



Carthage Corner

May, 2006 Quarterly Newsletter

Contents:

A note from:



Joseph Connor
DVM, MS
Carthage Veterinary
Service, Ltd.

&

Elanco Products

Important Industry Dates:

World Pork Expo
Iowa State Fairgrounds
June 8-10, 2006

Carthage Veterinary
Service, Ltd. Annual
Swine Conference
August 29, 2006

Carthage Veterinary
Service, Ltd.
PO Box 220
Carthage, IL 62321

217-357-2811
www.hogvet.com
www.psmswine.com

It is a great time of the year to be communicating through Carthage Corner. With each new season comes new challenges, new optimism, and reality of hard work to achieve the results that optimism gives. This area of Illinois received much needed rain. We are not yet replenished but will certainly have sufficient moisture to get the corn off to a good start.

In this newsletter I want to discuss PMWS. This syndrome created a lot of international and domestic discussion at our most recent American Association of Swine Veterinarians meeting in Kansas City. Recent field reports of 35 to 50% of mortality not only on individual groups of pigs but successive weekly groups as well catch your attention.

PMWS is acronym that stands for Porcine Multisystemic Wasting Syndrome. This syndrome was first recognized in Canada in 1995. Circovirus or PCV2 (Porcine Circovirus Type 2) has been considered as a cause of PMWS. However, the industry is still trying to clearly identify how this agent is involved, is this the only agent involved, and what triggers this agent to be active in individual herds or groups of pigs.

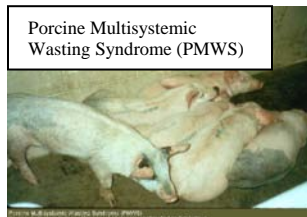
Even though PCV2 (Porcine Circovirus Type 2) is thought to be a leading cause of this syndrome, it remains perplexing for numerous reasons.

1. (Based on serological surveys) All herds are PCV2 positive.
2. Many herds that are historically PCV2 positive suddenly start developing this syndrome which raises the question as to what has changed.
3. Herds typically need coinfection agents such as PRRS, SIV, and mycoplasma.

The syndrome spread across Europe during the period 2002-2005. Most of the veterinarians that I communicate with say that the producers have learned to live with the syndrome and in most cases are effectively controlling mortality and morbidity even though these parameters often do not return to the herd's original base line. Scrutinization of the syndrome intensified in 2005-2006 because of the sudden emergence in Canada. Sporadic episodes have also been reported in finishing populations in the United States. This syndrome catches our attention when individual populations have 35-50% mortality.

If PCV2 is the primary agent then it brings up the question as to what has changed. The Canadians have reported a mutation in the amino acid sequence (i.e. a different strain) as being a common finding in affected herds. However, challenge studies here in the U.S. have not substantiated this. It is hard to believe that individual herd management suddenly changes creating conditions that would be correct for expression of this virus. Researchers are using terminology such as viral uploading as a suggestion that the virus is present in pigs; but some other factors such as a co-infection or stress, are uploading this virus back into the circulatory system which is creating infective pressure resulting in the clinical syndrome.

The disease primarily affects pigs in the early finishing phase at 10-14 weeks of age. The typical PMWS affected pig suddenly starts losing weight and continues losing weight over a period of 2-4 weeks. These pigs have gross signs of weight loss, anemia, jaundice (yellow), discolored extremities (ears, tails, lower legs, and nose), and enlarged lymph nodes. Another gross sign that is generally thought to be part of the condition is PNDS (Porcine Nephropathy and Dermatitis Syndrome). These pigs have gross lesions of hemorrhage or discoloration of the skin. Almost 100% of pigs showing PNDS die. Surprisingly, the rest of the pigs in the population that do not show these gross clinical signs frequently recover and do well to slaughter. However, recently veterinarians have reported that on closer examination many of these supposedly recovered pigs have enlarged lymph nodes in various areas of their body. These pictures show you typical pigs that are affected with the syndrome.



As an industry, it would seem valuable that this be renamed to remove the name wasting syndrome.

Most extensive publications on managing this syndrome are from Europe. These are referred to as the Madec 20 points.

FARROWING

1. AIAO Management
 - a. Empty slurry pits
 - b. Clean and disinfect
2. Wash sows
 - a. Treat for parasites
3. Limit cross farrowing
 - a. Only where essential
 - b. Preferably between sows of the same parity
 - c. Deadline – 24 hours

NURSERY

4. Limit mixing multiple litters post-weaning
 - a. No more than 3 litters per pen
 - b. Solid pen divisions
5. AIAO Management
 - a. Empty slurry pit
 - b. Clean and disinfect
6. 3.48 sq. ft. per pig
7. Increased feeder space > 2.75 inches per pig
8. Improved air quality
9. Improved temperature control



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Training Toolboxes!



Educational CD-ROM's designed to train swine producers on various aspects that go into successful swine production and management.

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Swine language Audio CD's and booklet designed to allow English and Spanish employees to communicate with each other and be more productive.

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FINISHER

10. No mixing of nursery pigs at entry into finishing
11. AIAO Management
 - a. Empty slurry pits
 - b. Clean and disinfect
12. 7.92 sq. ft. per pig
13. Improved air quality
14. Improved temperature control
15. No re-mixing of finishing pigs

OTHER MEASURES

16. Appropriate vaccination program
17. Sensible flow within buildings – air and pigs
18. Maximize colostrum intakes
19. Strict hygiene at all interventions:
 - a. Teeth clipping
 - b. Tail docking
 - c. Notching
 - d. Castration
 - e. Injections, etc.
20. Early removal of sick pigs to a hospital pen or euthanize

It is fortunate these 20 management points should already be in place as part of best management practices. It is helpful to review the implementation of these practices and to consider other co-infections or stressors. In systems with ongoing mortality it is likely that the other co-infections will have to be more effectively managed until we understand how to manage PCV2 or identify other co-infections.

A vaccine for PCV2 has been available in Europe from Merial for approximately two years. This vaccine was recently introduced in Canada. A conditional licensed vaccine through Intervet is available on a limited basis in the U.S. Other biological companies are expected to have PCV2 vaccines on the market this summer. If PCV2 is the primary pathogen then it would be hopeful that a vaccine would be effective. Field studies will very quickly tell us whether this is correct or not. If additional agents are involved researchers will identify these and intervention steps be utilized.

As an industry we would hope to be able to prevent movement of this syndrome and causative agent much more effectively than we did when PRRS was first discovered. It behooves all of us to work very closely with veterinarians, diagnosticians, researchers, and epidemiologists to identify routes of introduction and preventive steps to prevent transmission. As an industry it is satisfying to see that we are much more open to combined approaches and I am sure that we will identify the cause and preventive measures.

Best Regards

Joseph F. Connor, DVM, MS

PROTECT YOUR INVESTMENT.



Pulmotil

Controls respiratory disease[†], resulting in:

- Reduced mortality¹
- Reduced medication costs²
- Heavier pigs*³

Recommendation

- Begin feeding about 7 days before anticipated disease outbreak
- Feed for a total of 21 days at 181-363g/ton

The label contains complete use information including cautions and warnings. Always read, understand, and follow the label and use directions.

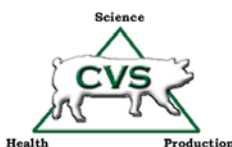
[†] Associated with *Actinobacillus pleuropneumoniae* and *Pasteurella multocida*.
^{*} As a result of respiratory disease control, Pulmotil-treated pigs are able to perform to their full genetic potential, thus gaining weight and utilizing feed as any normal, healthy animal would.

CAUTION: Federal law limits this drug to use under the professional supervision of a licensed veterinarian. Animal feed bearing or containing this veterinary feed directive drug shall be fed to animals only by or upon a lawful veterinary feed directive issued by a licensed veterinarian in the course of the veterinarian's professional practice.

1 Lehe, K. and Watkins, L. Case study: Effect of Pulmotil on mortality and growth in nursery pigs with clinical PRDC initiated by PRRSV. *Proc. AASV*, 2003.
 2 Langley, M. et al. Dose evaluation studies with Pulmotil (tilmicosin premix, Elanco) in the control of naturally occurring pneumonia in growing/fattening pigs. *Proc. 13th IPVS Congress*, 1994.
 3 Backstrom, L. and Olson, L. Efficacy of tilimicosin for control of swine atrophic rhinitis involving infection with toxigenic *Pasteurella multocida* type D. *Elanco*, 1999.

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