MSU Pork Quarterly

Information for an Industry on the Move

December 2016 Vol. 21 No.4

In This Issue...

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ANIMAL AGRICULTURE INITIATIVE

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BEST ODDS – Success in meeting the requirements of the CSIA starts with the PQA Site Assessments.

By: Madonna Gemus-Benjamin, Department of Large Animal Clinical Sciences MSU College of Veterinary Medicine

Many packers have initiated individual third party audits for their supplying swine farms. To prevent complications to farms of having to comply with multiple auditing programs, the National Pork Board (NPB) worked with packers to create a common swine audit with the goal to provide a common, credible, assurance of on-farm swine welfare and food safety. This single common third party audit platform initiative is called the Common Swine Industry Audit (CSIA).

Information about the audit can be found at pork.org/commonaudit.

The CSIA builds on the existing Pork Quality Assurance® Plus (PQA Plus®) program and the questions in the PQA Plus® Version 3 Site Assessments are aligned with the CSIA, making it an excellent preparation step for the CSIA. The audit is designed to be independent of facility size or design and measures four primary areas: records, animals, facilities and caretakers and provides an opportunity for the PQA+ advisor to educate the producer on issues associated with animal well-being, pork quality, and safety.

This article is an overview of the comparison and value of CSIA and PQA Plus® Site Assessments.

The CSIA does not replace the PQA+ site assessment, which serves as an educational and benchmarking tool to ensure pig well-being. The CSIA, on the other hand, does not have an educational component, but rather is a method to provide independent verification that the animal well-being system is working.

The value in a third party audit is producer's commitment to developing and ensuring "trust" among pork chain partners and consumers. Professional Animal Auditor Certification Organization (PAACO) has been contracted to train and certify packer and third party

Audit vs. Assessments

PQA Plus® V. 3 Site Assessment

- Producer initiates and schedules site assessment based on PQA Plus®
- Site is designated by PIN
- Completed by first or second party assessors trained by PQA Plus® advisor
- Preplanning includes biosecurity protocols, facility design and number of animals
- Educational and benchmarking
- Measurement and feedback

Common Swine Industry Audit

- Farm is contacted by packer or third-party audit company to schedule an audit
- Site is deisignated by PIN
- Completed by packer or third-party auditors trained by PAACO
- Preplanning includes biosecurity protocols, facility design and number of animals
- No educational component
- Measurement and comments

Measures and questions are the same. Site assessment prepares producers for CSIA.

auditors to conduct CSIA. "With PAACO auditor training, producers have added confidence that auditors visiting their farms are trained in a standardized way" states Collette Kaster, Executive Director of PAACO. The first in a series of training courses was held in October. Subsequent PAACO-CSIA training sessions have been scheduled within the next 12 months, providing the swine industry with a core mass of auditors available to conduct the CSIA.

If you haven't yet had a CSIA audit or a PQA Plus® Version 3 Site Assessments by an assessor, this is what you can expect: The auditor or assessor will conduct a thorough examination of the farm to include four areas: records, animals, facilities and caretakers. While on-site, the auditor will observe animal conditions and caretaker interactions and conduct an exit meeting to discuss the findings and allow for any necessary clarification, but cannot provide guidance relative to the findings

The audit, designed to be independent of facility size or design, assesses all phases of production, including load-out. The audit process may take up to 4 hours, depending on the production phase(s) evaluated. Audit questions have assigned point values. The site receives the full point value if it meets the approved standard. Although, there is no established minimum passing score, willful acts of abuse or failure to euthanize animals in a timely manner will result in the site failing the audit automatically. Both the audit and assessment can expect the producer to complete corrective actions for critical issues. Packers and customers will be responsible for reviewing the scores and corrective actions to determine if problems have been resolved or if a follow-up audit is necessary.

Your farm will still need a PQA Plus site assessment even if you are audited. Conversely, your buyer may request a third party audit even if you have met all requirements for PQA Plus.

Audit and Assessment:

Animal benchmarking makes up 50% of the audit. During the audit, a representative sample of pigs will be observed at the farm for the following criteria:

- Space allowance
- Body condition scores
- Severe lameness
- Scratches longer than 12 inches
- Abscesses
- Deep wounds
- Tail biting lesions
- Prolapses
- Hernias (non-breeding only)
- Shoulder sores (breeding only)
- Vulva injuries (breeding only)

Standard Operating Procedures

1. Written euthanasia plan
2. Animal handling
3. Piglet processing
4. Feeding and watering protocols
5. Daily observation
6. Caretaker training
7. Treatment management
8. Needle usage
9. Rodent control
10. Biosecurity

Records

1. Emergency backup equipment testing (minimum of twice a year testing)
2. Daily observation records (12 months needed)
3. Mortality records

(12 months needed)

4. Medication and treatment records, including vaccinations

(12 months needed)

5. VFD records according to FDA guidelines

Documentation

1. Willful acts of abuse - zero tolerance policy
2. Abuse - reporting mechanism
3. Euthanasia plan - posted
4. Annual caretaker training
5. PQA Plus certification - current of all employees. New employees must be certified within 90 days of employment.
6. TQA certification current for most recent transporter delivering or loading pigs at site
7. Valid PQA Plus site status from a PQA Plus Site Assessment (done within 6 months of operation or before animals are marketed or sold; completed every 3 years)
8. Internal site assessments - facility, animals, caretakers and procedures must be conducted by production management team (supervisors, site managers, or other internal animal welfare auditors). Must be conducted at least quarterly on sow farms and semi-annually on nursery and finishing farms.
9. Emergency action plan - posted
10. Valid VCPR (Veterinary Client Patient Relationship) - verification must be dated within the past 12 months
11. Visitor log
12. Biosecurity signage or other means to restrict access

To cover areas of caretakers, facilities, records, transport, and food safety producers will need to show 1) Standard Operating Procedures (SOPs), 2) Records, and 3) Documentation (See chart above)

Other notes:

1. Needles that are 16 gauge or larger size (lower number) must be highly detectable.

2. Sharps container for proper disposal of sharps - must be clearly labeled as sharps and according to each state's regulations.

Pass or fail?

There is no Pass/Fail with the PQA+ site assessment. However the CSIA has 5 pass/fail questions related to willful acts of abuse and timely euthanasia of animals. Receiving a fail in any one of these areas is an automatic failure for the audit but the remainder of the audit will be conducted.

The rest of the audit questions are assigned a set number of points for meeting the minimum site is given a score for each section as well as an overall score for the entire audit. There is no minimum score to pass and it will be up to the buyers to determine which scores are acceptable.

Extra-label use for pain management in pigs

By: Sarah Ison, Department of Animal Science MSU College of Agriculture and Natural Resources;
Dr. Madonna Gemus Benjamin, MSU Extension Swine Veterinarian
Beth Ferry, MSU Extension Pork Educator

Pigs have similar anatomy and physiology to humans, as such, it is generally agreed that pigs experience pain. When pain is managed in human patients, it results in improved recovery and a greater ability to function. Certain aspects of livestock production can result in pain, including several diseases, management procedures, injuries, and farrowing. Food-producing animals are restricted in the types of pharmaceutical products they can receive. However, there are ways in which FDA-approved pain relief products can be used on-farm under veterinary supervision. The use of these drugs can result in improved recovery, and a greater ability to function in pigs, which can also be reflected in production figures. There are many ways to reduce pain, including the reducing of risk factors associated with lameness, injury, or disease, and altering the way pigs are housed and managed. This article, however, will focus on pharmaceutical pain management, including the pain management options available, and evidence for clinical improvements to pigs.

On-farm pain management options

There are several classes of pain relief medication, with categories based on how the drugs work, including: opioids, non-steroidal anti-inflammatory drugs (NSAIDs), local anesthetics, a2 adrenoceptor agonists and those classed as 'others'[1]. The drug class that can be used on farm by producers (under veterinary supervision) are the NSAIDs, which are used to treat mild to moderate pain, representing most conditions affecting pigs. In cases of severe pain, for example if a bone fracture is suspected, or in severe cases of lameness, disease, or injury, euthanasia is the best option. The NSAIDs act to reduce sensitivity at the site of inflammation, by inhibiting the production of inflammatory mediators released in response to tissue damage, they also have an antipyretic effect, meaning they reduce fever[2]. Another class of drug used to treat inflammation, are known as corticosteroid anti-inflammatories (e.g. dexamethasone). These products treat swelling, but do not reduce pain associated with inflammatory conditions or skeletal pain.

The FDA-approval process for veterinary products is complex, time-consuming, and expensive, with little return on investment for pharmaceutical companies, compared to human medical products or drugs used for companion animals, so fewer drugs are available for food animal use. There is one FDA-approved NSAID product available in the United States for on-label use in swine, which is labelled to treat respiratory disease. This drug is called Banamine-S, containing the active ingredient flunixin meglumine (or flunixin), which is the ingredient that produces the anti-pyretic, and anti-inflammatory pain-relieving effect. However, this product, along with another NSAID, can be used to treat pigs for many other conditions involving inflammation and pain through a veterinarian, using the Animal Medicinal Drug Use Clarification Act of 1994 (AMDUCA). The use of Banamine-S for any other condition, and the use of another NSAID product, meloxicam (Metacam®), is possible using the process termed extra-label drug use.

Extra-label drug use (ELDU) under AMDUCA must be done through a veterinary-client-patient-relationship (or VCPR). The veterinarian can administer, dispense, or prescribe the drug, for specific conditions in pigs, and will specify a withdrawal time, which is found using the Food Animal Residue Avoidance Databank (FARAD). Producers can then use the drug to treat the condition in pigs, keeping accurate records of the individuals treated, in order to keep track of the individuals so withdrawal times are met. Talking to the veterinarian about the recognition and treatment of pain is recommended[3].

The benefits of pain management

Pain can reduce food and water intake, so for livestock species like pigs, there is a possible economic cost to pain[4]. For example, growth performance was significantly improved in pigs given meloxicam in addition to anti-microbial drugs to treat porcine respiratory disease complex[5]. The use of pain relief products is not

always directly related to production measures, but can benefit the individuals. When the NSAID ketoprofen was administered through drinking water for three days, to pigs showing signs of respiratory disease, no improvement in feed intake or growth was found, but fewer pigs had difficulty breathing, there was less coughing, lower body temperatures, and pigs generally appeared healthier[6]. When experimentally infected with respiratory disease, the NSAID ketoprofen, reduced fever, and increased feed intake in the infected pigs[7]. In another type of experimental infection (using E.coli endotoxin), both meloxicam[8] and ketoprofen[9] improved clinical scores (including: behavior, breathing, movement and stance) in infected pigs.

Recent interest has focused on the potential for NSAIDs administered to the sow around farrowing, to improve sow recovery and aid in the treatment of post-farrowing conditions. On a farm with high incidence of milking problems, and where a post-farrowing antibiotic is routinely used, piglet mortality was reduced and the number of piglets weaned increased for sows given the NSAID ketoprofen[10]. A study involving 15 commercial farms, tested the use of post-farrowing ketoprofen provision for all sows regardless of milking problems, and also demonstrated a reduction in piglet mortality and a greater number of piglets weaned[11]. Another study found no piglet performance benefits to administering ketoprofen, but did identify other sow benefits, which included a reduced loss in back-fat and body condition during lactation through delayed feed refusal, a lower incidence of constipation, and less severe shoulder sores[12], that may overall benefit sow health and longevity. The NSAIDs meloxicam and flunixin in addition to antibiotic treatment improved clinical signs in sows with post-farrowing illness[13,14]. When the NSAID meloxicam was given after farrowing, regardless of signs of infection, an increased average daily weight gain of low birth weight piglets was found in one study[15] and another showed a slight increase in piglet weight gain of litters containing 11 to 13 piglets[16]. An oral dose of meloxicam administered during farrowing, resulted in increased piglet weaning weights, average daily gain of piglets, and improved transfer of immunity to piglets[17]. However, care should be taken when giving NSAIDs at farrowing, as they have the potential to inhibit uterine contractions. Additionally, oral meloxicam administered to the sow post-farrowing, has been shown to transfer a therapeutic dose to piglets through milk[18].

Another surge in recent interest has been directed towards pain relief in relation to lameness, which is an important cause of pain in pigs. Lameness can reduce sow longevity and impact on performance indicators[19]. For non-infectious lameness, meloxicam reduced clinical lameness scores, improved feed intake and behavior scores, when administered at the point of lameness detection and repeated on day 2 if necessary[20]. An oral doses of ketoprofen reduced lameness scores in another study, when given over 5 days[21]. A research group in the US, created a method to experimentally induce lameness in sows, in order to investigate lameness, including pain management[22]. Subsequent research by this group has demonstrated that both meloxicam and flunixin reduced sensitivity in lame sows[23], reduced behavioral sign of pain[24], and showed improvements with gait analysis[25]. However, their behavioral results suggest that meloxicam was superior to flunixin in treating lameness pain[24,26].

Research shows that non-steroidal anti-inflammatory drugs (NSAIDs) can be beneficial to reduce pain in pigs and reduce the economic costs associated with painful conditions. NSAID products available to producers in the US include flunixin meglamine (Banamine-S®) and meloxicam (Metacam®), which can be used for several conditions causing pain and inflammation in pigs under veterinary supervision. Evidence suggests that the NSAID ketoprofen can also be effective in pigs, and is approved for pigs in other countries. Increasing evidence may mean this product becomes available in the near future.

References

1.) Nolan AM. Pharmacology of Analgesic Drugs. In: Flecknell P, Waterman-Pearson A, editors. Pain Manag. Anim. Harcourt Publishers Limited; 2000. p. 21–52.
2.) Hudson C, Whay H, Huxley J. Recognition and management of pain in cattle. Farm Anim. Pract. 2008;30:126–34.
3.) Ison SH, Rutherford KMD. Attitudes of farmers and veterinarians towards pain and the use of pain relief in pigs. Vet. J. 2014;202:622–7.
4.) Anil L, Anil SS, Deen J. Pain detection and amelioration in animals on the farm: issues and options. J. Appl. Anim. Welf. Sci. 2005;8:261–78.
5.) Georgoulakis IE, Petridou E, Filiousis G, Alexopoulos C, Kyriakis SC, Papatsas I. Meloxicam as adjunctive therapy in treatment and control of porcine respiratory disease complex in growing pigs. J. Swine Heal. Prod. 2006;14:253.

6.) Salichs M, Sabaté D, Homedes J. Efficacy of ketoprofen administered in drinking water at a low dose for the treatment of porcine respiratory disease complex. J. Anim. Sci. 2013;91:4469–75.
7.) Swinkels J, Pijpers A, Vernooy J, Van Nes A, Verheijden J. Effects of ketoprofen and flunixin in pigs experimentally infected with Actinobacillus pleuropneuniae. J. Vet. Pharmacol. Ther. 1994;17:299–303.
8.) Friton G, Schmidt H, Schrödl W. Clinical and anti-inflammatory effects of treating endotoxin-challenged pigs with meloxicam. Vet. Rec. 2006;159:552.
9.) Mustonen K, Banting A, Raekallio M, Heinonen M, Peltoniemi OAT, Vainio O. Dose-response investigation of oral ketoprofen in pigs challenged with Escherichia coli endotoxin. Vet. Rec. 2012;171:70.
10.) Sabaté D, Salichs M, Bosch J, Ramó P, Homedes J. Efficacy of ketoprofen in the reduction of pre-weaning piglet mortality associated with sub-clinical forms of post-partum dysgalactia syndrome in sows. Pig J. 2012;67:19–23.
11.) Homedes J, Salichs M, Sabaté D, Sust M, Fabre R. Effect of ketoprofen on pre-weaning piglet mortality on commercial farms. Vet. J. 2014;201:435–7.
12.) Viitasaari E, Hänninen L, Heinonen M, Raekallio M, Orro T, Peltoniemi O, et al. Effects of post-partum administration of ketoprofen on sow health and piglet growth. Vet. J. 2013;198:153–7.
13.) Hirsch AC, Philipp H, Kleemann R. Investigation on the efficacy of meloxicam in sows with mastitis-metritis-agalactia syndrome. J. Vet. Pharmacol. Ther. 2003;26:355–60.
14.) Tummaruk P, Sang-Gassanee K. Effect of farrowing duration, parity number and the type of anti-inflammatory drug on postparturient disorders in sows: A clinical study. Trop. Anim. Health Prod. 2013;45:1071–7.
15.) Mainau E, Ruiz-de-la-Torre JL, Dalmau A, Salleras JM, Manteca X. Effects of meloxicam (Metacam®) on post-farrowing sow behaviour and piglet performance. Animal. 2012;6:494–501.
16.) Tenbergen R, Friendship R, Cassar G, Amezcua MR, Haley D. Investigation of the use of meloxicam post farrowing for improving sow performance and reducing pain. J. Swine Heal. Prod. 2014;22:10–5.
17.) Mainau E, Temple D, Manteca X. Experimental study on the effect of oral meloxicam administration in sows on pre-weaning mortality and growth and immunoglobulin G transfer to piglets. Prev. Vet. Med. 2016;126:48–53.
18.) Bates JL, Karriker LA, Stock ML, Pertzborn KM, Baldwin LG, Wulf LW, Lee CJ, Wang C, Coetzee JF. Impact of Transmammary-Delivered Meloxicam on Biomarkers of Pain and Distress in Piglets after Castration and Tail Docking. PLoS One. 2014; 9(12): e113678.
19.) Anil SS, Anil L, Deen J. Effect of lameness on sow longevity. J. Am. Vet. Med. Assoc. 2009;235:734–8.
20.) Friton G, Philipp H, Schneider T, Kleeman R. Investigation on the clinical efficacy and safety of meloxicam (Metacam) in the treatment of non-infectious locomotor disorders in pigs. Berl. Munch. Tierarztl. Wochenschr. 2003;116:421–6.
21.) Mustonen K, Ala-Kurikka E, Orro T, Peltoniemi O, Raekallio M, Vainio O, et al. Oral ketoprofen is effective in the treatment of non-infectious lameness in sows. Vet. J. 2011; 190:55–9.
22.) Karriker LA, Abell CE, Pairis-Garcia MD, Holt WA, Sun G, Coetzee JF, et al. Validation of A lameness model in sows using physiological and mechanical measurements. J. Anim. Sci. 2013;91:130–6.
23.) Pairis-Garcia MD, Johnson AK, Stalder KJ, Karriker LA, Coetzee JF, Millman ST. Measuring the efficacy of flunixin meglumine and meloxicam for lame sows using nociceptive threshold tests. Anim. Welf. 2014;23:219–29.
24.) Pairis-Garcia MD, Johnson AK, Stalder KJ, Abell CA, Karriker LA, Coetzee JF, et al. Behavioural evaluation of analgesic efficacy for pain mitigation in lame sows. Anim. Welf. 2015;24:93–9.
25.) Pairis-Garcia MD, Johnson AK, Abell CA, Coetzee JF, Karriker LA, Millman ST, et al. Measuring the efficacy of flunixin meglumine and meloxicam for lame sows using a GAITFour pressure mat and an embedded microcomputer-based force plate system. J. Anim. Sci. 2015;93:2100–10.
26.) Whalin L, Pairis-Garcia M, Proudfoot K, Stalder K, Johnson A. Validating behavioral sampling techniques for lame sows administered flunixin meglumine and meloxicam. Livest. Sci. 2016;191:103–7.

Positive Pig Handling

Tom Guthrie, MSU Extension Pork Educator
Dr. Madonna Gemus Benjamin, MSU Extension Swine Veterinarian
Beth Ferry, MSU Extension Pork Educator

There are several considerations that should be taken into account when handling pigs. These considerations can be broken down into three basic categories that include the following: 1) The Pigs, 2) Role of the Handler and 3) Tools and Techniques. A good understanding of each of these categories will aid in the efficiency of moving pigs and ultimately making it a positive experience not only for the pigs but the handler as well.

The Pigs

Use What You Know About Pigs. Pigs are herd animals and will use hearing and sight to keep track of handlers. When considering sight, pigs have poor depth perception and are sensitive to contrasts. This means that pigs may stop at a 90 degree turn and/or it may pigs a few seconds to figure out a new flooring surface. Below is a list of what a few pig behaviors that are important for the handler to understand when handling pigs.

What Common Pig Behaviors Mean:

Squealing = Sounding the alarm

Bunching = Seeking the safety of the herd

Jumping = Trying to escape

Circling back = Returning to safety

Pointing ear = Focusing attention

Changing body position = Tracking, telegraphing next move

The Handler

The role of the handler can and in many cases may dictate the behavior reactions exhibited from the pigs they are handling. It is extremely important for the handler to have a positive attitude. Along with a positive attitude, a well thought out plan of action and route to move pigs as well as exceptional communication with all team members that are assisting with handling pigs will be paramount for success.

Tools and Techniques

A sorting board is more than likely the most effective tool when handling pigs. The sorting board is not only an efficient tool when sorting and moving pigs but may also serve as a Personal Protective Equipment providing a barrier between the handler and the pigs. A rattle paddle is a very good tool for providing and releasing pressure especially for small pigs that tend to keep in a group and have a wide flight or bubble zone. Shake the paddle to initiate pressure and once there is flow eliminate the shaking and keep the paddle near your side until pressure is needed.

One simple technique that may be considered is using a preload pen. This pen is a designated pen close to the door of the loading ramp used for market hogs. The preload pen serves three purposes. First, for the pig, as it allows them the ability to take a quick rest after being sorted and walking down the alleyway, get a drink if needed and/or explore a new environment before being loaded onto the truck. The second purpose is aimed at the handler(s). Handlers will have the opportunity to evaluate the overall condition of the pig, therefore, providing the handler a chance to make a decision whether or not the pig should be loaded onto the truck. Third, the preload pen is close to the truck, allowing the handler to position and initiate flow onto the truck by using and releasing pressure.

Michigan State University Extension Pork Team members have developed a poster (as illustrated on the following page) that can be used for Positive Pig Handling training documentation as well as serving as a quick reminder of the key aspects of handling pigs. Interested producers can receive full size, color printed posters by contacting Dr. Madonna Gemus Benjamin, gemus@msu.edu.

Happy Handling!

Positive Pig Handling Rules

Understand Pigs

Use What You Know About Pigs.

Pigs are herd animals, so they:

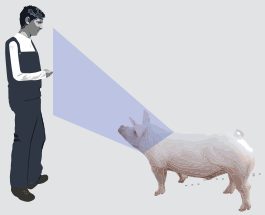
- Use hearing and sight to track handlers.
- Tracking behavior forms the bubble and flight zone.
- Try to rejoin the herd or stay in the pen when scared.

Pigs have poor depth perception, so they:

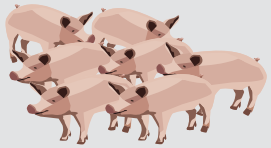
- Are sensitive to contrasts in flooring and lighting.
- Will stop at blind turns.

What Common Pig Behaviors Mean:

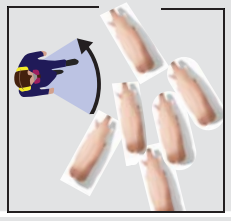
- Squealing = Sounding the alarm
- Bunching = Seeking the safety of the herd
- Jumping = Trying to escape
- Circling back = Returning to safety
- Pointing ear = Focusing attention
- Changing body position = Tracking, telegraphing next move



Pigs use hearing and sight to track handlers.



Bunching and jumping are signs of stress in pigs.



Use the position of the "handler's bubble" to direct pigs' flow (movement patterns).

Last date reviewed: _____

Understand Your Positive Role

Prepare.

- Plan your movements.
- Tell all handlers what you want to get done.
- Remove distractions where possible.

Your attitude affects your approach.

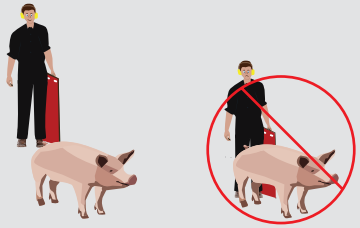
- Stay calm and patient.
- Be observant.
- Be safe.
- Wear protective clothing (nonslip footwear, and long sleeves and pants) and gear (ear protection and respirator).

Watch the pigs.

- Go slow when doing anything new.
- Predict the pigs' next move.
- Position or reposition yourself in response to pig behavior.
- Look for signs of stress in pigs and handlers.
- Take a break if you (or the pigs or another handler) are losing your cool.

Don't use an electric prod:

- On suckling or weaned pigs.
- To move pigs out of a pen.
- As a primary tool for moving animals.
- On more than 25% of pigs being moved.
- On sensitive areas (such as eyes, ears, nose, rectum) of animals.



Stay calm and patient — don't tailgate.

Use the "apply pressure and release" technique.

Understand Positive Tools & Techniques

Equipment

- A handling board applies pressure and visually blocks the pigs' path.
- A rattle paddle makes sound, extends the reach of the handler and applies pressure.
- Handling boards and rattle paddles are NOT weapons.

Facilities

- Keep pens, gates and loading ramps free of sharp objects.
- Make sure flooring has good traction.
- Provide even lighting, without deep shadows or bright spots.
- Avoid "pinch points" in pig paths.
- Use preload pens to give sorted pigs a new pen before loading.

Handling Tips & Tricks

- Get pigs started by applying pressure, keep them moving by releasing it.
- Direct pigs' movement using the position of the "handler's bubble."
- Control the second pig from the front.
- Use a cart or sled to move hurt or sick pigs.
- Understand that outside temperatures can affect flow (movement patterns).
- Watch the low-stress pig handling videos at *http://manitobapork.com/manitobas-pork-industry/animal-care/pig-handling/.*

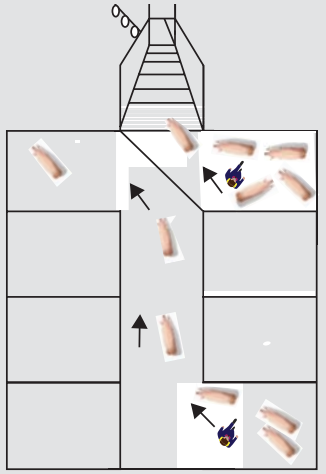


Diagram of a "preload pen" that gives sorted pigs a place to drink and a new environment to explore while sorting continues.

MICHIGAN STATE UNIVERSITY | Extension

E3351 Coordinated by Madonna Gemus Benjamin, DVM, Extension swine specialist, MSU Extension; Beth Ferry, Extension pork educator, MSU Extension; and Thomas Guthrie, Extension pork and equine educator, MSU Extension. Funding was provided in part by the Michigan Pork Producers Association. Produced by ANR Creative for MSU Extension (http://msue.anr.msu.edu).

Announcing MSUE Pork Team Statewide Winter and Spring Programs!

Come join the MSUE Pork Team to learn further how to improve your performance, your business and ultimately your bottom line. For further details and information relating to the pork industry, check out our website at: msue.anr.msu.edu/topic/info/pork

2017 MSUE Pork Team Spring Road Show (March)

Co-sponsor: Michigan Pork Producers Association

Locations:

Mount Pleasant, MI; Date – TBD
Coldwater, MI; Date - TBD
Cassopolis, MI; Date - TBD

Program:

Michigan EnviroImpact Tool
Shelby Burlew, MSU Extension Livestock Environmental Educator

Influenza – You and the people who take care of your hogs
Dr. Madonna Gemus-Benjamin, MSU Extension Swine Veterinarian

Respirator Protection – Do I need it? Does it fit?

While OSHAs Hazard Communication (HazCom) Standard and EPAs Worker Protection Standard (WPS) are not 'new' to the agriculture industry, recent changes to HazCom and the WPS have resulted in conflicting directives leading to uncertainty as to how to best maintain compliance.

Dr. Melissa May, Associate Professor of Medicine, College of Human Medicine

SOPs – Want some?

The goal of this presentation is to work with Michigan producers to show how the PQA V3 site assessment can help to prepare producers for the CSIA. We will conduct mock audits and share templates of necessary protocols in order to assist swine producers to prepare and complete the CSIA successfully.

Beth Ferry, MSU Extension Pork Educator

Cleaning the Ventilation System
Dr. Dale Rozeboom, Professor and MSU Extension Specialists

Industry Quality Assurance Programs

PQA V3 Site Assessment – A valuable tool in training for your Common Swine Industry Audit.

Dr. Madonna Gemus-Benjamin, MSU Extension Swine Veterinarian

In October 2014, the National Pork Board officially announced a new Common Swine Industry Audit (CSIA) platform for pork producers, packers and processors and certified by the Professional Animal Auditor Certification Organization (PAACO). Within a few months trained third party PAACO-CSIA auditors will be conducting audits on Michigan swine farms. The goal of this presentation is to work with Michigan producers to show how the PQA V3 site assessment can help to prepare producers for the CSIA. We will conduct mock audits and share templates of necessary protocols in order to assist swine producers to prepare and complete the CSIA successfully.

Transport Quality Assurance ... Cost: $20/pp
Pork Quality Assurance Plus ... Cost: $20/pp
(Common Swine Industry Audit)

Locations;

Mount Pleasant, MI; Date – TBD
Coldwater, MI; Date - TBD
Cassopolis, MI; Date - TBD

2017 Green and White Education Fair and Show

January 27- 29, 2017

Location: Pavilion for Livestock and Agriculture Education, MSU, East Lansing, MI.

This day long event for Youth will feature; • Pig Farming Scenario Contest • Swine Skillathon • Promotional or Educational Power-point Contest • Pork Judging Contest at the MSU Meats Lab • Scholarship Contest • Showmanship Clinic and • Market Hog Show

For more information, please visit: msue.anr.msu.edu/

2017 Professional Pork Producers Symposium

Co-sponsors: Michigan Pork Producers Association

February 16, 2017, The Lansing Center, Lansing, MI

All comments and suggestions should be directed to the:

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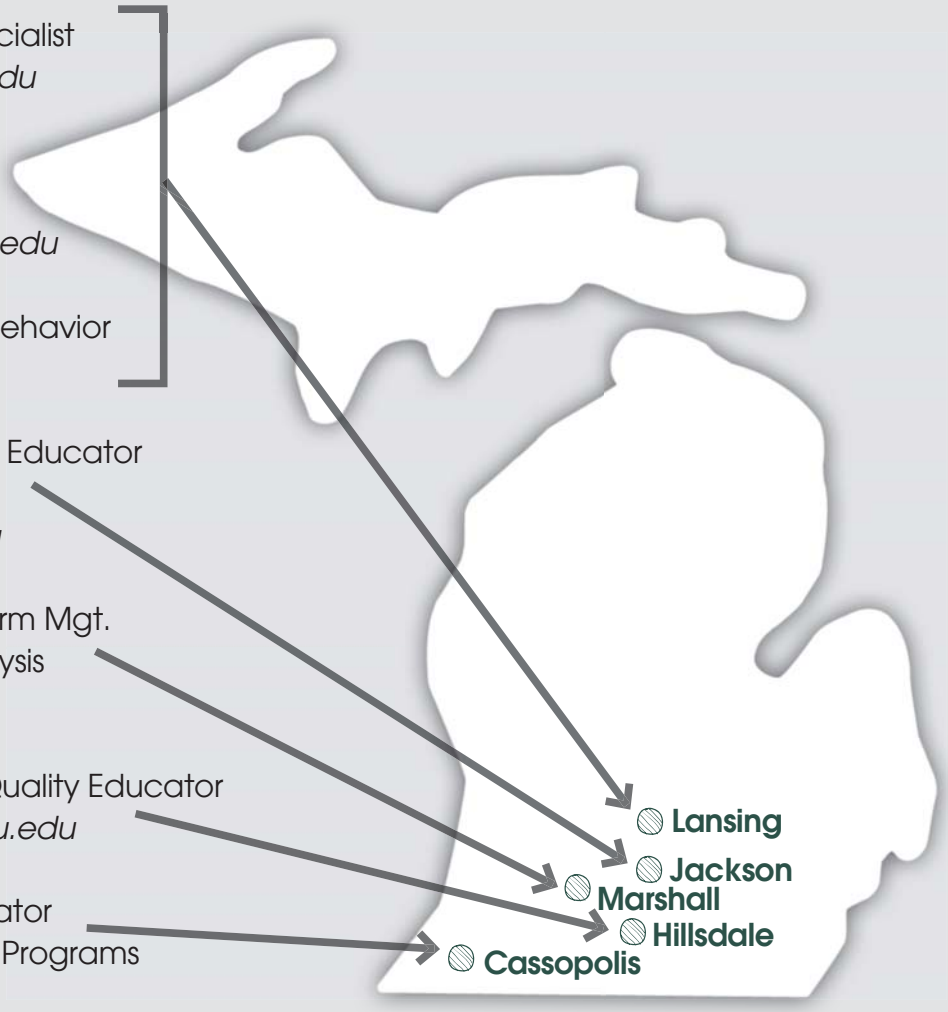

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