

MICHIGAN

Michigan's Pork Producers source for information.

PORK



Three hundred gilts are limit-fed 5 pounds of cubed ration a day from McKenzie's 200-foot, bottom-opening auger feeder.

Pg. 4

**Meet New Board
Member: Scott
McKenzie**

Pg. 10

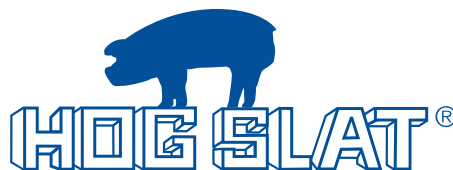
**2018 Michigan Pork
Symposium Agenda**

Pg. 22

**YQCA Taking
Place of YPQA**



ON TIME. ON BUDGET.
BUILDING AMERICA'S FARMS
FOR 49 YEARS.



www.hogslat.com

Retail Stores

UNION CITY, OH.....(937) 968-3890
FLORA, IN.....(574) 967-3776

Michigan Sales Representative

Jackie Bass(269) 254-6210 • Email: jbass@hogslat.com

©2017 Hog Slat, Inc. All rights reserved.

MICHIGAN

PORK

Michigan Pork Producers Association
3515 West Road, Suite B
East Lansing, Michigan 48823
(517) 853-3782
www.mipork.org

2017, VOL. 42, NO. 4

Michigan Pork is published quarterly by Michigan Pork Producers Association and has a circulation of more than 2,500 copies.

All editorial and advertising are screened along rigid standards, but publisher assumes no responsibility for accuracy or validity of claims, all rights reserved.

For any questions regarding Michigan Pork's mailing list, advertising or content please contact Emily Schmitt at schmitt@mipork.org or 517-853-3782.

MPPA Staff:

Mary Kelpinski

Chief Executive Officer
Managing Editor
kelpinski@mipork.org

Sam Hines

Executive Vice President
hines@mipork.org

Emily Schmitt

Program Director
Editor
schmitt@mipork.org

On the cover: Three hundred gilts are limit-fed five pounds of cubed ration a day from McKenzie's 200-foot, bottom-opening auger feeder. Scott McKenzie is a new member of the MPPA Board of Directors. This photo from his family farm was originally published in a 1970 edition of *Michigan Farmer*.

SPOTLIGHT

Meet New MPPA Board Member: Scott McKenzie 4

DEPARTMENTS

President's Page	6
Across My Desk	8
<i>MSU Pork Quarterly</i>	center
Capital Update.....	14
Pork Checkoff	16
Calendar of Events	23
We're Listening.....	24
Index to Advertisers.....	25

FEATURES

U.S. Must Make Commitment to Agriculture Research	7
2018 MI Pork Symposium	10
Michigan Pork Symposium Registration.....	12
MPPA Membership Form.....	13
Winter Animal Care.....	18
BBQ Contest Winners Announced	19
Great Lakes Crop Summit	20
Michigan Pork PAC	21
Youth for the Quality Care of Animals	22
MPPA Scholarship Information.....	23

By: Emily Schmitt

MPPA PROGRAM
DIRECTOR

Meet New Board Member: Scott McKenzie

The Michigan Pork Producers Association would like to welcome Scott McKenzie, one of three new members elected to the MPPA Board of Directors this year. Scott owns and operates Scott McKenzie Farms in Marcellus, Michigan. The farm is a farrow-to-finish operation, housing 870 sows. Scott also farms crops on 600 acres.

Scott started raising pigs in Cass County many years ago and fondly remembers his first pig, Blossom. He has experienced lots of changes on his farm from raising pigs outside on pasture to modern barns.

"I've seen a pig raised every which way you can raise it," he said. "Our industry has settled on the way we are raising pigs now because it is most efficient and good for the pigs."

Technology has been one of the biggest changes Scott has witnessed over the years, but he said there are several reasons the way hogs are raised today is drastically different than when he started in the industry.

"The technology we have today helps us be more precise with both our crops and our livestock," he said. "We used to have more neighbors that farmed, but now the farms are bigger, so we don't have as many neighbors to share ideas with. Record keeping is the other thing—the records we have to keep now have doubled or tripled."

The type of work has also changed when it comes to caring for the animals, Scott said.

"We used to pitch the pens by hand," he said. "It was probably the early 80's before we got a Bobcat to pitch the pens. We still work hard

in the barns, but now it is more focused toward animal care instead of labor-intensive work."

Working in the pork industry has always been a family affair for Scott as his father and grandfather started their operation.

"My dad probably started with hogs in the 40's," he said. "They



*Pictured above, Scott with
his first pig, Blossom.*

Pictured right above, Scott McKenzie and his wife, Andrea, in the nursery at their farm. At right below, Don McKenzie introduced low-investment pasture farrowing on a large-scale to southeastern Michigan. His sons Dean, Scott and Ray carry on the tradition.

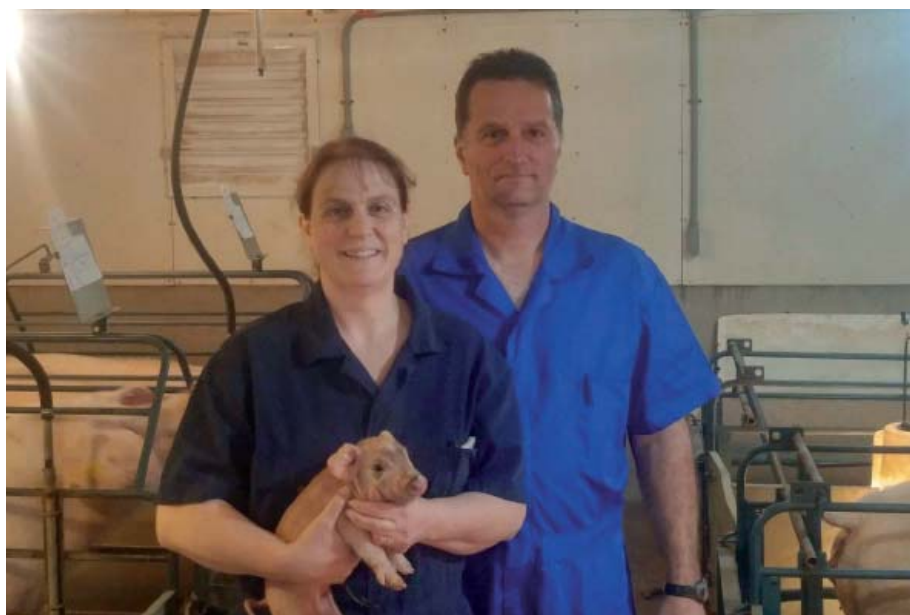
farrowed in barns at the time, but he had too many pigs, so he decided to farrow them in the fenced-in woods.”

“My father got pasture-farrowing started in this county,” Scott said. “He got the shelter idea from going to Europe.”

Scott’s wife, Andrea also helps on the farm, working in the farrowing unit and keeping up on the book-keeping.

When Scott is not in the field or the barn, he enjoys spending time with his wife and four sons, whether they are fishing or having a cookout in the back yard. Scott also plays an active role in his local church and with sports at the high school level.

Scott looks forward to serving the association as a board member and is excited to meet other producers, share ideas and work toward promoting the pork industry in Michigan. 🐷





Swine Farms
Albright

Doug: 517-416-5781 Pat: 989-429-5215
965 Flint Rd. Coldwater, MI

Berkshires
Durocs
Yorkshires
Herefords
Crossbreds



Boars Semen Sales
Open Gilts Bred Gilts
Feeder Pigs



Visit our website for more information!
www.brightswine.com

"December Update"



By: Bob Dykhuis
MPPA PRESIDENT

We finished harvest on our farm before Thanksgiving. It was our best corn yield ever and our soybeans were good but not as good as last year. I have heard the same results from many other farmers. It is fun to see good crops. The mills we work with do a lot of mycotoxin testing and the toxin levels are coming back at low levels also. That is a big relief. That will give a lot more flexibility than last year for ration formulation. Pigs always grow faster with clean corn. We are thankful for the good crops.

I am pleased with the opportunity to hedge hogs for a good portion of next year at a good profit. I commented in an earlier article about the losses that happen in years that end in eights. We have more hogs at strong prices. That is called a demand shift and that is the mirage of every economist. Good things are happening in an industry with that. We can thank the additional packing capacity for a portion of that. We can also note that domestic consumers are eating more protein, especially meat. I think it was Churchill that said, "Americans will do the right thing when they have exhausted all of the alternatives." I think that applies to the food fiasco of the last few decades with agenda driven junk science popular fads. This will never end, we are probably just in favor again.

We know for sure our pork organizations have been in the market slugging away to promote our product and defend us. We may be reaching a point where we see a larger return on that effort. The price of the pork cutout will be tested as more hogs come to market next year. So far, so good.

I attended the Pork Action Group meetings in Marco Island in the middle of December. They always have excellent presentations and it is a nice area to spend time. We have some Strategic Planning Sessions coming up for the MPPA Board in January. This will shape the future direction of MPPA for our staff to pursue in the coming years. Our Michigan pork conference in late February will be exciting. There is a committee that has worked together to make that an exciting day and well worth the time to attend.

I hope everyone has enjoyed the holidays and gets a good start on the New Year. Thanks! 🐷

United
Producers, Inc.
Fowler, Mich.

Denny Thelen, Regional Sales Manager

Call: (989) 640-1091

Email: dthelen@uproducers.com

Web: www.uproducers.com

U.S. Must Make Commitment to Agricultural Research

The National Pork Producers Council in testimony delivered recently urged Congress to renew its commitment to funding agricultural research to help America's farmers feed a growing world population, improve public health and strengthen U.S. national security by ensuring America's food security.

NPPC chief veterinarian Dr. Liz Wagstrom told the House Committee on Science, Space and Technology Subcommittee on Research and Technology that the United States is the "lowest-cost and most technologically innovative producer of food in the world ... and has the safest food on the planet" because of the country's historical commitment to research.

She pointed out that research helped the U.S. pork industry deal with diseases such as Porcine Reproductive and Respiratory Syndrome and the H1N1 influenza virus. But, she added, U.S. agriculture remains vulnerable to emerging and foreign animal diseases.

A disease the pork industry and other livestock sectors are particularly concerned about, Wagstrom testified, is

Foot-and-Mouth Disease (FMD). The United States doesn't have enough vaccine to address an FMD outbreak, which, if unchecked, would cost the pork, beef, corn and soybean sectors, alone, \$200 billion over 10 years.

NPPC is urging Congress to establish and fund, through the next Farm Bill, a manufacturer-managed FMD vaccine bank. It is requesting funds for animal disease diagnostics and research that "can help address the alarming gap in the government's preparedness for an FMD outbreak."

Wagstrom also told the subcommittee that the federal commitment to agricultural research seems to have waned recently, pointing out that from 1970 to 2008 50 percent of the U.S.

Department of Agriculture's budget went to research but by 2013 it was less than 30 percent.

One factor for that decline, she said, is the increased costs of operating federal research facilities. She asked Congress to ensure adequate funds for operating agricultural research facilities "over and above" research dollars.

"The U.S. pork industry strongly supports and urges a significant increase in funding for federal ... agricultural research and grants to help America's farmers and ranchers continue feeding the world with safe, wholesome and nutritious food," Wagstrom told the subcommittee. 

Wooden Purebred Swine Farms

Production Tested F1
Hampshire Duroc, Yorkshire,
F1 Service Age Boars
Open, F1 & Purebred Gilts
Fresh Semen Available
Delivery Available
Quality 4H & FFA Show Pigs Available
Cassopolis, MI 49031
Dennis Wooden
(269) 445-8066
(517) 937-5568 (mobile)
dkswine@yahoo.com



High Quality - High Health Aggressive



By: Mary Kelpinski

MPPA CHIEF
EXECUTIVE
OFFICER

“Something for Everyone”

This year’s Michigan Pork Symposium really does have something for everyone. The Michigan Pork Producers Association board of directors decided to make the annual event an educational session that producers of all types and sizes would find interesting. MPPA Vice President and chairman of the Pork Expo Task force Pat Albright, Coldwater, said he thought the presentations should address issues farmers are facing everyday on their operations. To do that, we will have 16 different speakers and 15 different presentations!

The Symposium will be held on February 22, 2018 at the Lansing Center, Lansing, Mich. The Task Force is asking for your help to inform producers about this event. As the pork industry has grown and changed, there are new producers that we don’t currently have on our mailing list. Whether you know a new contract grower or small niche producer just getting started, it is my hope you will let them know about the symposium and the association in general. We try to communicate with all pork producers in the state and welcome the opportunity to add new ones to the mailing list.

This year’s symposium will include two different tracks, each with eight sessions. The two tracks focus on Sow Housing and Grow/Finish operations. The Task Force thought these were the two areas that were expanding the most in Michigan currently. In the future they will look at

// We hope you will join pork producers, farm managers, contract growers, university, government and allied industry representatives for a day of learning and networking hosted by the Michigan Pork Producers Association. //

SWINE VETERINARY SERVICES OF MICHIGAN

Partner of 4 Star Veterinary Services

60 Veterans Dr. #7, Holland, MI 49423

616-355-PIGS (7447) FAX 616-355-7110

James A. Kober, D.V.M., MS

svsmi@sbcglobal.net

adding new tracks to address different types of production models. Even if you don't fall into one of the two tracks specifically, there are still topics that apply to all aspects of raising pigs. The full agenda is on page 10-11 and a registration form is on page 12.

Another change to the event is the addition of a small trade show/reception with the sponsors. Bringing in the best speakers from across the country would not be possible without the support of the many industry sponsors we have. To help recognize those sponsors and give participants an opportunity to learn more about the products they offer, the reception will be open from 4:30 p.m. until 7:30 p.m. In addition to spending time with the sponsors, attendees will have time to network with other producers and learn about new research being conducted at Michigan State University. Researchers will have an area on the reception floor to discuss their projects and highlight their importance to producers.

We will continue to recognize some of Michigan's outstanding producers and our distinguished service recipient at our annual awards luncheon. Our conference is a great way to celebrate Michigan pork industry and for producers to talk and share ideas for the future of pig farming in Michigan.

We hope you will join pork producers, farm managers, contract growers, university, government and allied industry representatives for a day of learning and networking hosted by the Michigan Pork Producers Association. 🐷

The conference will be packed with a line-up of speakers covering topics from farrowing to barn maintenance to manure management. Dr. Larry Firkins (above right) and Steve Meyer (lower right) will be guest speakers at the conference, covering how to manage employees and giving an industry update. For a full list of speakers, see page 10.



Lois Britt Memorial Pork Industry Scholarship

The National Pork Producers Council is pleased to announce the 2018 Lois Britt Memorial Pork Industry Scholarship, which is sponsored by CME Group and the National Pork Industry Foundation and is managed and administered by the National Pork Producers Council. Ten \$2,500 scholarships are awarded to students annually who intend to pursue a career in the pork industry with hopes that they may emerge as pork industry leaders themselves someday. To be eligible, applicants must: Be an undergraduate student in a two-year swine program or four-year college of agriculture, and a U.S. citizen. For more details, visit nppc.org/lois-britt-memorial-pork-industry-scholarship/

All entries must be postmarked by JANUARY 5, 2018 to be accepted. Please contact Cally Fix, NPPC Director of Industry Resource Development, with questions about the scholarship at (515)278-8012 or fixc@nppc.org.

2018 Michigan Pork Symposium Agenda

2018 Michigan Professional Pork Producers Symposium

Thursday, February 22, 2018

The Lansing Center, 333 E. Michigan Ave, Lansing, MI

8:30 a.m. Registration

INVITED PRESENTATIONS

8:50 a.m. Welcome and Introductions

9:00 a.m. Getting Work Done Through Others Keynote - Dr. Larry Firkins : We will unpack and define the action that must take place in order to effectively get work done through others

10:00 a.m. Sow Housing and Grow/Finish Breakout Sessions

11:00 a.m. Sow Housing and Grow/Finish Breakout Sessions

BANQUET LUNCH

12:00 Buffet Lunch
Awards Program

1:30 p.m. Sow Housing and Grow/Finish Breakout Sessions

2:30 p.m. Sow Housing and Grow/Finish Breakout Sessions -

3:30 p.m. Pork Industry Update -Steve Meyer

SPONSOR TRADESHOW

4:30-7:30 p.m. Sponsor Tradeshow - Talk with sponsors and industry representatives, meet researchers and learn about new research projects in the industry, enjoy appetizers and talk with the day's speakers.

The registration form for the 2017 Pork Symposium can be found on page 12.

Sponsored by:



Industry sponsors will be recognized at the event.



Pictured above, attendees at the Michigan Pork Symposium hear from Dr. Dale Rozeboom.

Sow Housing Breakout Sessions

	Room 101 Breakout Session	Room 102 Breakout Session
10:00 a.m.	Fixed-Time Insemination Presented by Kevin Turner and Chris Rozeboom, MSU	Sow Housing Presented by Hyatt Frobose
11:00 a.m.	Employee Management Presented by Dr. Larry Firkins, University of Illinois	Sow Longevity Presented by Rich Deaton, PIC
1:30 p.m.	Day 1 Pig Care Presented by Dr. Ashley Johnson, Zoetis	Sow Housing Presented by Hyatt Frobose
2:30 p.m.	Caring for the Gilt through her First Litter Presented by Rich Deaton, PIC	Breeding and Farrowing Presented by Bob Altman, JBS United

Grow/Finish Breakout Sessions

	Room 103 Breakout Session	Room 104 Breakout Session
10:00 a.m.	Ventilation Presented by Ken Lamm, Provimi	Pig Start-Up Presented by Brady McNeal, DNA Genetics
11:00 a.m.	Packer Audits Presented by Beth Ferry, MSU Extension	Managing the Unexpected Outbreak Presented by Dr. Daniel Hendrickson, IVM
1:30 p.m.	Pig Start-Up Presented by Brady McNeal, DNA Genetics	Managing the Unexpected Outbreak Presented by Dr. Daniel Hendrickson, IVM
2:30 p.m.	Economics of Manure Presented by Marc Eads, Spearhead A&M	Barn Cleaning and Maintenance Presented by Gene Noem, Reicks View Farms, IA

We hope you can join us for this educational and networking event. Look for more information about the 2018 Michigan Pork Symposium in the January Pork Sampler. For sponsorship information or questions, please contact Emily Schmitt at schmitt@mipork.org or 517-853-3782.

2018 Michigan Pork Symposium Registration

Name: _____ Company: _____

Additional Names (second registration \$25, third \$15, cap of \$100 fee per farm):

Address: _____ City: _____

State: _____ Zip: _____ Phone: _____

Email: _____ Cell: _____

☐ **Single Conference registration \$60.00.**

☐ **Group Rates:**

Second registration for \$25.00

Third registration for \$15.00

Fourth or more registration free

(Cap of \$100 registration cost per farm)

_____ **Total Number of Registrations**

_____ **Total Registrations Fees Enclosed**

Payment Options:

Credit Card Expiration Date: _____ Code: _____

Card Number: _____

Name and Zip Code on Card: _____

Check: Please make checks payable to MPPA and mail to 3515 West Road, Suite B, East Lansing, MI 48823.

For more information contact: Emily Schmitt (517) 853-3782 schmitt@mipork.org

2018 Michigan Pork Producers Association Membership Application



Name: _____
 Company: _____
 Address: _____
 City: _____ State: _____ Zip: _____
 Phone: _____ Cell: _____
 Email: _____

Please check one:

- ☐ \$40.00 Producer/Owner Member: Individuals or firm (one vote per firm) with over \$30,000.00 gross annual sales from hogs.
- ☐ \$40.00 Producer/Grower Member: Contract grower and/or person or firm (one vote per firm) with less than \$30,000.00 gross annual sales from hogs.
- ☐ \$40.00 Associate Member: Person or companies associated with the pork industry. Associate members do not have voting privileges.
- ☐ \$5.00 Student Member: Individuals under 21 years of age. Student members do not have voting privileges.
- ☐ \$100.00 Gold Contributor: A Gold Contributor provides additional support for MPPA programs requiring the use of unrestricted (non-checkoff) funds. Producer Gold Members are eligible to hold office and vote.
- ☐ \$250.00 Gold Industry Member Contributor: A Gold Industry Contributor provides additional support for MPPA programs requiring the use of unrestricted (non-checkoff) funds. Gold Industry Contributors do not have voting privileges.

Payment Options:

☐ Credit Card: Card Number: _____
 Expiration Date: _____ Code: _____
 Name on Card: _____ Billing Zipcode: _____

☐ Check: Please make checks payable to MPPA and mail to 3515 West Road, Suite B,
 East Lansing, MI 48823

As a result of changes made by the 1993 Tax Act, 25% of membership dues for 2017 are not deductible for federal income tax purposes.



Information for an Industry on the Move

December 2017

Vol. 22 No.4

In This Issue...

Pg. 1 Farm Safety hits home
for Michigan Swine
Veterinarian

Pg. 2 Safe Work Practices on
the Farm

Pg. 6 Humane Swine
Euthanasia & Human
Safety -- Firearms



This newsletter is edited by:

Dr. Madonna Benjamin, MSU Extension Swine
Veterinarian, 517-614-8875,
gemus@cvm.msu.edu
& Emily Schmitt MPPA, Program Director,
schmitt@mipork.org

Farm safety hits home for Michigan swine veterinarian

By Emily Schmitt, MPPA Program Director

Michigan swine veterinarian, Dr. Jim Kober, never imagined that he would be the protagonist in a story about a farming accident. But in early September, Dr. Kober lost a majority of his right arm in an accident involving a power take off on a manure spreader.

Dr. Kober is a swine veterinarian in Holland, Michigan and has been practicing for 30 years. He also owns a contract swine finishing barn on the farm where he grew up.

"I was working up at the barn with a tractor and manure spreader," he said. "It's an older spreader that didn't have any guards on the power take-off. I reached over to do something and I was wearing a raincoat with elastic straps on the sleeve. It pulled me in. It was like tug-of-war for a few seconds before I lost my arm."

Kober said his wife, Donna has been a big help in his recovery.

"As my wife put it, you are not going to use this as excuse to sit around and watch TV for the rest of your life," he said. "You move on the best you can. It's going to change my life, but I am



not going to let it stop my life.”

Pain is still a hurdle for Kober’s recovery, but he trying to remain positive throughout the process.

“The wound healed uneventfully, but the phantom pain is lingering,” he said. “That is the most aggravating thing at this point. The phantom pain is a very real thing. I think once I get on top of that, I will be OK. Mentally, I am usually pretty good earlier in the day, but as it wears on, I get crabbiier than I used to. I can tell if I don’t get enough rest at night. I start feeling sorry for myself later in the day.”

Dr. Kober is still getting used to life since the accident, especially getting back to work at his veterinarian practice. While he lost his right arm, Kober is left-handed so he said it could have been worse.

“I am getting back to work two or three days a week,” he said. “Everything takes more time than is used to. Getting dressed, getting suited up, and showering in and out at farms takes more time. I am not able to do as much heavy lifting and I need to take assistants with me to do things like snaring pigs. Driving has been a little bit of a challenge, but it’s getting better. I still spend a lot of time going to doctors’ appointments and physical therapy and things like that.”


Support from those around him have played a large part in keeping Kober’s practice and his hog farm operating successfully.

“I have a really good employee that takes care of the barn on a day-to-day basis,” he said. “I have to have more help from assistants on my vet calls and sometimes I have someone drive me.”

Kober is in the process of getting a prosthetic arm to help with everyday activities.

“In the next four to eight weeks, I am looking at getting a prosthetic,” he said. “It’s an interesting process to get a prosthetic. By the morning after the accident, there was already someone from a prosthetic company in my hospital room talking to me. I learned there is no standard prosthetic. Every single one is custom made and different for every person. They tell you to use the prosthetic as an assistant, not as you would your regular arm. I would be able to use it to help with things like driving or changing the radio station. They have different detachable hands—one holds a tennis racket, one holds a fishing pole. The main one would be a finger and thumb pincher to grab things with.”

Farm safety has a whole new meaning for Dr. Kober and he would advise farmers to take caution when working on the farm.

“Be leery of power take-offs and moving machinery in general,” he said. “Don’t wear baggy clothes. Don’t take short cuts. I know farmers take short cuts when they are in a hurry. Just be careful.” 

Taking the time to think about safe work practices on the farm.....is time well spent.

By: Melissa Millerick-May MSc, PhD, Assistant Professor of Medicine, Division of Occupational and Environmental Medicine, Michigan State University

Farming is often considered by the public to be an idyllic occupation based on media portrayal of family working together, farms handed down from generation to generation, and images of awe-inspiring countryside with tractors slowly bumping down a beautiful shady lane. What isn’t readily understood is that the

agriculture industry can be one of the most intense and dangerous industries in the United States.

The agriculture industry employs approximately 2 to 4 million people nationwide, and includes the highest percentage of ‘self-employed’ individuals of all

Table 1*. Traumatic Work-Related Fatalities by Industry Sector, Michigan Incidence Rates Compared to US Incidence Rates, 2015

Industry Sector (NAICS Code)	Number of Fatalities	2015 MI Employment-based Rate ^{ab}	2015 MI Hours-Based Rate	2015 US Hours-Based Rate ^f
Agriculture, Forestry, Fishing and Hunting (11)	21	24.7	35.2 ^d	22.8
Construction (23)	28	18.9	9.8 ^d	10.1
Manufacturing (31-33)	16	2.7	2.2 ^d	2.3
Wholesale Trade (42)	4	2.4	2.4 ^e	4.7
Retail Trade (44-45)	9	1.9	2.6 ^e	1.8
Transportation & Warehousing (48-49)	18	13.3	5.9 ^d	13.8
Financial Activities (52)	1	0.6	3.5 ^d	0.9
Real Estate and Rental and Leasing (53)	6	11.7	**	**
Professional & Business Services (54, 56)	12	2.1 ^c	**	3.0
Educational & Health Services (61, 62)	1	0.1 ^c	**	0.7
Leisure & Hospitality (71, 72)	10	2.4 ^c	2.5 ^d	2.0
Other Services (except Public Administration) (81)	3	1.8	2.2 ^e	3.0
Public Administration (92)	7	3.0	4.0 ^d	1.9
Total	136	3.0	3.1^d	3.4

^a Sources: USDA, National Agricultural Statistics Service, 2012 Census of Agriculture, AC-12-A-22, Released May 2015.

Table 23. Summary by Farm Typology Measured by Gross Cash Farm Income, Primary Occupation of Small Family Farm Operators, and Non-Family Farms - Michigan: 2012 Pg 315
http://www.agcensus.usda.gov/Publications/2012/Online_Resources/Typology/typology13_mi.pdf Accessed March 8, 2015.
 Michigan Department of Technology, Management and Budget (DTMB), Office of Labor Market Information, Industry Employment (Establishments-CES) (IES), Michigan, Year: 2012. Accessed November 25, 2015. www.milmi.org/cgi/dataAnalysis/.

^b Incidence rates calculated per 100,000 full-time equivalent (FTE) workers (from Table 5)

^c Employment-based rate calculated as $(N+N)/(E+E) \times 100,000$ FTE workers (from Table 9): N=Number fatalities (NAICS+NAICS), E=Number Employees (NAICS+NAICS).

^d <https://www.bls.gov/iif/oshwc/cfoi/rate2015mi.htm>

^e Rate represents the number of fatal occupational injuries per 100,000 full time equivalent workers and was calculated as: $(N/EH) \times 200,000,000$ where N= Number of fatal injuries; EH = total hours worked by employees in the industry sector during the calendar year (number of hours x 50 weeks per year); 200,000,000 = base for 100,000 equivalent full-time workers (working 40 hours per week, 50 weeks per year) (from Table 5)

^f U.S. Bureau of Labor Statistics, 2015 Census of Fatal Occupational Injuries (final data): Number and rate of fatal work injuries by industry sector, 2015, Release Date: Final data released December 16, 2016. Accessed Aug 9, 2017. <https://www.bls.gov/iif/oshwc/cfoi/tables/cfoi1.htm#charts>

** No data available from respective sources

industries in the U.S¹. According to the 2015 Bureau of Labor Statistics Census of Fatal Occupational Injuries (BLS CFOI), agriculture had the highest fatality rate of all industries nationwide². In 2016, there were over 54,000 reported non-fatal injuries in the agriculture industry with the highest incidence rate occurring in workers involved in hog and pig farming, which includes 'breeding, farrowing, and the raising of weanling pigs, feeder pigs, or market size hogs' (North American Industry Classification System (NAICS) Code 1122)³. It is important to note that these estimates, which are generally based on employer reporting, may be a significant underestimate of non-fatal injuries. The agriculture industry employs many 'seasonal' workers, migrant and undocumented workers, is comprised of a significant number of small and family-run farms not

required to report to BLS, and often injuries related to work are not reported to employers due to fear of retribution – all potentially affecting data accuracy¹.

The Division of Occupational and Environmental Medicine at Michigan State University tracks work-related injury, illness, and fatalities in the State of Michigan (www.oem.msu.edu). In Michigan in 2015, there were a reported 21 fatalities and 678 work-related farm injuries⁴. Table 1. shows the incidence of traumatic work-related fatalities in Michigan as compared to the United States by industry sector in 2015.

More than half (n=11) of the 21 fatalities were operators, and four were identified as hired labor⁵. 'Hired labor' may include family members who are paid, office workers, maintenance workers, etc., but excludes contract/migrant workers. There were nine

'machine' related fatalities, with eight of the nine (89%) involving tractors⁵. Four of the eight fatalities involving tractors were the result of a rollover, with none of the tractors possessing rollover protection⁵. The other four individuals were run-over. The final 'machine' related fatality involved a teenage farm worker who became entangled in a hay elevator's chain and sprocket, powered by a tractor⁵. Other causes of death included animal (n=1), fall (n=1), homicide (n=2), motor vehicle (n=3), struck-by (n=2), suicide (n=1), and toxic exposure (n=2)⁵.

In 2015 there were 678 work-related farm injuries in the state treated in the emergency department or hospitalized⁴. Farm injuries that were treated in doctors' offices or self-treated are not included in the 678 total.

The majority of injuries were to the upper and lower extremities (39% and 24.8% respectively), followed by injuries to the head (15.4%) and back (10.3%)⁴. Injuries were characterized as contusion/bruise (29.2%) followed by fractures (17.6%) and laceration/cut/punctures (16.4%) (Figure 1)⁶.

In 2004, the MSU Division of Occupational and Environmental Medicine began tracking work-related amputations in Michigan. There were 6,091 amputations statewide in workers across all industries (2006-2016)⁷. The agriculture industry in Michigan had the highest rate of amputations (2006-2015) (Figure 2), with the leading cause(s) of amputation being saws (18%), presses (12%), pinched between objects (12%), struck by an object (9%), and caught in chain/pulley/gears/belt (9%)⁷.

In its Farm Safety Fact Sheet, the Occupational Safety and Health Administration (OSHA) describes the most common health and safety hazards found on the farm, as well as risk factors for injury and illness⁸. While some of

Figure 1. Nature of Injury – Work-Related Farm Injuries, Michigan 2015

*Information on nature of injury available: 677 (99.9%)

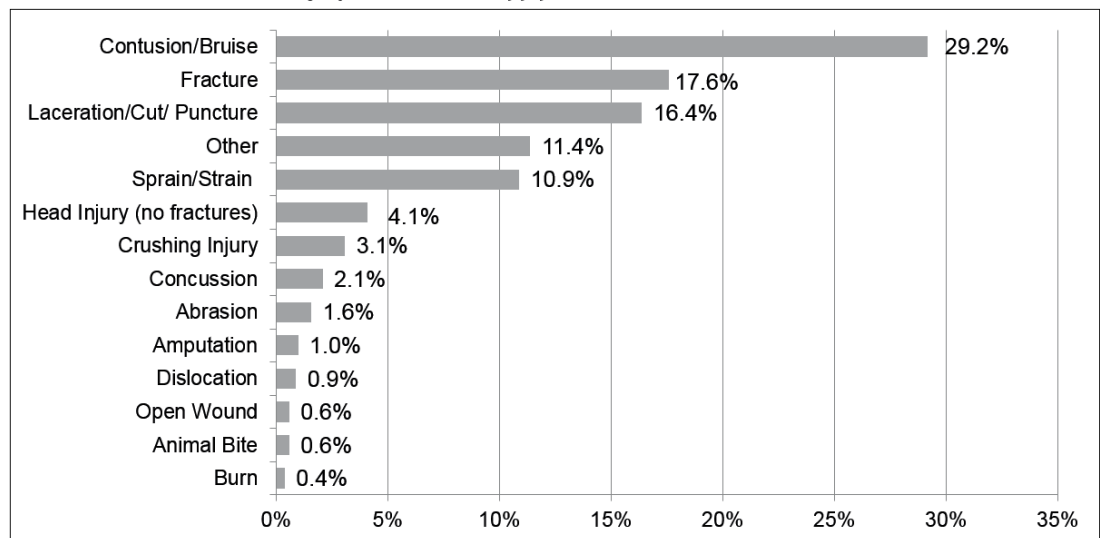
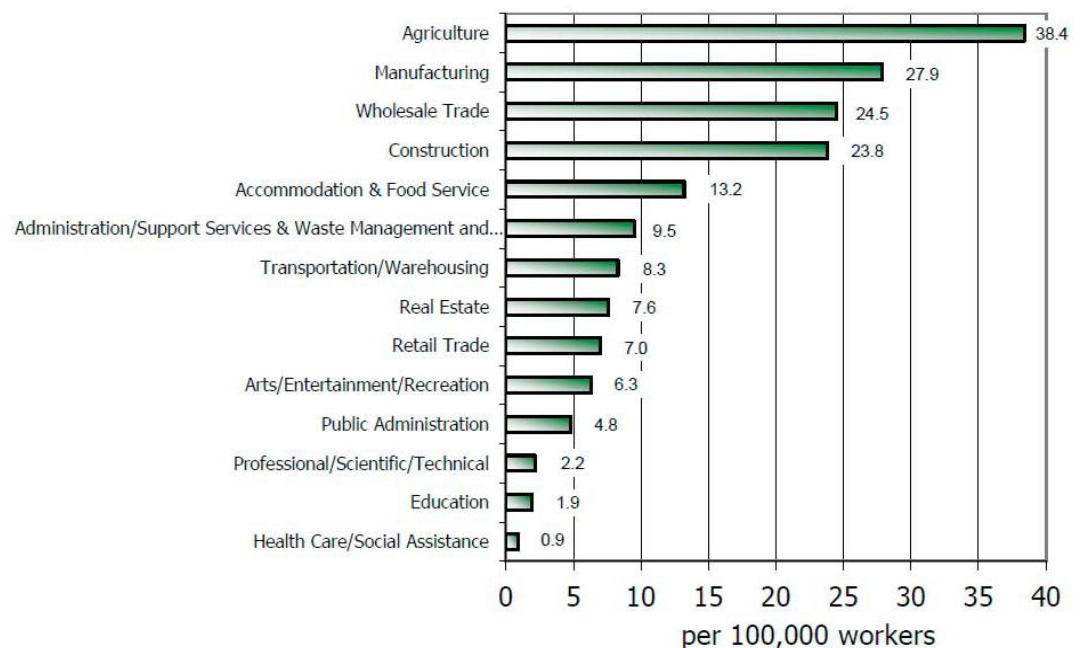


Figure 2. Work-related amputation rates by industry, 2006-2015



these risk factors may be intuitive, others may not be as obvious. Those 'new' to the industry (e.g. small-scale producers and inexperienced growers), those under the age of 15 and adults over the age of 65 (e.g. hearing loss and loss of mobility) have been reported to be at increased risk for injuries and fatalities particularly when working with machines and mechanical equipment⁸. Training, proper machine guarding, and following manufacturer's recommendations for maintenance may reduce machine/equipment related injuries and fatalities⁸. Incorrect use or the absence of use of protective equipment is also strongly associated with injuries and fatalities. Use of equipment such as seat belts and rollover protection on tractors, and the use of personal protective equipment (i.e. protective clothing, gloves, safety glasses, respirators, etc.) can also reduce the risk of illness, injury and death. In addition to making sure equipment is in good repair and employees (and family) have been trained on safety and health hazards on the farm, having an emergency action plan (EAP) in place has the potential to positively impact health and survival outcomes should an adverse event (i.e. fire, explosion, natural disaster, injury, illness, etc.) occur. The MSU Division of Occupational and Environmental Health has recently published two hazard alerts focused on safe animal handling, and preventing farm-related machinery entanglements.

Developing and implementing workplace safety and health programs costs far less than the cost of an injury, or worst case, a fatality. A safe work environment lends itself to fewer employee lost workdays, improved productivity and quality, improved morale, and a reduction in employee turnover – all positively affecting the farms bottom-line.

For assistance with identifying risk factors for employee injury and illness on your farm, as well as for support in developing and implementing safe work practices and health and safety programs, please contact your local MSU Extension Educator or Melissa

Millerick-May in the Division of Occupational and Environmental Medicine at MSU (melissa.may@hc.msu.edu).

References

- 1 Leigh, J.P., et al., An estimate of the U.S. government's undercount of nonfatal occupational injuries and illnesses in agriculture, *Annals of Epidemiology*; 24(2014) 254-259
- 2 Bureau of Labor Statistics (<https://www.bls.gov/iif/oshcfoi1.htm>) Last Accessed 11.20.2017
- 3 Bureau of Labor Statistics (<https://www.bls.gov/iif/oshsum.htm>) Last Accessed 11.20.2017
- 4 Michigan State University Division of Occupational and Environmental Medicine, Farm Related Injuries Data Fact Sheet (<http://www.oem.msu.edu/index.php/work-related-injuries/farm-related-injuries>) Last Accessed 11.20.2017
- 5 Michigan State University Division of Occupational and Environmental Medicine, 2015 MIFACE Annual Report (http://www.oem.msu.edu/images/annual_reports/2015MIFACEAnnRpt.pdf) Last Accessed 11.20.2017
- 6 Joanna Kica MPA., Kenneth Rosenman MD, Michigan State University Division of Occupational and Environmental Medicine, Tracking 2015 Work-Related Farm Injuries in Michigan.
- 7 Michigan State University Division of Occupational and Environmental Medicine, Amputations Data Fact Sheet (http://www.oem.msu.edu/images/annual_reports/2016_AmputationsDataFactSheet.pdf) Last Accessed 11.20.2017
- 8 Occupational Safety and Health Administration (OSHA), Farm Safety Fact Sheet (https://www.osha.gov/OshDoc/data_General_Facts/FarmFactS2.pdf) Last Accessed 11.20.2017 

Humane Swine Euthanasia and Human Safety - Firearms

By: Madonna Benjamin, DVM, MS¹ and Steven Howard Esq.²

As the most common and acceptable methods (AVMA and AASV) of euthanasia used on swine farms for grower pigs and breeding stock are firearms, (rifles and shotguns) the following discussion on firearms is in alignment with this issue of the Pork Quarterly's focus on farm safety. Co-author, Steven Howard, is a third-generation gunsmith and recognized firearms expert in 14 state and federal courts.

Overview: A basic knowledge of firearms and the ammunition is necessary to interpret both euthanasia and human safety. The following discussion will be limited to these methodologies. In the subsequent issues of Pork Quarterly, we will compare use of firearms and captive bolt for humane swine euthanasia.

1) Firearms:

Rifles: Have spiraled grooves (rifling) cut the length of the inside of the barrel. The purpose of rifling is to cause a rotational spin to the bullet on the longitudinal axis stabilizing a bullet's flight. The caliber of a weapon, is determined by the diameter of the gun's bore such as .22 (inches). Rifles are shot from the handler's shoulder and used for longer distances and precision. Projectiles (ammunition) reach speeds of 762 to 1160 m/s¹. Rifles are the best tool for their low cost, efficiencies and ability to humanely euthanize even a larger pig.

Shotgun: Is a firearm with a smooth or rifled barrel and are fired from the shoulder dispersing shots (pellets, buck shot and slugs) at shorter distances. Velocities range from 366-396 m/s, with pellets a slower velocity than slugs. Slugs are used commonly for deer and bear hunting in highly populated areas as with the intention to reduce long range shooting accidents. Because shotguns throw out either a very large single slug, or many smaller balls they are not a particularly useful or safe tool to use in a farm euthanasia environment. Each projectile has the possibility of ricochet and causing the secondary casualty.

2) Ammunition:

An ammunition cartridge is comprised of a cartridge case, a primer, propellant and bullet (projectile). Rifle bullets consist of either a metal jacket or lead. There are full metal jacket bullets, half metal jackets, and partial metal jackets. Full metal jackets are typically used for high velocity firearms, used in the military or while hunting wild game and should not be used in on-farm situations where pigs can be restrained and euthanized individually.

Shotgun cartridge (shells) are composed of a cartridge case of plastic or cardboard, a primer in the base, gunpowder, and the wadding and shot enclosed in the casing. Shell sizes are based on length and gauge. The gauge refers to the caliber size referring to the number of lead balls that can make up a pound.

Firing a firearm:

Pulling the trigger causes the firing pin to be released. The pin strikes the primer, crushing and igniting it. The metal cartridge case expands and isolates the chamber of the weapon against a backward escape of gases when fired. The primer (center fire or rim fire) is ignited and produces an intense flame through a flash hole. The flame flows through the flash hole and ignites the powder in the cartridge producing a large quantity of gas and heat. This heat and pressure expels the projectile (bullet) through the barrel. As the bullet emerges, it is accompanied by a jet of flame and gas.

A General Rule: One gram of propellant produces 1 liter of gas under high temperature and pressure¹.

Ballistics is the science of projectile travel and is expressed in a common formula describing the influences of mass of the bullet and muzzle velocity on the amount of Kinetic Energy (KE) that can be delivered to a target or tissues by a projectile. If mass of the bullet is doubled then KE on the target is doubled. However, if muzzle velocity is doubled, then KE is quadrupled.

Velocity is determined by the type of firearm, distance traveled and type or changes of media in the path²

Kinetic energy (foot pound) = $\frac{1}{2}$ Mass * Velocity.

Four Rules of Firearm Safety (taught in all police academies).⁸

1. Always treat every firearm as if it is loaded.
2. Always keep muzzle pointed in a safe direction.
3. Keep your finger outside the trigger guard until you are ready to shoot.
4. Always be sure of your target and what is in front and behind it.

3) How tissue damage occurs:

Tissue damage can occur in three ways: 1. laceration or crushing; 2. cavitation and 3. shock waves. Laceration, affected by the characteristic of the ammunition, forms a wound cavity, where the crush and stretch forces act on the tissues. Thicker tissue such as brain and cortical bone (skull) offer great resistance, increasing the energy transfer or KE from the projectile to the tissue. In addition, cortical bone tends to fracture and fragment ideally causing more disruption of the brain. Secondary fractures of the skull occur due to the gas produced from the weapon which enters the cranial cavity and expands intracranial pressure. Therefore, euthanasia of the pig occurs when the correct amount of energy is used for the size of the animal, the additional fragmentation of bone on the brain and the disruption from the brain stem due to the shock waves.

4) The science of Ricochet:

Jed Clampett hustles the pool hustler at the “billy-ard” table saying “this is just like ricochet shootin”.

Although bullets and shotgun pellets lose energy after striking a surface, they retain sufficient energy after ricochet to inflict serious or fatal injuries³. A national database for entry of these types of accidents on humans does not exist. There is both anecdotal evidence from other veterinarians or through conversations with farmers and forensic investigation have described individual cases to emphasize a point.

While ricochet is the most common terminology of the continued flight of a rebounded projectile, deflection is the deviation in a projectile’s normal path because of an impact with some object. Of interest are the circumstances which ricochet will occur. In general, the more rigid the target the lower the angle of ricochet, compared to the angle of incidence or the source angle. However, the angle of ricochet can be greater when the bullet strikes a yielding surface. Contrary to conventional wisdom, flexible targets bend under the impact and when that surface rebounds it returns some of the energy to the projectile. In general, the trajectory of a ricochet bullet is impossible to predict. Soil for example will crater and can result in a higher ricochet angle than the angle of incidence⁴. The angle of ricochet will generally increase, but lower than the angle of incidence, as the angle of incidence increases. However, if the angle of incidence is very low and strikes a yielding surface, the angle of ricochet can be greater. This theory fits with anecdotal stories of ricochet shot inside confinement facilities whereby unintended targets (persons, other pigs) are wounded in the foot or leg.

Also, solid point bullets can begin to penetrate but, depending on energy transfer and bullet quality, part of the bullet shears off and follows a separate trajectory⁵. In other situations, the bullet may fragment on impact causing fragments to spray out in a fan. Further, the surface itself might fragment, sending secondary projectiles injuries.

The shape of the bullet determines whether it will ricochet. Round nose bullets are more likely to ricochet than flat-nosed bullets and full metal jacket bullets are as likely as lead or lead alloy bullets. At short distances, hollow point or low-velocity bullets (ie shotgun) are less likely to ricochet, when compared to flat-nosed, lead or high-velocity bullets³. In addition, the soft-point ammunition deforms or mushrooms when entering the skull and destroys brain tissue more effectively. However, if a hollow-point bullet ricochets, it might fail to expand and penetrate more deeply than the direct shots. If animals are required to be shot from a distance, a high-velocity bullet should be used¹.

Interestingly, projectiles at low velocity are also more likely to ricochet than high velocity projectiles.

As mentioned earlier ($KE = 1/2 * \text{velocity}$) the kinetic energy determines the penetration of the bullet to the target. Research⁴ has demonstrated a “billiard ball” effect when the leading pellets in the shot decelerate at the point of impact, as the pellets in the rear overtake the lead pellets and collide with them causing the shot string to scatter. When shotgun pellets ricochet, the pellets will spread out horizontally. For shotguns, the

steeper the angle of incidence, the wider the spread of shot. Consider when the average height person aims the muzzle down toward the skull of a pig, the angle of incidence is near 45-60 degrees. With many barns having open curtain siding, this information further confirms that small children, pets and people should not be in the barn area within at least 60 yards when a rifle or shotgun is fired.

Firearms Safety: No one can call a shot back.

Source: National Shooting Sports Foundation

Once a gun fires, you have given up all control over where the shot will go or what it will strike. Don't shoot unless you know exactly what your shot is going to strike.

Clear the bore with a rod before Shooting: Bits of mud, dirt, rodents, snow, or grease in the bore can dangerously increase pressures and cause the barrel to bulge or burst on firing and injure the shooter and bystanders.

Firearms are designed, manufactured and proof tested based on standards of factory loaded ammunition. Use the correct ammunition for your firearm. Read and heed all warnings, including those that appear in the gun's instruction manual and on the ammunition boxes.

Handloaded ammunition pressure is different from pressures generated by factory loads. *The money you save is not worth the risk of possible injury.*

Examine every cartridge you put into your gun. Never use damaged, wet, lubricated or substandard ammunition or smaller gauge/caliber into a gun (ex 20-gauge shell in a 12-gauge shotgun).

A cartridge in the chamber = loaded firearm- even if it did not fire.

Occasionally, a cartridge may not fire when the trigger is pulled. If this occurs, keep the muzzle pointed in a safe direction. Keep your face away from the breech. Then, carefully open the action, unload the firearm and dispose of the cartridge in a safe way.

When shooting, wear protective shooting glasses and hearing protection. **Shooting glasses** guard against a shattered bullet, ruptured case or firearm malfunction.

Don't Alter or Modify Your Gun, And Have Guns Serviced Regularly

Your gun is a mechanical device that is subject to wear and requires periodic inspection, adjustment and service. Check with the manufacturer of your firearm for recommended servicing.

Learn the Mechanical and Handling Characteristics Of The Firearm You Are Using

Never handle any firearm without first having thoroughly familiarized yourself with the firearm you are using. Safe gun handling rules for loading, unloading, carrying and handling that firearm.

Wounds: When bullets ricochet, they may tumble and strike an unintended target in an unstable condition. This effect can cause larger and more irregular wound shape and tend to penetrate rather than perforate⁶.

Advantages of firearms:

- Experienced operators can achieve a humane pig euthanasia, safely.
- Firearms and ammunition are readily available.
- High velocity ammunition of a small caliber is humanely effective.⁷

Disadvantages of firearms:

- Potentially the most dangerous of humane euthanasia of swine.
- The potential for ricochet.

5) Humane Swine Euthanasia using Firearms:

Humanely swine euthanasia can be completed from close range using a .22 caliber rifle with long-rifle mushroom shells such as a hollow point or a soft-shell lead.

The procedure should be performed outdoors whenever possible and in a location away from public access. The trajectory of a ricochet bullet is impossible to predict. People, other than the shooter, should be cleared from the area. Assistants should stand behind the shooter.

To improve euthanasia - the distance from the muzzle to the skull target should be 2-6 inches.


The barrel of the firearm should never be placed directly against the animal's skull.

As a properly euthanized animal will undergoes tonic/clonic actions, improve shooter safety by restraining the

pig using a rope snare secured to a solid object.

Contributors: The authors thank Nancy Bradley-Siemens, DVM, Clinical Assistant Professor, Midwestern University, AZ and D. James McGuire for their contributions and content review.

References:

1. Bradley-Siemens N, Brower AI. Veterinary Forensics. Vet Pathol. 2016;53(5):988-1000. doi:10.1177/0300985816653170.
2. Merck MD. Firearm Injuries. In: Veterinary Forensics. John Wiley & Sons, Inc.; 2013:151-168. doi:10.1002/9781118704738.ch8.
3. Burke TW, Ph D, Rowe WF, Ph D. Bullet Ricochet: A Comprehensive Review. 1992;37(5):1254-1260.
4. Rowe WF, Ph ZD, Meconnell R, Shotgun WF a S. A Study of Shotgun Pellet Ricochet. J Forensic Sci. 1981;26(4):699-709.
5. McDonough SP. Veterinary Forensic Pathology: The Search for Truth The Rise of Forensic Pathology in Human Medicine: Lessons for Veterinary Forensic Pathology. Vet Pathol. 2016;53(5).
6. Haag LC. Wound Production by Ricocheted and Destabilized Bullets. Am J Forensic Med Pathol. 2007;28(1). http://journals.lww.com/amjforensicmedicine/Fulltext/2007/03000/Wound_Production_by_Ricocheted_and_Destabilized.2.aspx.
7. Longair JA, Finley GG, Laniel MA, et al. Guidelines for euthanasia of domestic animals by firearms. Can Vet J. 1991;32(12):724-726. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1481111&tool=pmcentrez&rendertype=abstract>.
8. Four Rules of Firearm Safety. <https://www.hunter-ed.com/gun-safety/> 

All comments and suggestions should be directed to the:

MSU Pork Team

Dale Rozeboom: Extension Specialist
(517) 355-8398, rozeboom@msu.edu

Madonna Benjamin:
Extension Swine Vet
(517) 614-8875, gemus@cvm.msu.edu

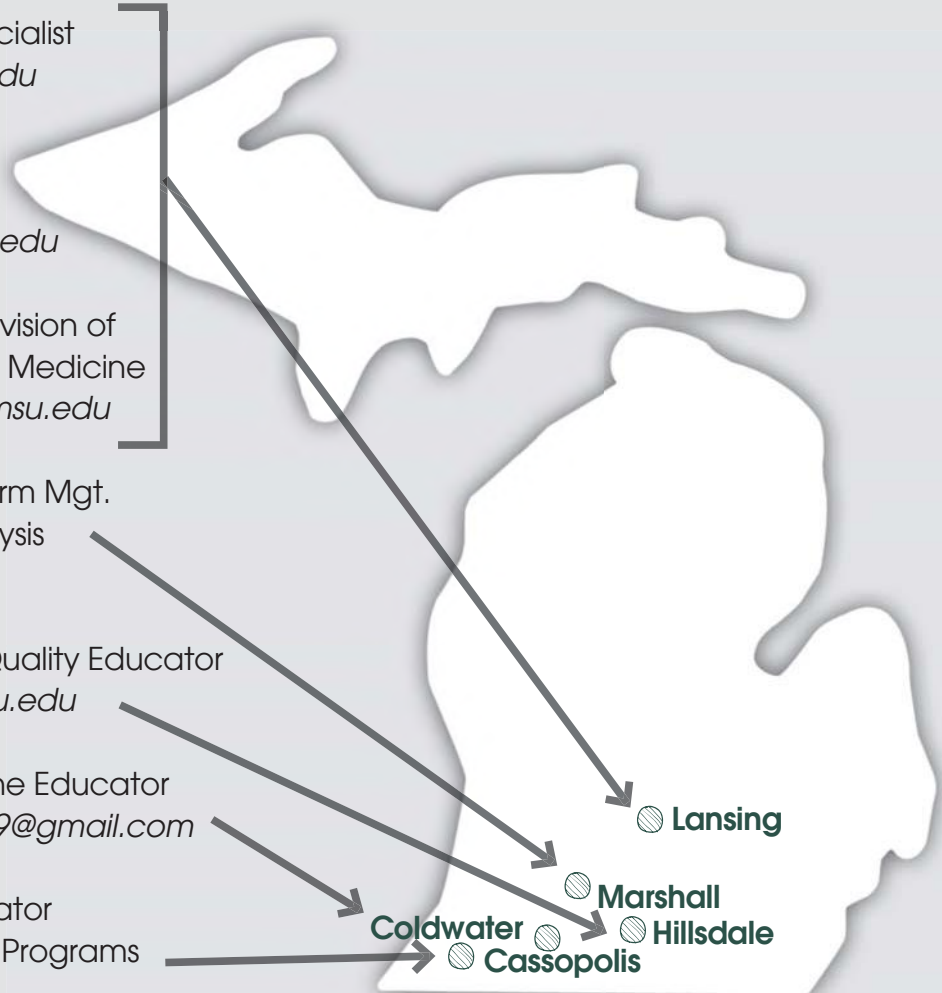
Melissa Millerick-May: MSU, Division of
Occupational and Environmental Medicine
(517) 432-0707, melissa.may@hc.msu.edu

Roger Betz: Southwest District Farm Mgt.
Finance, Cash Flow, Business Analysis
(269) 781-0784, betz@msu.edu

Shelby Burlew: Environmental Quality Educator
(517) 439-9301, bollwah1@anr.msu.edu

Dave Thompson: Extension Swine Educator
(269) 832-8403, davethompson729@gmail.com

Beth Ferry: Southwest Pork Educator
Management, Quality Assurance Programs
(269) 445-4438, franzeli@msu.edu



**Sign Up for
the Latest
News for
Agriculture**

Want to stay updated on various MSU Extension topics? Sign up for news digests online! Visit bit.ly/MSUENews, and follow the prompts to get customized email digests. Digests are electronic newsletters of recent articles published on the MSU Extension website. You can unsubscribe or change your areas of interest anytime. The digests contain information on categories including agriculture, business, community, family, food and health, lawn and garden, 4-H and youth, and natural resources. Each category has multiple subcategories, so subscribers can narrow down their choices to fit their specific interests.

MICHIGAN STATE
UNIVERSITY

Extension



Capital Update

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

NPPC CONTINUES EFFORTS TO KEEP UNITED STATES IN NAFTA

With trade negotiators from the United States, Canada and Mexico scheduled to meet in Washington, D.C., in mid-December before a formal sixth round of renegotiation talks on the North American Free Trade Agreement (NAFTA) set for Jan. 23-28 in Montreal, NPPC is continuing to extol the benefits of the agreement in an effort to keep the United States in the deal. NPPC continues to meet with congressional lawmakers; reach out to the nation's governors; participate in public events in support of NAFTA; and partner with many other organizations in an effort to preserve and enhance the agreement. Recently, NPPC President Ken Maschhoff penned an op-ed that ran in the Capitol Hill publication *The Hill*, and agriculture economist Dermot Hayes wrote one that appeared in *Agri-Pulse*. Former NPPC president and Minnesota pork producer Randy Spronk had a blog post on NAFTA – with an accompanying video – published by the U.S. Chamber of Commerce. Spronk recently participated in a panel discussion on NAFTA hosted by the Chamber.

DEFENSE FUNDING LAW INCLUDES FMD PROVISION

President Trump recently signed the fiscal 2018 National Defense Authorization Act (NDAA), the military spending bill, which includes a provision strongly supported by NPPC. Introduced by U.S. Senator Joni Ernst, R-Iowa, chairwoman of the Senate Armed Services Subcommittee on Emerging Threats and Capabilities, the provision recognizes the risk of Foot-and-Mouth Disease (FMD) to our food security

and our national security. NPPC has asked Congress for language in the next Farm Bill establishing and funding an FMD vaccine bank to address an FMD outbreak, which would have a devastating impact on U.S. agriculture and the U.S. economy.

STATES SUE MASSACHUSETTS OVER BAN ON OUT-OF-STATE MEAT, EGGS

Led by the state of Indiana, the attorneys general for 13 states recently filed a lawsuit against Massachusetts over its ban on the sale of out-of-state meat and eggs from animals raised in certain housing. Massachusetts voters in November 2016 approved a ballot initiative that banned certain housing for pigs, egg-laying hens and veal calves. The AGs are asking the U.S. Supreme Court to rule that the ban on the sale of meat and eggs from animals raised in housing systems prohibited by the state, which is set to take effect in 2022, violates the U.S. Constitution and the Commerce Clause's original goal of preventing states from enacting barriers to interstate commerce and regulating commercial activities that take place beyond their borders. The lawsuit, filed directly with the high court based on its original jurisdiction over disputes between states, follows a similar suit recently filed by 13 states - led by the attorney general of Missouri - challenging a similar law restricting access to retail markets in California. NPPC fought both the Massachusetts and California initiatives and now is supporting the "No Regulation Without Representation Act of 2017" (H.R. 2887), legislation introduced by Rep. Jim Sensenbrenner, R-Wis., that would prohibit states from imposing regulatory burdens on businesses, including pork operations, not physically present in the state. Earlier

this year, NPPC CEO Neil Dierks testified on the bill before a House Judiciary subcommittee, saying: “Several states – most with little pork production – have banned gestation stalls, either through ballot initiatives or legislation. That was their prerogative, however ill-advised or uninformed their motives were. What NPPC and pork producers object to is one state adopting a law or regulation that dictates the practices of the other 49 states.”

LAWMAKERS WANT DELAY FOR LIVESTOCK HAULERS OF TRANSPORTATION RULE

Senate and House lawmakers recently sent letters to their congressional leaders in support of including in the House-passed Transportation, Housing and Urban Development appropriations bill language delaying for one year a Department of Transportation (DOT) requirement that livestock haulers install Electronic Logging Devices (ELDs) in their trucks. The letters were signed, respectively, by 67 House members and 20 senators. NPPC, which in late November got a 90-day waiver of the ELDs mandate for livestock truckers – it was set to become effective Dec. 18 – has argued that the requirement could have a negative effect on animal well-being and that it is incompatible with DOT’s Hours of Service rules, which limit truckers to 11 hours of driving daily, after 10 consecutive hours off duty, and restrict their on-duty time to 14 consecutive hours, which includes nondriving time. NPPC also has asked DOT to grant livestock haulers a permanent exemption from the ELDs regulation. The organization strongly supports the congressional effort to delay the ELDs mandate for a year.

HOGS ON THE HILL BLOG RELAUNCHED

NPPC relaunched its Hogs on the Hill blog. Billed as “the voice of the U.S. pork industry, with a swine’s eye view of the world,” the blog will give readers information on matters coming out of Congress, the executive branch and even state capitals that affect pork producers.

USDA TO WITHDRAW ORGANIC RULE

U.S. Secretary of Agriculture Sonny Perdue announced that the U.S. Department of Agriculture (USDA) will withdraw a proposed organic rule for livestock and poultry. The Obama-era regulation – the Organic Livestock and Poultry Practices rule – would have incorporated into the National Organic Program welfare standards that were not based on science and that were outside the scope of the Organic Food Production Act of 1990. The act limited consideration of livestock as organic to feeding and medication practices. NPPC raised a number of problems with the regulation, including animal and public health concerns and the fact that animal production practices have nothing to do with the basic concept of “organic.” NPPC also cited the complexity the standards would have added to the organic certification process, creating significant barriers to existing and new organic producers. In withdrawing the rule, the USDA determined the regulation exceeded the agency’s authority – something NPPC pointed out in comments on the rule – and that it would have had a greater economic impact on farmers than originally estimated. NPPC applauds the decision to withdraw by Sec. Perdue and his department. The withdraw notice, to be published in the Federal Register, is subject to a public comment period.



Pork Checkoff

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

FDA REPORT ON ANTIBIOTICS VALIDATES WORK BY U.S. PIG FARMERS

America's 60,000 pig farmers continue to do what's right on the farm for people, pigs and the planet when it comes to demonstrating their commitment to antibiotic stewardship. That's why recent findings in the U.S. Food and Drug Administration's 2016 Summary Report on Antimicrobials Sold or Distributed for Use in Food-Producing Animals came as no surprise, but as a validation of the hard work U.S. pig farmers have put in to reduce the overall need for antibiotics while still protecting the health and welfare of the pigs under their care.

"This report, which still is based on sales and not actual usage, supports what we already know at the farm level—we're using fewer antibiotics overall today because we're committed to reducing the need for them while protecting the health and welfare of our animals," said National Pork Board President Terry O'Neel, a pig farmer from Friend, Nebraska. "When we must use antibiotics, we work closely with our veterinarians to ensure that we use them according to the FDA-approved label."

Veterinarian Dave Pyburn, vice president of science and technology at the National Pork Board, says the new report must be viewed for what it is—an estimate of antibiotic use and not a literal measure of use at the farm level. He also points out the inherent size and longevity differences between cattle, pigs and poultry when looking at antibiotic use. Different species will obviously face additional health challenges due to longevity. For example, a broiler chicken typically goes to market in about six weeks, whereas for pigs it's about six months and for beef cattle it's 18 months.

"Unfortunately, the FDA report is not truly reflective of overall antibiotic usage by species because the

pharmaceutical companies don't record sales by species," Pyburn said. "Secondly, the report does not include species-specific data regarding ionophores in its results, making its estimate about which species use more antibiotics than another less than precise. For example, pig farmers use almost no ionophores, but poultry and beef producers use a fair amount of that class of antibiotics."

Despite its species-specific shortcomings, the FDA report clearly shows that the overall usage of antibiotics in livestock is the lowest since 2009. According to the USDA's National Agricultural Statistics reports, America's pig farmers produced over five million more market hogs in 2016 than in 2009 and market weights increased by 16 pounds in that period. Those figures suggest that today's pig farmers are using far less total antibiotics per pound of pork produced.

"As a scientist, I'm very excited about the work America's pig farmers have funded to help us get a more precise handle on antibiotic usage," said public health veterinarian Heather Fowler, director of producer and public health with the National Pork Board. "We've been collaborating with some of the best researchers in the world on developing on-farm metrics, so that we can make additional progress in antibiotic stewardship in a way that has a tangible and positive outcome for the health of people, pigs and the planet."

According to Fowler, the National Pork Board's work with researchers on creating novel on-farm antibiotic use metrics will advance more quickly in 2018 since much of the groundwork has been completed. Likewise, similar work has been done by the U.S. poultry and beef industries.

Fowler believes ongoing collaboration with academia, governmental agencies and non-governmental organizations is the best way to move forward in solving the complex issue of antibiotic resistance. She points

to the Pork Checkoff's ongoing work and collaboration with partners such as the Centers for Disease Control and Prevention on the global One Health initiative. Also, long-time industry programs such as PQA Plus have put even more focus on antibiotic stewardship today, which complements the Checkoff's investment of more than \$6 million for antibiotic-related studies since 2000.

From a farmer perspective, O'Neel said 2017 has been another milestone in antibiotic stewardship. "While some of our detractors may think it's only legislation or new rules that move us to act, we know differently," he said. "The data that we are seeing in this FDA report shows that livestock producers were reducing the need and usage of antibiotics prior to the enactment of the FDA guidances going into effect on January 1. It also reflects our ongoing dedication and competency as pig farmers to practice good antibiotic stewardship."

PORK DEMAND REMAINS STEADY AS SIGNS POINT TO STRONG FOURTH QUARTER

Pig farmers and food production companies alike are wrapping up a successful 2017 that continues to show steady consumer demand for pork. The summer grilling season ended strongly, and signs point to a solid year-end opportunity for ham.

According to Nielsen Perishables Group data for the 13 weeks ended Oct. 28, total sausage and rib volumes were up from the same time last year 3.3 percent and 2.6 percent respectively, while sales were up in those categories 4.1 percent and 3.2 percent.

"Summer is always an ideal time for cooking pork outdoors," said Patrick Fleming, National Pork Board director of market intelligence. "Whether it was brats on the grill or a few racks of ribs on the smoker, consumers made room for pork on their picnic plate in 2017."

That momentum carried over into fall, as overall retail spending on pork by U.S. consumers was up by more than 3 percent in dollar sales during the month of

October.

The Nielsen data shows that consumer spending for ham was up a slight 1 percent for the 13-week period ending Oct. 28. Fleming acknowledges this demonstrates strong consumer demand for a pork cut that normally shines at year end due to the holidays.

"It's encouraging to see that more consumers are spending more on ham as we head into the holiday season," said Fleming. "We are already hearing anecdotally that some key retailers saw more hams leave the cold case heading into Thanksgiving. The volume of hams currently in storage should create favorable price points for consumers through yearend and into 2018."

According to the U.S. Department of Agriculture's National Agriculture Statistics Service, frozen ham inventories at the end of October were up 2.1 percent, compared to this time last year. With both strong summer and fall sales performance, pork producers are encouraged by signs that point to a strong finish to the year.

"Hams are no longer saved just for Christmas," said Terry O'Neel, president of the National Pork Board and a pig farmer from Friend, Nebraska. "And with the kids, grandkids and other family members visiting for a few days, other cuts like bacon and sausage shine at breakfast, while prosciutto and salami are showcased in the New Year's charcuterie tray. Pork's value and versatility make it a go-to meal option this time of year."

Additionally, pork plays a growing role in the restaurant and foodservice industry. Since 2011, pork has been the fastest-growing protein, according to Technomic, Inc.'s 2017 Volumetric Assessment of Pork in Foodservice. During the past six years, pork use has grown on a per pound basis by more than double chicken, largely due to foodservice operators seeking higher quality cuts and cooking them to 145 degrees Fahrenheit (with a three-minute rest). During this same time period, pork represented 61 percent of all protein growth in the foodservice industry.

Winter animal care: Tips to help keep your animals healthy and happy during winter months

Winter is upon us! Preparing for and utilizing a few easy techniques on your farm will help you manage your herd successfully during the cold, winter months.

Water: Ensuring your herd has access to fresh, clean water is essential to their health. In the winter, battling frozen water buckets and tanks can be a challenge. By utilizing tank heaters, heated buckets or automatic waterers, water is kept ice-free and at a temperature the animal is comfortable drinking. Products that utilize electricity, such as tank heaters and heated buckets, should be checked with a voltmeter to ensure there is no current running through the water. Any electrical current will deter animals from drinking from the water tank or bucket. By inserting one end of the voltmeter in the water tank and the other into the ground, you will get a reading that will indicate if there is a problem. Make sure to check this often.

The University of Wisconsin Extension has published a water consumption chart that outlines the amounts of water certain species will consume per day. Ensuring that your animal is consuming enough water each day is critical to their overall health and wellbeing. It is estimated that hogs need 6-8 gallons per day.

Housing: Most animals need some shelter during the winter months, however their natural winter coats allow them to endure cold temperatures. Humans oftentimes are prone to making the winter environment for their animals too warm, which is unhealthy for animals. Michigan State University Extension recommends the following factors to consider when evaluating the housing of your animals:

Air quality. Is there adequate ventilation to help dispel respiration gasses and manure odor? Poor ventilation can cause irritation in the animal's lungs and lead to pneumonia.

Dry bedding areas. Dry bedding provides insulation from the cold

ground and helps decrease the amount of energy animals use to keep them warm.

Feed: Animals must maintain their energy reserves in order to endure cold temperatures. They also need food for growth and maintenance. During cold weather, it may be necessary to increase the amounts of good quality feed and forages. Supplying adequate amounts of feed is essential in your herd's wellbeing through the winter months.

Rodent control: Rodents are a problem throughout the year, but it seems that in the wintertime, the challenge is exacerbated. According to University of Massachusetts Extension's "Rodent Control on Farms," a general rule of thumb is there are approximately 25 mice or rats for every one you see.

You can take precautionary measures, which sometimes in the winter seem more challenging because of temperatures, such as remembering to maintain good housekeeping around and in the barn. Old feedbags and piled up items such as building materials provide perfect hiding places for rodents, so keep things picked up. Cover all feed bins or secure bags of feeds in containers, such as bins or covered cans to keep rodents out. Also, reduce feed spillage as much as possible.

This article was originally published by Michigan State University Extension. 

Want to make your farm more energy efficient?

Tune in to FREE Powering Michigan Agriculture Webinar series



January 25, 2018

February 1, 2018

February 8, 2018

Learn more & register at <http://tinyurl.com/PoweringMIAg>

MICHIGAN STATE UNIVERSITY | Extension

BBQ Contest Winners Announced

The BBQ Competition, was held on Tuesday, October 18, 2017 as part of the annual Michigan Restaurant Show as hosted at Suburban Collection Showplace in Novi. The event was sponsored by the Michigan Restaurant Association, SYSCO Companies of Michigan, and the Michigan Pork Producers (MPPA). An expert panel of judges tasted each entry and carefully assessed the category. The first place winners for each category received a trophy and \$1,000, the second place winner will receive \$500, and the third-place winners received \$200.

2017 Winners

Ribs – Sponsored by MPPA

1. Holy Smokers BBQ
2. Slo'Bones BBQ Smokehaus
3. Bad Wolf BBQ

Shoulder – Sponsored by MPPA

1. Slo'Bones BBQ Smokehaus
2. Holy Smokers BBQ
3. Bad Wolf BBQ

Side Dishes – Sponsored by Michigan Potatoes Commission

1. Slo'Bones BBQ Smokehaus
2. Brotherhood of Swine
3. Flavor Unit

Brisket

1. Slo'Bones BBQ Smokehaus
2. Brotherhood of Swine
3. Holy Smokers BBQ 🐷



Above, Richard Bourdow with Slo' Bones Smokehaus receives awards for second place ribs, first place shoulder, first place sides and first place brisket at the 2017 Michigan Restaurant Show BBQ Competition. Mary Kelpinski, far right, served as an official judge for the event.

Customized Nutrition that Works for you!



10015 Pierce St, Zeeland, Michigan
Ben Kamp (616) 291-3697

BAKKER
CONSULTING

Formulated with
EnMax
nutrition technology

- Net Energy Formulation
- Supplemental Enzymes
- Crystalline Amino Acids
- Best-Cost Formulation

Certified Distributor for:
RALCO
Animal Nutrition

REGISTER NOW FOR THE 2018 GREAT LAKES CROP SUMMIT



www.GreatLakesCropSummit.com

2018 FEATURED SPEAKERS

CHRIS BARRON, AG VIEW SOLUTIONS



Barron has developed top-notch ag decision-making techniques by working with some of the best producers in the U.S. and Canada. From bridging the generational gap to helping individual farms become more profitable, Barron helps farmers size their family enterprise to be more competitive.

DR. BARRY FLINCHBAUGH, KANSAS STATE UNIVERSITY



Dr. Flinchbaugh has brought his sage advice on agriculture policy to lawmakers on both sides of the aisle. He's literally written the book on ag policy! His knowledge, experience, and "tell-it-like-it-is" humor will stretch your understanding of farm economics.

MARK GOLD, TOP THIRD AG MARKETING



Gold is a regular guest analyst on U.S. Farm Report, Market To Market, and Ag Day TV and can be heard daily on Nebraska and Kansas radio and AgWeb. Gold was a floor trader at the Chicago Mercantile Exchange, International Monetary Market, Sydney Futures Exchange, and the New Orleans Commodity Exchange where he served as vice chairman of the board.

THIS YEAR'S HIGHLIGHTS

More than 25 speakers from 7 states will cover topics for everyone on the farm, including:

- Technology
- Financial Planning
- Grain Marketing
- Farm Family Communications
- Insect, Weed and Disease Control
- Nutrients, Soils and Drainage

A tradeshow with more than 60 exhibitors. Plenty of time to network with farmers from around the state.

A detailed agenda and registration are available online at www.GreatLakesCropSummit.com.
You may also register by phone at (888) 323-6601.

Earn 10 RUP credits for full attendance, CCA credits for all sessions, and MAEAP Phase 1 credit.

Lodging is not included in registration. A special group rate of \$109 per night is available until Jan. 8. Call Soaring Eagle Casino & Resort at (877) 232-4532 and use code GLCS013018.

JANUARY 31-FEBRUARY 1, 2018

SOARING EAGLE CASINO & RESORT | MT. PLEASANT, MI



MI Pork PAC

Helping elect friends of the Michigan pork industry.

The Michigan Pork PAC is the bi-partisan political action arm of the Michigan Pork Producers Association. The MI Pork PAC enables producers to pool their resources together and become directly involved in the election process.

A strong political action committee complements our advocacy efforts at the state Capitol. By contributing to the MI Pork PAC, you are helping to elect legislators who support your industry. By working with our elected lawmakers, we can be assured that we will have maximum impact in shaping policy issues that impact you. A strong PAC assures us that pork producers and candidates who support us will be at the table when decisions impacting your industry are being made.

Please keep in mind that contributions may be accepted from individuals, partnerships, LLC's, and Sole Proprietors. However, NO CORPORATE CONTRIBUTIONS CAN BE ACCEPTED.

Contributions to the PAC are not deductible as charitable contributions for Federal income tax purposes.



MI Pork PAC Contribution

Name: _____

I would like to contribute:

\$250 \$150 \$100 \$50 Other \$ _____

Payment Options

Credit Card:

Number: _____

Exp. Date: _____ Code: _____

Name and zip code on Card: _____

Address: _____

Check:

Please make checks payable to: **MI Pork PAC**

Mail to: Michigan Pork Producers Association,
3515 West Road, Suite B,
East Lansing, MI 48823

Working for you...

by urging legislators to enact
responsible legislation
and regulation.

Youth for the Quality Care of Animals taking place of Youth PQA Plus Jan. 1, 2018

Youth for the Quality Care of Animals (YQCA) is a national multi-species quality assurance program for youth ages 8 to 21. The program is designed to provide an estimated 60 minutes of education each year. The online program requires the passing of a series of three quizzes to earn certification. An in-person YQCA workshop requires complete attendance.




YQCA is the result of a collaborative effort between states that have previously offered multi-species youth livestock quality assurance programs, the National Pork Board's Youth PQA Plus

program and representatives from other national livestock groups.

YQCA is designed as an annual education and certification program focused on food safety, animal well-being and character awareness for youth ages 8 to 21 producing and/or showing pigs, beef cattle, dairy cattle, sheep, goats, market rabbits, and poultry. The program has been designed by extension specialists and national livestock program managers to ensure it is accurate, current and relevant to the needs of the animal industry and shows and is appropriate for youth.

Any youth in the United States will have access to the online YQCA program and to certification at yqca.org. YQCA in-person workshops will be available through Michigan Pork Producers Association.

The national YQCA program launched March 2017. The first show requiring YQCA certification was the World Pork Expo in June of 2017. Livestock shows can make completion of the YQCA program mandatory for their exhibitors. If your show is interested in learning more about YQCA to determine if it is suitable to meet your quality assurance requirements, please use the Contact Us page or email info@yqca.org or contact Emily Schmitt at MPPA at schmitt@mipork.org or 517-853-3782. 



Brant Graham
616-403-0944

Ed Hardin
937-239-1517

Brandon Hill
269-251-6428

JBSUnited.com

Thinking about installing solar panels?

Get valuable, practical guidance January and February 2018 featuring Extension expertise from

- Michigan State University • The Ohio State University •
 - University of Nebraska • University of Wyoming •
- during six 60-minute sessions

Agricultural Solar Electric Investment Analysis webinars

Learn more and register

<https://events.anr.msu.edu/SolarAnalysisWebinar/>

Questions? Contact Charles Gould at
616-994-4547 or gouldm@msu.edu

**MICHIGAN STATE
UNIVERSITY**


Extension

Now accepting MPPA scholarship applications

The Michigan Pork Producers Association awards more than \$3,000 annually in scholarships to high school seniors, college freshmen, sophomores or junior students. There are two scholarships available, the IAT Swine Management Scholarship for those pursuing or currently in Michigan State's Swine Tech program and the Michigan Pork Industry Scholarship for those pursuing or currently in a Bachelors program at any college. The interviews for both scholarships will be held January 27, 2018 at the Green and White Show, held at the MSU Pavilion in East Lansing.

The deadline to apply for the 2018 Michigan IAT Scholarship and the 2018 Michigan Pork Industry Scholarship is January 19, 2018.

The applications are available at www.mipork.org/michigan-pork-industry-scholarship/

Please contact Emily Schmitt with questions at schmitt@mipork.org or 517-853-3782. 



Calendar of Events

Jan:

26-28 Green and White Swine Show

East Lansing, Mich.

27 MPPA Scholarship Contest

East Lansing, Mich.

29-30 MPPA Strategic Planning

Grand Rapids, Mich.

Feb.:

22 Michigan Pork Symposium

Lansing, Mich.

23 MPPA Board Meeting

Lansing, Mich.

March:

1-2 National Pork Industry Forum

Kansas City, KS

June:

6-8 World Pork Expo

Des Moines, Iowa

13 MPPA Board Meeting

East Lansing, Mich.

We're Listening

Dear MPPA,

Thank you for the use of the model swine barn and donation of coloring books and educational materials. They were a great addition to our Kids' Day at the Montcalm County 4-H Fair!

Sincerely, Bonnie Havlicek,
Montcalm MSU Extension

Dear MPPA,

Thank you for your donation to the Michigan State University College of Agriculture and Natural Resources. Your contribution, designated to the Great Lakes Leadership Academy Program Endowment Fund is greatly appreciated.

With an alumni base of more than 65,000, our work expands beyond the borders of our campus. We provide academic programs spanning a wide range of disciplines, and host more than 50 study abroad programs in 40 countries.

Gifts like yours are critical to the success of our programs and our students. These dollars make it possible for scholarships, fellowships, research opportunities, technology needs and community outreach to happen -- your gifts have a direct and immediate impact. On the behalf of the faculty, the staff and students of CANR, thank you for your continued support.

Sincerely, Ronald Hendrick,
Professor & Dean, College of Agriculture and Natural Resources, Michigan State University

Dear MPPA,

I would like to thank you so much for donating freebies to the baby animal tent at the Clinton County Fair. Though words can only say so much, I personally witnessed kids with a smile on their face while enjoying the coloring books. Thanks for all of your support.

Sincerely, Samuel Selleck,
Clinton County Fairboard



MPPA Board of Directors:



Afton Blight Maksimchuk
Homer, (517) 488-4938

Lee Carte
Remus, (989) 967-3669

Dennis DeYoung
Plainwell, (269) 672-7034

Kris Duflo
Carson City, (989) 584-6401

Beth Ferry, MSU Extension
Cassopolis, (269) 445-4438

Ryan Hunter
Vicksburg, (269) 649-0764

Scott McKenzie
Marcellus, (269) 506-8718

Dale Norton
Bronson, (517) 369-1236

Joel Phelps
Newaygo (314) 614-3762

Ed Reed
Marcellus, (269) 646-2431

Harley Sietsema
Allendale, (616) 895-7493

Fred Walcott
Allendale, (231) 873-1635

Andy White
Jones, (269) 506-1978

Dennis Wooden
Cassopolis, (269) 445-8066

Executive Committee:

Bob Dykhuis, President
Holland, (269) 751-7189

Tim Kruithoff, Treasurer
Kent City, (616) 675-7787

Pat Albright, Vice-President
Coldwater, (517) 238-5817

Brian Pridgeon, Secretary
Montgomery, (517) 296-4543

ADVERTISERS

5	Albright Swine Farms
19	Bakker Consulting
2	Hog Slat
22	JBS United
8	Swine Vet Services
6	United Producers, Inc
7	Wooden Farms

Happy Holidays!

-Mary, Sam & Emily

Honey and Sage-Roasted Rack

Nothing is more memorable than the unexpected. This rack of pork is perfect for those large holiday gatherings. Serve with Cranberry Waldorf Salad, Brussels Sprouts with Prosciutto and Parmesan, Garlic Rosemary Mashed Potatoes, and finish with Cherry-Crowned Almond Pear Gems.

Ingredients:

- 2 racks pork rib rack (8-ribs each, center cut, chine bone off, Frenched)
- salt
- black pepper
- 1/2 cup honey
- 2 tablespoons fresh sage (snipped)

Season pork racks with salt and pepper. Place each rack in roasting pans with bones facing up and sides not touching. Roast at 350 degrees F. for 1 to 1 1/2 hours (20 minutes per pound) until internal temperature on a thermometer reads 145 degrees F. Remove roast from oven; let rest about 10 minutes. Stir together honey and sage. Brush honey mixture onto roast after removing from oven.

