 MSU GREEN AND WHITE

On January 27-29, more than 200 youth participated with more than 300 pigs taking part in the 2017 Green and White Education Fair and Show. The show kicked off Friday evening with an educational program taught by several industry leaders. For the second year, students participated in a meats judging program and were able to tour the MSU meats lab, after receiving a tutorial on how to judge the meat. After the program, there was a showmanship clinic taught by this year's Green and White judge.

Saturday featured a variety of classes and competitions including a breeds division for registered hogs. Other classes included futurity, showmanship and market classes. Participants of all ages participated in educational competitions like Skillathon and a Extemporaneous Speaking Contest. This allows participants to not only showcase their animal expertise, but also all of their accumulated swine knowledge.

An additional show was added on Sunday.

MPPA would like to thank all of the volunteers who helped make the day a success and look forward to seeing you all next year! 🐷



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MPPA Awards Scholarships to Michigan Youth

An outstanding group of students came out on January 28th at the 2017 Green and White Education Fair and Show to contend for MPPA's Pork Industry scholarships. The students were interviewed by a panel made up of Brian Pridgeon, Michigan pork producer, and industry representative Jackie Bass with Hog Slat. After the interview, the participants gave a presentation in front of the judges and other Green and White attendees. The judges had a tough decision to make and awarded three scholarships in total. The winners included:

Catherine Majinska- 1st place

Catherine Majinska is the daughter of George and Susan Majinska of Lowell. Catherine is currently attending Michigan State University with the ultimate goal of becoming a veterinarian. She first became interested in agriculture when she worked on her uncle's dairy farm and became interested in swine after working at Michigan State's Swine Teaching and Research Farm. Catherine said her favorite part of working on the swine farm is in the farrowing operation as it is truly fulfilling to help with the birthing process. Outside of school and work, Catherine is involved in the American Sign

Language Club, a catholic women's group and the Pre-Veterinary Medical Association.

Kelsy Bloomer - Tied for 2nd place

Kelsy Bloomer is the daughter of Steve and Danielle Bloomer of Hudson and is currently attending Michigan State University. Kelsy has been involved with her local 4-H club for many years and is currently involved with the MSU Block and Bridle Club. She also works at the MSU Swine Farm. After graduating, Kelsy hopes to work in the production livestock industry.

Emily Kittendorf- Tied for 2nd place

Emily Kittendorf, daughter of Kevin and Nancy Kittendorf, is a student at Michigan State University pursuing a

degree in Animal Sciences and International Agriculture. She grew up in the Monroe County 4-H program and has shown swine at county, state, and national expositions for many years. Her activity in the industry has given her the opportunity to lead workshops in her district and attend clinics throughout the Midwest. At Michigan State, she has delved into policy related agriculture content and is looking forward to a future career working for the United States Department of Agriculture auditing swine farms. With this goal in mind, Emily is very grateful for generous organizations that make college more assessable and would like to thank Michigan Pork Producers Association for all the help they have given her to make her dreams a reality. 🐷



MPPA Chief Executive Officer Mary Kelpinski presents scholarships to Catherine Majinska, Kelsy Bloomer and Emily Kittendorf.

Industry Honors Degner with Distinguished Service Award

The National Pork Board honored Rich Degner as the recipient of its Distinguished Service Award during the National Pork Industry Forum in Atlanta. Degner is the former chief executive officer of the Iowa Pork Producers Association.

At the pork industry's annual business meeting, the award is given to an outstanding leader to recognize his or her lifelong contribution to the pork industry.

"Rich has provided extraordinary leadership to the pork industry," said National Pork Board President Jan Archer, who is a pork producer from Goldsboro, North Carolina. "Through the years, he worked tirelessly for the advancement of pork producers, as well as for the industry in Iowa and across the United States."

The National Pork Board and the National Pork Producers Council (NPPC) also presented Degner with the inaugural Paulson-Whitmore State Executive Award, which was developed cooperatively by the Pork Board and NPPC. The award recognizes the outstanding leadership and commitment of state pork executives and was named after two top leaders – Don Paulson, past Minnesota state pork executive, and Rex Whitmore, past Wisconsin state pork executive.

Degner learned the value of hard work on his family's farm in northwest Iowa. Following graduation from Iowa State University in 1972, he taught vocational ag in Iowa, first in Rock Valley and later in Ankeny. He joined the Iowa Pork Producers Association in 1980 under the mentorship of Mike Telford and the late Don Gingerich.

Over the next 35 years, Degner served in many roles, including as CEO for 17 years. Degner also played a key role in expanding pork export markets, leading producers on more than 50 trade missions to over 20 countries, including 30 to Japan. 🐷



Calendar of Events

April: **21 Spartanwood Sow Unit Open House**
Bronson Mich.

June: **8-10 World Pork Expo**
Des Moines, IA
14 MPPA Board Meeting
East Lansing, Mich.
16-17 Spartan Classic
East Lansing, Mich.
18 Spartan Jackpot
East Lansing, Mich.
24 Breakfast on the Farm
Marne, Mich.

July: **13-16 Michigan Livestock Expo**
East Lansing, Mich.

Aug.: **19 Breakfast on the Farm**
Middleton, Mich.

MI Pork PAC

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Sincerely, Carl Bednarski,

President, Michigan Foundation for Agriculture
President, Michigan Farm Bureau

Dear MPPA,

It is with great appreciation that we receive Michigan Pork Producers Association's annual donation that continues your full scholarship of the 2017 State 4-H Swine Award.

It is our goal that these experiences will encourage young people to align their futures with opportunities to explore and pursue careers in pork production and management. Your annual gift allows 4-H to support this learning through events, workshops, curriculum and other supports designed to help youth gain the knowledge, skills and experiences they need to be successful. Thank you and the members of the MPPA for your commitment to 4-H!

Sincerely, Cheryl Howell,

Executive Director, Michigan 4-H Foundation

Dear MPPA,

Thank you for your sponsorship of the 2017 4-H Beef, Sheep and Swine Teen and Adult Leaders Workshop. It was a great weekend of learning. Your support has helped kindle our club's love for learning and enthusiasm for their projects. The students are excited to share what they have learned with the rest of our club.

Sincerely, Kristi Caine

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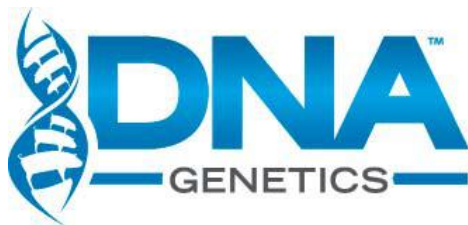
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The Corn Marketing Program of Michigan (CMPM) is a legislatively established statewide program that utilizes one-cent per bushel of Michigan corn sold. Investments are made in the areas of research, education, market development, and new uses in an effort to enhance the economic position of Michigan corn farmers. Michigan's corn industry adds more than one billion dollars to the state's economy annually, and in 2014, Michigan's corn farmers harvested a record-setting crop of more than 355 million bushels. For more information, visit our website at www.micorn.org.

Corn Marketing Program of Michigan



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Based in Hatfield, PA, Clemens Food Group is a sixth-generation family owned company that has proudly served its community for over 120 years. Clemens Food Group is a vertically coordinated company that includes hog farming, food production, logistical services, and transportation. Clemens Food Group is excited to be constructing a new fresh pork facility in Coldwater, Michigan, with plans to begin operations in the Fall of 2017. We are pleased to be partnering in this project with a number of family-owned pork producers who share our values, rich history in pork production, and vision for this new operation.



Earnie Meily | EMEILY@clemensfoodgroup.com | clemensfoodgroup.com

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Tony Roser, Logansport Procurement Supervisor | Office 574-722-8607 | Cell 260-571-0914 | tony.roser@tyson.com



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Michigan Farm Bureau is the state's largest farm organization working to represent, protect and enhance the business, economic, social and educational interests of our members. Learn more about Farm Bureau's grassroots structure and its agricultural support at www.michfb.com.

517-323-7000 | 7373 West Saginaw Highway Lansing, Michigan 48909

The Michigan Soybean Promotion Committee is in place to manage soybean checkoff resources to increase return on investment for Michigan soybean farmers while enhancing sustainable soybean production. We are organized into seven districts across the soybean producing areas of the state and are led by the Governor-appointed farmer director in each district. As livestock, and hogs in particular, are soybean's largest customers, we will continue to support this industry.



Gail R. Frahm, Executive Director | Phone: 989-652-3294 | gfracm@michigansoybean.org | P.O. Box 287 Frankenmuth, MI 48734



PIC is the international leader in providing genetically superior pig breeding stock and technical support for maximizing genetic potential to the global pork chain. We work closely with our affiliates - on gilts - Belstra User Group and on semen - Birchwood Genetics. PIC has been serving the Genetic and Technical Service needs of Pork Producers in Michigan since 1980.

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4-H Alumni, Raise Your Hands!

Are you a 4-H alumni? Do you know someone who is?

This spring, Michigan Pork Producers Association is asking its members to raise their hand in support of one of its long-time partners: MSU Extension and their youth development program, Michigan 4-H. This key program provides kids with the opportunity to learn by doing, grow from failure and develop the skills they need to handle whatever life throws their way. No one knows this better than 4-H friends and alumni who have experienced these programs firsthand, and that is why we are asking these alums to join in Raising Your Hand for 4-H and registering as 4-H alumni.

By raising your hand for 4-H, you'll be paying it forward to the next generation of 4-H'ers and helping to bring the same opportunities you enjoyed to additional kids in our state. Now through June 30, every alumni hand raised will count as a vote for their state with cash prizes of \$20,000, \$10,000 and \$5,000 available to the top three states. In addition to helping Michigan 4-H win a cash prize to support their programming, your registration will also connect you with the National and Michigan 4-H alumni communities where you will receive valuable information about upcoming events, programs and other opportunities.

With long-standing connections to our agricultural community, there are no doubt many 4-H alums throughout the Michigan Pork Industry. However, the opportunity to support Michigan 4-H is not limited only to past 4-H'ers: 4-H parents, volunteers and other supporters can also raise their hand for 4-H to show their 4-H pride! We hope you will join in empowering kids across Michigan by raising your hand for 4-H and providing youth with 4-H hands-on learning that teaches them responsibility, compassion, respect and the value of hard work. Together we can grow the next generation of true leaders!

Visit 4-h.org/raise-your-hand/

