

Swine Health

Beth Ferry

MSU Extension Pork Educator



What Affects Pig Health?

Resources

- Environment
- Nutrition

Management

- Animal Care



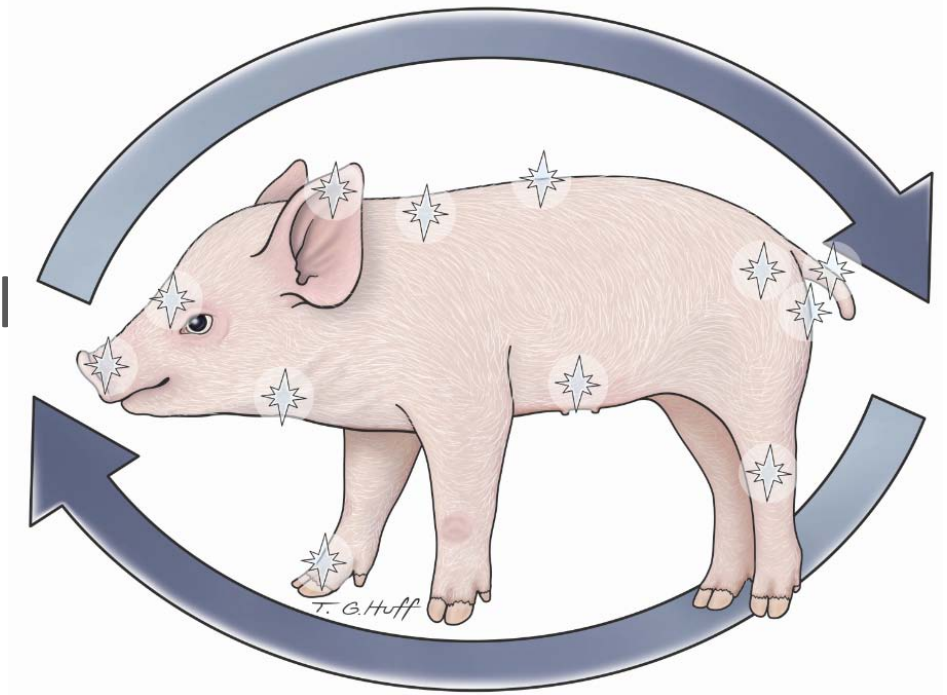
What is your job?

- Good Observation
 - Key to managing health, production and animal behavior
 - Most be done EVERYDAY!
- One of the hardest thing to do well
- Who do you talk to when something is wrong



Things to look for!

- Is your pig getting up
- Does your pig eat
- How does your pig move
- What does the hair coat look like
- Check the eyes, ears and nose of the pig



What are Major Diseases in the Pork Industry?

- **PRRS** – Porcine Respiratory Reproductive Syndrome
- **PEDv** – Porcine Epidemic Diarrhea Virus
- **SIV** – Swine Influenza Virus



PRRS

- Was found in the 1980s and originally called Mystery Swine Disease
- Also called blue ear pig disease
- Officially named in 1991
- Affects the macrophages – “disease fighters”
- Makes pigs get sick easier
- Many different PRRS strain identified



What does PRRS Do?

- Piglets
 - More diarrhea.
 - Less viable piglets.
 - Increase in respiratory infections
- Growing pigs
 - Go off feed
 - Mild coughing.
 - Hairy wasting pigs.
 - In some herds there are no symptoms
- Sows
 - Go off feed
 - A reluctance to drink.
 - No milk and mastitis - significant symptoms.
 - High rate of abortions.
 - Farrowings are often 2-3 days early.
 - Respiratory/breathing issues.
 - Mummified piglets. 10-15% may die in the last 3-4 weeks of pregnancy.
 - Stillbirth levels increase up to 30%.
 - Very weak piglets at birth.





What should show pig people do?

- Minimal PRRS virus signs in exhibition pigs
- Michigan is a PRRS “light” state
 - We have PRRS on our farms
 - Most strains do not cause many issues
- Vaccines available – this should happen at the sow farm
- Estimated to cost the US pork industry is over 6 million dollars a year.
 - \$12 to \$15 per pig marketed



PEDv

- New disease to the United States – found April 2013
- Causes severe watery diarrhea in pigs and vomiting.
- The first strain of PED virus found in the United States is 99% homologous (similar) to the Asian strain which remains virulent.
- At this time multiple strains are suspected in the US



What does PEDv do to pigs?

- Cause increased vomiting and diarrhea in pigs
- Death is caused by dehydration
- Piglets
 - Mortality in piglets is high (up to 80%) due to dehydration
- Sows
 - Mortality in sows is lower, diarrhea present
- Growing pigs
 - Clinical signs of fever, vomiting and diarrhea
 - Increased mortality but not significant like in suckling pigs



Is PEDv in Michigan?

- Yes!!!
- First found in the summer 2013
- Wide spread this winter
- Initially thought to spread via trucks and trailers, manure and other pigs
 - Possible aerosol transmission
 - Possible feed contamination



Still lots of questions regarding PEDv out there, no good answers!



What should show pig people do?

- There is no treatment NOR effective vaccine available for PED
- Focus should be made on prevention and control = BIOSECURITY!
- Minimal contact with other pigs/areas with pigs
- PED and TGE mimic each other in clinical signs and a true diagnosis of PED will require sampling and testing
- Contact your veterinarian if you see signs of PEDv



PED – Don't bring it home

Porcine Epidemic Diarrhea Virus is a threat to herd health

PED is a virus that can be easily spread to your swine herd. Proper precautions and biosecurity methods should be in place to help protect your animals from this detrimental virus. If you suspect that your herd has been exposed to this virus, please call your veterinarian immediately.



After visiting an area with comingled pigs, change your footwear (boots or boot covers) before getting in your truck.



Have signage on your farm to limit visits from unknown guests. Post a contact number.



Washing hands before and after contact with animals will decrease the spread of disease.



Have designated clothing for each pig barn.



Clean trailers, boots and equipment and use effective disinfectants such as Clorox in a 1:32 ratio.



Have a separate isolation area for all incoming animals on your farm. House them separately for at least 28 days.



Use an off-site vehicle wash, being sure to clean tires and truck mats, after visiting an area with pigs from other farms.



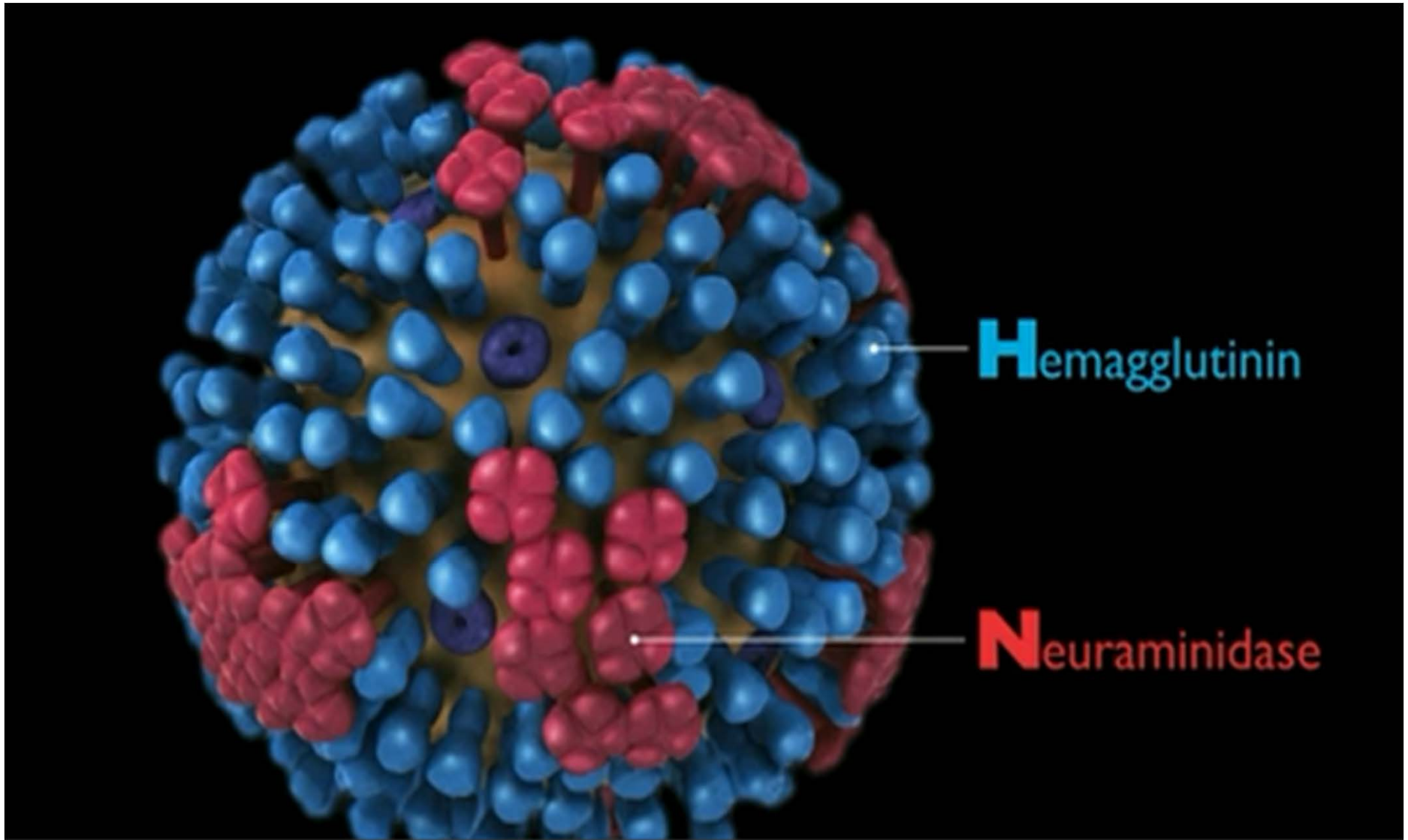
Use an off-site vehicle wash, being sure to clean tires and truck mats, after visiting an area with pigs from other farms.

For more information on this or other herd health concerns please contact a Michigan State University Extension county office or call 888-MSUE4MI (888-678-3464) to locate an expert in your area.

SIV

- Influenza is a virus that acts like a common cold in pig
- Various different strains are present
- Some strains are zoonotic – can be transferred from animals to humans
- In 2009, 2012 and 2013 we saw zoonotic strains of SIV in human and pig populations





Hemagglutinin

Neuraminidase





Classical hypothesis

The pig as intermediate host for avian influenza viruses and “mixing vessel” for potentially pandemic reassortants?





What does SIV do to pigs?

- Happens most often during low immunity or high stress
 - Transport
 - Commingling of pigs
- **Off – feed events**
- **Fever**
- Dry (Bark) Coughing





Swine Influenza Virus (SIV) Infected Lung
Source: Pathology lecture (4th year vet students), contributed by Pat Halbur.



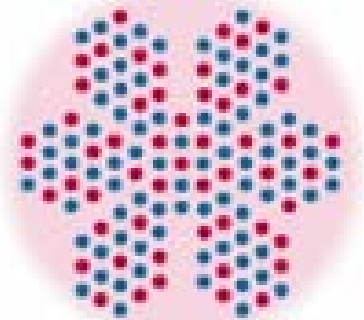
What should show pig people do?

- Treatment of symptoms, not viruses
 - Pain, fever
- Vaccination program
 - 2 dose vaccine available
 - First dose around 21 days of age, second dose 3 to 4 weeks later
 - Will not eliminate all SIV strains but will decrease symptoms
 - Helps protect pigs and people – reduction of clinical signs

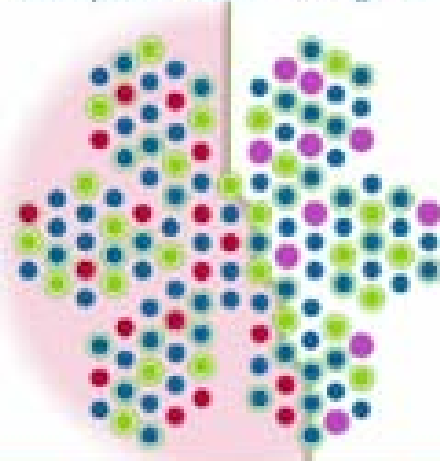


http://www.youtube.com/watch?v=rAGHXMq9ttw&feature=player_embedded

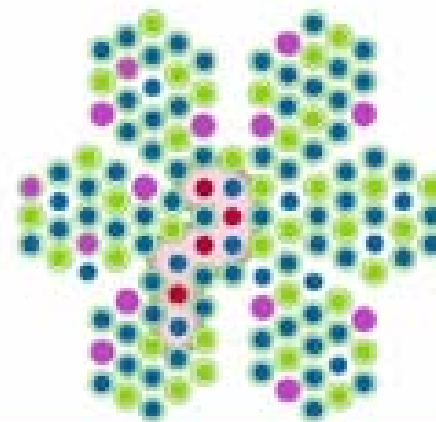
Assumption 1: Spread of the disease in a naive population



Assumption 2: Vaccine coverage 50%



Assumption 3: Vaccine coverage 80%





WORLD LEADING
NOMINEE



www.facebook.com/evanmiller

Testing for different diseases



Prevention

- Biosecurity practices
 - Keep pigs separated from avian species
 - Isolate new pigs from the rest of the herd before we introduce them into the new herd
 - Use clean and disinfected trucks and trailers to transport pigs
 - Change boots and clothes when you come into contact with other pigs
 - Practice good hygiene – wash you hands!







Final Thoughts!

- Remember as a youth pork producer it is your responsibility to protect the health of your pigs and the people that come into contact with pigs!



Questions!

