

us it remains critical for everybody connected to the hog industry to be vigilante and help prevent the spread of the PED virus---BIOSECURITY.

Over the last 11 months several veterinary diagnostic labs in Canada have developed expertise to rapidly identify coronaviruses (PEDv, TGEv, and delta corona virus) from samples submitted for testing. This gives our industry an improved ability to respond to questions and concerns regarding contamination and infections. We now know that there may be three similar corona viruses involved in what we typically call a PED break; the majority of PED cases reported are due to infection with the classical virus which was first identified in the US and Canada. However, two less common strains of corona virus which cause milder diarrheas in the piglets have been identified as well; delta corona virus and the "Ohio" strain of the classical virus. Immunity to one strain of these viruses may not give protection to the other strains of coronaviruses and therefore farms do risk re-infection. There is no doubt that keeping farms clean and free of all these viruses is to your advantage--BIOSECURITY

"The most significant risk for pork producers remains transportation"

Over the last 11 months we have learned that positive PED sites can be cleaned up successfully and restocked with negative pigs. Sanitation/ disinfection protocols developed for nursery and finisher barns have resulted in these individual units being able to return to full production after being emptied, washed, disinfected, and dried thoroughly. Sow barns and farrow-to-finish facilities have been more challenging to decontaminate successfully although expertise in managing and understanding PED virus infections has improved to the point where some of the sow units are getting close to reporting they have returned to negative status. While it may become technically possible to convert a PED positive farrow-to-finish unit to PED negative status, the costs associated with this is significant and negative farms should focus on maintaining their negative status--- for the farms it's STILL all about BIOSECURITY .

Improving Your Barn Environment

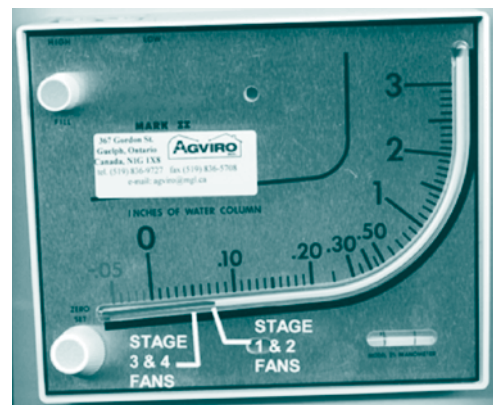
An Article from PorkInsight

MANURE MANAGEMENT

- 1) Repair and replace penning, flooring, etc. which causes spilled water, or manure and urine to lie on floors and alleyways. This raises ammonia and humidity levels in the winter and reduces the room temperature, as it takes energy to evaporate this liquid.
- 2) Check slats and penning support ledges for locations where manure can build-up. This provides a haven for flies and causes similar problems to 1) above.
- 3) Never allow manure to build up closer than 12" to the bottom of the slats. Gas begins to enter the confinement area and can effect performance if manure builds up beyond this level.
- 4) Check for leaks through manure pump out ports, under manure pit dividers, etc. Air entering rooms this way increases gas production from the manure and can cause extreme health problems.
- 5) Flush manure from gravity flow pits within 15-20 days maximum. Recharge the pits with a few inches of fresh/wash water to absorb ammonia and reduce potential for solids build up.
- 6) Ensure radiant heat lamps direct heat onto solid pads. Light passing through slats will heat the manure below and increase gas production.

VENTILATION

- 7) If there is a pit tube/duct ventilation system, be sure to check it periodically for solids/manure build-up.
- 8) Repair leaking waterers immediately. Keep replacements handy.
- 9) Verify adequate flow at water nipples to see if there are problems. Check during high flow



times. Since 70 % of water is consumed during feeding, morning or late afternoon is best. If some form of water based cooling is used, it will mean the heaviest load occurs during late afternoon; check when the cooling system is operating.

- 10) Ensure that the mechanical ventilation system is performing as required. Use a static pressure gauge to adjust air inlets; Set @ 0.04" in the summer, 0.08" in the winter.
- 11) Verify inlet openings are correct with a velocity meter such as the Dwyer High Air Speed Indicator.
- 12) Ensure inlets are of good quality and properly located to mix fresh air uniformly and reduce drafts.
- 13) Adjust minimum winter ventilation to achieve a relative humidity (RH) of 50-70% . Too high causes health problems from air-borne pathogens. Too low wastes increase heating costs and can also cause health problems. An inexpensive digital relative humidity instrument is a good device for checking relative humidity as well as temperature.
- 14) Verify heaters, fans/shutters and controls are all maintained.
- 15) If air is drawn in from the attic in summer, ensure temperature rise is less than 1.5 °C. Exterior roof sheathing should be white, or a layer of insulation on the underside of the roof will also help to reduce solar heat gain.

(Improving Your Barn...Continued on page 12)

Personal Profiles

Megan Strawford


Megan's career in agriculture began in 1999, when she enrolled in the College of Agriculture at the University of Saskatchewan. The final summer before she graduated, Megan got a job at a 600 sow farrow-to-finish farm, where she fell in love with pigs. After completing her Bachelor of Science degree, Megan was invited by

Dr. Harold Gonyou to work as a summer student for the Ethology Program at the Prairie Swine Centre. In September 2003, Megan began working on her Masters degree in Applied Ethology under the supervision of Dr. Gonyou. Megan's thesis topic was "Social Factors that Affect the Behaviour and Productivity of Gestating Sows in an Electronic Sow Feeding System". While completing her Masters, Megan began working part-time for the Contract Research program at the Prairie Swine Centre and upon completing her Masters in February 2006, continued to

happily work as the Assistant Manager of the Contract Research program. In November 2008 Megan said farewell to her beloved pigs to assume the role of Project Manager for Drs. Trevor Crowe, Hank Classen and Phyllis Shand poultry transportation research group. This venture into uncharted territory not only taught Megan all about chickens and turkeys, the collaborative approach introduced her to the fields of agricultural engineering and meat science. Despite their charm, chickens and turkeys could never replace her one true love, pigs, so in September 2014, Megan flew the coop and came to once again roost at the Prairie Swine Centre in the newly created position of Research Coordinator and Manager of Contract Research Services. 



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- 16) Check and maintain insulation levels. It not only reduces heat load on the building, it reduces the thermal environment effects due to reduced radiation (winter) and excessive radiation (summer).
- 17) Consider some form of cooling appropriate to the type of production room; spray cooling, evaporative cooling pads, stirring fans, tunnel ventilation, earth tube cooling, etc. A 3-7 °C cooling benefit with a resulting improved feed consumption is achievable.
- 18) Monitor temperature with a good quality digital maximum/minimum thermometer in every room. Older style mercury thermometers do not respond quickly enough.
- 19) Ensure pigs receive adequate light for at least 10 h/d (Recommended Code of Practice for the Care and Handling of Farm Animals (Pigs)). Use fluorescent tube fixtures or high intensity discharge (HID) to achieve this economically. Paint walls and ceilings white. Keep surfaces and lighting fixtures clean to ensure maximum reflectivity.
- 20) Consider the installation of windows to improve the environment for management. They add very little to heat load and can provide a psychological lift.
- 21) Install a good quality alarm system. It should be independent of controls, be battery backed up and lightning protected, and managed so that response to alarm is less than 15 minutes. A back up generator or other emergency contingency plan should be well formulated in advance to reduce potential for animal suffering and loss. It should operate off all minimum ventilation fans and hi/low temperature in each room.
- 22) Conduct a "Barn Health Audit" on the manure, ventilation, and lighting systems at least every spring and fall. Consider having independent experts out to conduct the audit for you. 

MISCELLANEOUS

Coming Events

PSC Producer Meeting

March 24, 2015
Swift Current, Saskatchewan

PSC Producer Meeting

March 26, 2015
Lethbridge, Alberta

PSC Producer Meeting

March 27, 2015
Red Deer, Alberta

2015 LivestockCare Conference

March 26-27, 2015
Calgary, Alberta

London Swine Conference

April 1-2, 2015
London, Ontario

PSC Producer Meeting

April 22, 2015
Niverville, Manitoba

PSC Producer Meeting

April 23, 2015
Portage la Prairie, Manitoba

World Pork Expo

June 3-5, 2015
Des Moines, Iowa



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