



Four Star Veterinary Service LLC

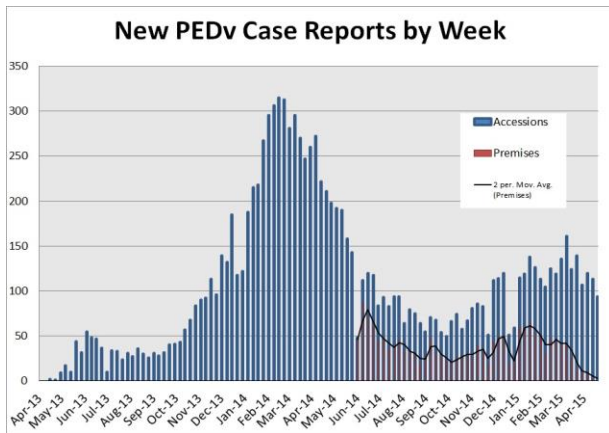
Spring/Summer 2015 Newsletter

Swine Enteric Coronaviruses

It has been said that “the only thing constant in life is change”. As an agricultural industry, farmers are very well aware of this; it’s just how significant that change affects your bottom line. Many of these changes, such as weather, market prices, and disease introductions are out of our hands.

I hope that your spring planting season has found everyone well. So, you might ask what happened to Swine Enteric Coronaviruses this past winter compared to winter 2013.

Fortunately, PEDv infections were down from last winter.



Graph courtesy of AASV.org website

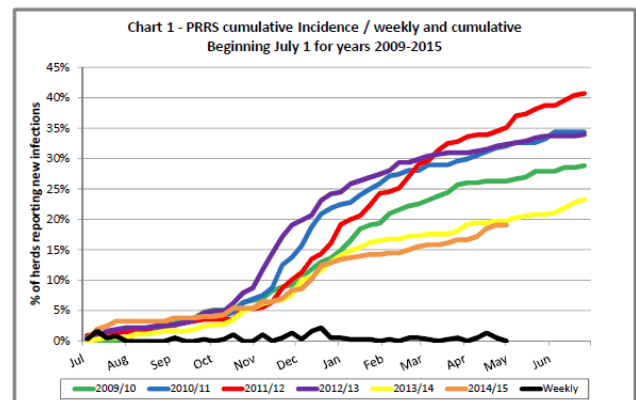
A combination of factors may be attributed to this decrease in cases. The increase in biosecurity efforts, such as a greater focus on livestock trailer washing, disinfection and drying, the introduction of conditionally licensed PEDv vaccines, and weather conditions to name a few. However, this does not diminish the fact that it is still a major threat to the swine herds.

Since the original PEDv case in April 2013, a variant strain was identified. This variant strain has been described globally, and may correlate with a less severe clinical presentation of PEDv. This variant strain was first detected in June 2013. In February 2014, the University of Minnesota sequenced the entire viral genetic material instead of one gene to

determine the variability. Currently, three naturally occurring US PEDv strains have been identified. This does not include the Swine Delta Coronavirus, which was reported in late 2013, early 2014.

Porcine Reproductive and Respiratory Syndrome (PRRSv)

Unfortunately, PRRSv has not followed the same trend as PEDv this past winter. PRRSv continues to be one of the main threats to the swine industry, and economically devastating. PRRS was first reported as “mystery swine disease” in the mid-1980s. This January and again mid-April, western Ohio sow units were hit with a 1-7-4 strain. The effects varied slightly depending on previous PRRSv history, and vaccination strategies. Current work is being done to compare these differences among the herds. Producers worked with their veterinarian on a plan for herd stability, which all included a load, close, homogenize strategy. In general, this strain of PRRSv has been associated with significant late term abortion losses, and sow deaths.



If you notice sows off feed, have a fever or cough, and/or increase in abortions, please contact your Four Star veterinarian.

Do not forget, the same applies to grow/finish hogs. PRRSv causes significant respiratory signs in this age pig. It is critical to determine cause to minimize

disease spread and update your neighbors on status of barns in the area.

Avian Influenza

Why are we talking about avian influenza in a swine newsletter? It is important to know the effect that avian influenza may have on other species.

Recently in December 2014 and early January 2015, “USDA has confirmed several cases of highly pathogenic avian influenza (HPAI) H5 in the Pacific, Central, and Mississippi flyways (migratory bird paths). The Centers for Disease Control and Prevention considers the risk to people from these HPAI H5 to be low.” Currently, no human cases of these HPAI H5 have been reported. Additionally, avian influenza does not present a food safety risk; poultry and eggs are safe to eat.

Currently, no reports of HPAI in Ohio; however, May 2015 the first case of HPAI H5N8 was reported in a hobby flock in Indiana that contained 77 birds of various species, including ducks, geese, chickens, and turkeys. In a rapid response effort, all of the birds were removed to ensure no ongoing risk of disease spread.

The USDA is heavily involved in the decrease in spread of this avian influenza. So, what is the risk to the swine industry? It appears that the H5 strains are very well adapted to the avian species at this time and pigs show little affect from these strains. However, pigs can become infected with the H5 strains and even if low clinical signs, can this cause assortment. Therefore, biosecurity is a major key to clean up and minimizing spread and should not be taken for granted. The main influenza viruses circulating in US pig populations in recent years are H1N1, H1N2, and H3N2.

For the most up to date information visit:
<http://www.usda.gov>

Fly and Rodent Control

Fly season has made its appearance. What can be done to control flies and rodents? Flies and rodents, first of all, are pests; can cause damage to your barn, increasing the need for repairs, and also cause irritation to the swine. Furthermore, both flies and rodents can transmit diseases, by being a mechanical vector. A mechanical vector is a living organism that transmits an infectious agent via physical contact from an infected animal to a susceptible animal. In this article, I will focus on flies. Eleven different kinds of flies are common around swine facilities and they come from different places. Below is a chart to summarize these differences.

Swine barn flies and their sources

| Ecological group | Common name | Manure storage systems | | | Pens, barnyards | | | Aquatic wetlands | |
|----------------------|-------------------------|--------------------------|-------------------------------|---------------|-----------------|-------------------|--------------|--------------------------|--------|
| | | Pit solids (above water) | Lagoon edges, floating solids | Liquid manure | Manure, bedding | Wet, rotting feed | Dead animals | Flood basins, containers | Swamps |
| Small filth flies | Moth flies, "gnats" | + | + | | + | | | | |
| | Fruit flies | + | | | | + | | | |
| Large filth flies | House fly | + | + | | + | + | | | |
| | Garbage flies | + | + | | + | + | | | |
| | Stable fly | | + | | + | | | | |
| | Rat-tailed maggot | | + | + | | | | | |
| | Blow flies | | | | | + | + | | |
| Aquatic biting flies | Mosquitoes | | | | | | | + | + |
| | Horse flies, deer flies | | | | | | | | + |
| | Biting midges | | | | | | | | + |
| | Blackflies | | | | | | | | + |

Graph courtesy of Roger Moon, UMN

Small filth flies develop in manure storage systems, soiled bedding, and moist, fermenting animal feed, they can be managed through source reduction in manure pit. At cleanout, power wash under feeders and along pig walls to remove debris, then agitate to break up solids before pumping out.

Large filth flies can spread pathogens, such as PRRSv. It has been shown Schurrer et al. 2004, that house flies can spread PRRS virus more than 1 mile

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from the source. These flies are managed through source reduction, exclusion, and premise sprays.

Mosquitos can cause “bug bites” that some packers must trim if severe enough. Mosquito control includes disposing of containers that hold water, grade property to prevent standing water, therefore dispersing rainwater and mow grass areas to keep vegetation short.

There are many on-animal sprays, larvicides, and barn sprays available. Additionally, many manure pile treatment plans are available to help with fly control. These are not the only options as stated above, cleanliness, control of feed spills, and compost pit management are other very important measures that must be taken.

Contact your Four Star Veterinarian to discuss control programs.

Seasonal Concerns (Summer)

Summer heat brings on additional stress for pigs and therefore, we do tend to see an increase in some diseases over the summer months. Two of these being *Lawsonia intracellularis* (Ileitis) and Hemorrhagic Bowel Syndrome (HBS) and you should consider visiting with your veterinarian to make sure that appropriate programs are in place to help combat these issues. Both of these can cause sudden death and can be confused without proper diagnostics.

Lawsonia intracellularis (Ileitis): is a bacterium that infects the intestine and causes a dark tarry diarrhea and in acute outbreaks causes death. There are many feed medication programs and vaccinations available to control this. If you are pulsing feed medications in your finishers, the timing of these medications are very important.

Hemorrhagic Bowel Syndrome (HBS): is a syndrome and cause is not completely understood. It appears that it is a multi-factorial syndrome, meaning that many factors affect the outbreak of HBS. HBS results in sudden death with blood filled intestines and they may be twisted. Factors include, but not limited to; on and off feed events, increase in clostridium organism in the intestine, and genetics. There are several options for control of this, including acidification of water, oregano, and Skycis.

Product Update

There are some new products in both the antibiotic and vaccines line for swine. We will target a few every newsletter and please let our offices know if you would like any additional information.

Skycis (Narasin)



Skycis is a feed grade product and is used only in animals. Skycis is an ionophore, which belongs to a specific class of antibiotics developed exclusively for use in animals. They are useful because they contribute to a safe food supply, and ensure animals receive treatment when needed. Ionophores create a more efficient balance of bacteria in the pig’s hindgut, delivering consistent improvement in growth and performance. They decrease bacteria that produce acetic and butyric acid while increasing bacteria that produce propionic acid. Propionate is a more energy-efficient fuel source; therefore can improve feed efficiency, increase gain and increase energy available for growth. There is zero day slaughter withdrawal. However, swine being fed with Skycis should not have access to feeds or water

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Offices located in Indiana, Michigan, Ohio, and Pennsylvania

containing tiamulin (Denegard) as adverse reactions may occur.

Fostera PRRS



As of January 2015, Fostera PRRS received an additional claim for reproduction to help protect every stage of swine production. Fostera PRRS is a modified live virus vaccine and is labeled for whole herd protection against both respiratory and reproductive forms of disease caused by porcine reproductive and respiratory syndrome (PRRS) virus. It is labeled for the aid in preventing reproductive disease with a duration of immunity of at least 19 weeks; and aid in preventing respiratory disease with a duration of immunity of at least 26 weeks. The new respiratory claim allows for vaccination of pigs one day of age or older for the respiratory form of the disease. Withdrawal time is 21 days after last vaccination.

Baytril (Enrofloxacin)



Baytril 100 is a commonly used antibiotic and is labeled for both cattle and swine. The swine label has recently changed to include coverage for some additional pathogens. For swine, administer by intramuscular or subcutaneous (behind the ear) injection of 3.4 cc/100 pounds. The administered

dose volume should not exceed 5 cc per injection site. Baytril is indicated for the treatment and control of swine respiratory disease (SRD) associated with *Actinobacillus pleuropneumoniae*, *Pasteurella multocida*, *Haemophilus parasuis*, *Streptococcus suis*, *Bordetella bronchiseptica*, and *Mycoplasma hyopneumoniae*. Baytril is indicated for the control of colibacillosis in groups or pens of weaned pigs where colibacillosis associated with *Escherichia coli* has been diagnosed. This is a prescription antibiotic and must be used according to label. The slaughter withdrawal time for swine is 5 days.

Happy Summer!

To our clients and their families:

Spring/Summer has finally arrived and we hope that you have been successful getting the crops in the ground. Please take time to be with your family and friends during the nice weather. We truly appreciate your continued support and look forward to helping you in the future.

Happy summer!



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