

## A Global Perspective on PCVAD

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Since PCVAD was first identified, different strategies have been used to try to control the disease and its effects, with variable levels of success. The control strategies that have been used can be classified in different groups: Management, Nutritional, Genetic, Therapeutic, Immunological, Bio-security. The reason to choose one strategy or another varies, and nearly all control programs include a combination of strategies. So far no single management strategy could claim control by itself but combinations of strategies appeared to help. Recently the use of vaccines against PCVAD look to be giving very good results and perhaps some of the discipline around management may begin to slip. Rather than repeat a lot of what is already known I want to focus on the effectiveness of three strategies that in my experience appear to help productivity the most and that as a production manager I would not want to lose having fought so hard to implement.

**20 Madec points:** It has been demonstrated in France (Madec et al. 1999, 2001) that management strategies can have a positive impact in controlling PCVAD. In essence they are the basics of pig management fully applied. They are based in strictly applying all in–all out (AI-AO), limiting stress as much as possible, reduced stocking densities and strict hygiene. It is suggested that at least 16 of the 20 points must be carried out to show a significant response. The challenge is in having sufficient fortitude and discipline to apply all these points, especially in big units, notwithstanding the difficulties reduction in post weaning mortality has been observed from 19 to 3.7%, from 12 to 3%, from 21.4 to 10.2% and from 20.3 to 5.8% (Madec et al 1999,2001).

Individual measures have not been found to be successful by themselves. A Danish study (Hassing 2003a) found that AI/AO did not reduce mortality in a statistically significant way.

Limiting of cross-fostering of pigs to the first 24 hours, thereafter to a bare minimum and restrict to the same parity range has been difficult to implement. However, once done correctly the evidence in favour can be overwhelming. From my own experience I found weaning weights on a 50 000 sows operation increase by 2lb in 10 months with subsequent improvements in liveability and feed conversion rates in the nursery. Additionally benefits can be found in the more precise management of sows by parity in the farrowing room especially when considering intervention to reduce still births, feeding and ease of management for staff.

**Batch farrowing:** Changing to a batch farrowing practice every 2,3,4 or even 5 weeks has proved to be successful for some farmers. The main impact of this technique is to allow farms to undertake advantageous management techniques for PCVAD which they would not otherwise be able to do (e.g. AI/AO, terminal disinfection, age segregation etc.). This system has plenty of advantages, from improved health to faster growth but it also has its disadvantages (difficulties in achieving mating targets, boar use if not using AI, etc) and might be difficult to implement in herds over 500 sows. There is a report from a 380 sow herd where after changing to batch farrowing and implementing hygiene procedures the post weaning mortality decreased from 23.6% to 5.3% (Dennis 2002). There is a farm where mortality was reduced from 18-20% to 6-8% when the farm was moved to a 3 weekly batch (Waddilove 2003). However other work shows that variation can be observed between batches. A farm that was moved to 3 week batch production, had batches with 9.8%, 9.7%, 8.8% mortality and others batches in between with 1.3% and 1.2% mortality (Marco 2003a). From a management perspective the additional benefits around the batch farrowing that can be considered to outweigh the disadvantages would be the efficient use of labour and materials, specialisation of staff, staff motivation and the ability to more effectively manage fostering, over farrowing and parity control.

**Wean to Finish:** Initially implemented as a way to reduce the stress of nursery to finisher movements it soon became apparent that the incentives for doing this are larger. In particular labor savings (sorting and handling pigs plus power washing rooms), enhanced performance of pigs (since there is one less move and group sorting), and lower trucking costs. Some typical results from the USA suggest 5 – 11 days quicker to market and 7 – 20lb improvement in finished weight (Dritz et al. 1998). Another advantage is flow. In reality you generate more growing space if you are comfortable with working the buildings all in all out if not the site. This is because during the 1<sup>st</sup> weeks you only use the hot buildings on a site and the cold are empty, this gives the opportunity to hold pigs from the previous group in the cold buildings until they reach market weight and so have the opportunity to eliminate pre-market animals from the mix. Wean to finish offers a viable alternative to the traditional nursery – finish systems more common in the Americas. The key advantages come in the use of labor, improved growth rates and lower use of resources in moving animals and cleaning buildings. In a world of ever increasing costs of fuel, environmental control costs etc. these advantages may become larger over time as compared to the traditional systems.

### Conclusions

Perhaps its common sense but if we give the pig the best start possible in the farrowing house and then provide a clean, stress free environment in which it can grow to its potential then we need do no more... perhaps! From experience if there is a silver lining to PCVD it is that it forces us to fully apply the basics of pig management.

### References:

- 1- Dennis I. 2002. Experiences in the management of PMWS on a farm in East Anglia. *The Pig Journal* 49:103-109.
- 2- Hassing AG et al. 2003. Announcement from the National Committee for pig production, Danish Slaughterhouses.
- 3- Hassing AG et al. 2003a. Characterisation of the first cases of PMWS in Denmark. *Proceedings of the 4<sup>th</sup> International Symposium on Emerging and Re-emerging pig diseases. Rome, Italy: 211-212.*
- 4- Hassing AG et al. 2003b. Effect of sow on the mortality of pigs after weaning. *Proceedings of the 4<sup>th</sup> International Symposium on Emerging and Re-emerging pig diseases. Rome, Italy: 193.*
- 5- Madec F et al. 1999. La maladie de l'amaigrissement du porcelet (MAP) en France. 1999. *Journées Rech. Porcine en France: 31, 347-354.*
- 6- Madec F et al. 2001. PMWS: On-farm observations and preliminary analytic epidemiology. *Proceedings of the Conference ssDNA viruses of plants, birds, pigs and primates – Saint Malo, France: 86-88.*
- 7- Madec F, Waddilove J. 2002. Control PCV2 or control other factors? Several approaches to a complex problem. *PMWS and PCV2 diseases: beyond the debate, Merial Symposium, Ames, IA, USA: 45-53.*
- 8- Marco E. 2002a. PMWS – Field observations in Spanish herds. *The Pig Journal* 50: 135-142.
- 9- Marco E. 2002b. PMWS control – European style. *Proceedings Tenth annual swine disease conference for swine practitioners: 83- 90.*
- 10- Marco E. 2003a. Personal communication.
- 11- Marco E., Piñeiro C., 2003b. An update on mycoplasma vaccines. *International Pig Topics, 2003, 18:3, 11-13.*
- 12- Waddilove AEJ, Marco E. 2002. Assessing serotherapeutic control of PMWS in the field. *Proceedings of the 17<sup>th</sup> IPVS Congress, Ames, Iowa, USA. I: 204.*