

October 2017

Pig Fair 2017, “Life beyond Zinc oxide”

This year’s George Vet Group Pig Fair was our most successful yet with well over 200 people attending across the two days; chairs were becoming scarce, particularly at Wincanton! Thank you to all that attended, both the producers and also Allied Industry representatives, your on-going support is invaluable. For those of you that were not able to attend this year this is a brief summary of the key messages from the afternoon.

Dr Ian Wellock, Primary diets

Ian reviewed pre and post-weaning nutrition and challenged producers to think about the criteria they use to segregate pigs at weaning.

Weaning is an extremely stressful time for a piglet and this stress can increase the risk of health challenges as well as depressing performance. Ian explained how tight junctions between the cells in the gut wall of the pig control what can and can’t escape from the gut into the blood stream. When a pig is under stress these tight junctions do not function properly and therefore the gut becomes “leaky” allowing pathogens, such as *E coli*, to exit the gut into the pig.

One particular stressor highlighted was that of weaning age; the younger the pig at weaning, the greater the stress on that pig and therefore a greater risk of a “leaky” gut. This introduced the concept of segregating by age rather than weight at weaning so that younger, potentially more compromised pigs can be managed more appropriately. Alternatively, considering increasing weaning age in order to wean a pig less likely to become stressed.



Preparing the gut of the pig for the weaning process remains very important so provision of creep prior to weaning is best practice.

Historically creep diets have included medication, some of which was zinc oxide and some antimicrobials. Since the start of 2016 the amount of antimicrobial included in creep diets has dramatically decreased therefore what remains is mostly zinc oxide. From June 2022 the higher feed inclusion rate of zinc oxide will be banned in the EU and so we are now challenged to find a life beyond zinc. Unfortunately the mechanism by which zinc oxide works is poorly understood so finding an alternative is a challenge. Many other additives have been produced but only a small proportion of these have a significant benefit and none have worked quite as well as zinc, but the search continues.

Andre Deru, Prevtect microbia

Following on from nutrition around weaning, Andre, covered the mechanism of post weaning diarrhoea (PWD) and in particular improving immunity against *E coli*.

E coli is the primary cause of PWD and also oedema disease although the pathogenic process of each is different due to the type of toxin released by the bacteria and their effect on the pigs’ body.



T
A
L
K
S
H
O
P

At birth a pig has receptors (F4) in its gut that enable *E coli* to adhere via F4 fimbriae and cause disease, i.e. neonatal diarrhoea. By weaning additional receptors (F18) have established that allow further *E coli* to bind (via F18 fimbriae) and at this point cause PWD and/or oedema disease.

A piglet gains immunity against certain pathogens via the colostrum it receives from the sow however this immunity deteriorates from birth until or just after weaning leaving a potential gap in immunity. It is in this gap that the pig can succumb to disease challenges presented in the environment; it is worth noting that *E coli* can survive in faeces for 3 months and therefore soiled accommodation can easily present these disease threats.

Control of PWD and oedema disease is multifaceted utilising nutrition, pro and prebiotics, the genetic potential of some breed lines, antimicrobials and vaccines.

Andre introduced a new vaccine, *Coliprotec F4 F18*; which enables the pig to produce antibodies against *E coli* causing both PWD and oedema disease. Unlike a lot of other vaccines this product is given to the pig by mouth either individually or via drinking water/cube drinkers so does not present an additional handling stress around weaning. It should be given after 18 days of age so that all the appropriate gut receptors have developed so the vaccine can act effectively. It is also important that it is given at least 7 days before a PWD or oedema disease issues usually arises to ensure that immunity has fully developed before the challenge hits.

If you have any further questions regarding PWD/oedema disease issues or this vaccine please speak to the GVG team.

Alice Brough, GVG team

Picking up on the importance of hygiene in the peri-weaning period in particular Alice took us back to basics with respect to proper cleaning and disinfection. Illustrating the unseen challenge in terms of lost performance and the subsequent cost implications.



Remembering to follow a comprehensive routine for all areas of the farm, which includes detergent as well as disinfectant and allows an adequate drying period. Ensuring that water systems are regularly cleaned to remove biofilm, lime scale and any other contaminants. Not forgetting equipment and PPE that might harbour pathogens and transport them between groups of animals.

Alice also introduced the ability to monitor efficacy of cleaning and disinfection programmes using a semi-quantitative method. By taking swabs of specific places such as the inside of feeders and drinkers, piglet processing equipment and creep areas it is

possible to establish within a couple of days if there is a zero, low, moderate or heavy growth of bacteria, yeasts and moulds. This can indicate how effective a clean down has been and highlight areas requiring further improvement.

Please speak to your vet to get this post cleaning and disinfection evaluation organised.

Sophie Edenborough, Applied Bacterial Control

Also linking with previous speakers, Sophie, presented a comprehensive overview of measuring, improving and maintaining good water quality. She gave practical advice on management of different water systems including how to clean and disinfect water lines when that virtually invisible enemy, biofilm, has built up.

Biofilm is a mucus – like substance that is produced by microorganisms that are present in the water lines either from a contaminated water source or that have tracked back from the pigs when they drink. This biofilm can restrict water flow and block drinkers as well as providing



a steady trickle of pathogen challenge to the pigs when they drink. Many products that are added to water such as antimicrobials or hydration agents contain sugars in order to aid solubility and palatability, unfortunately these sugars feed the biofilm so it important that a proper water line hygiene programme is in place. Immediate action to get better water could be as simple as putting a lid on a header tank or making sure that all the sludge at the bottom of a tank is properly removed rather than being allowed to build up. The best product to use for cleaning water lines will be determine by the type of water system that you have and if a period when pigs are not required to drink the water can be achieved. It will also depend on the acidity or alkalinity of the water on your unit.

The newly introduced Red Tractor standard that requires all naturally sourced water to be tested presents an opportunity to better understand the water quality issues that our pigs may be facing and introduce procedures to attain better water with the knock-on improvements in performance that this will give.

Ken Norman, Metropolitan police

Changing direction away from life after zinc oxide we invited Ken to speak about dealing with intruders on farms and the support available to farmers when such an incident occurs.

More and more frequently farms are receiving unwanted visits, often at night or on a Sunday when these intruders know that farm workers are unlikely to be on site.

Ken reminded the room that the 101 telephone service is there for any incident, even what may seem trivial but he also reiterated that if you felt that you or your family were at risk or being threatened than that is what 999 is for and it should be used in these situations.

All rural areas of the country have farming liaison officers who are there to be contacted in these incidents and the SW officer was also at the Exeter meeting for producers to speak to.

If you have an issue that you would like to discuss with Ken and his team please contact the Pig office for his details.

Fran, Richard and Alex, GVG team

In his usual smorgasbord of topical issues Fran covered his personal experience with clients that have suffered unwanted visits and reiterated the importance to clear up and lock up. By following the NPA end of day routine and ensuring that all areas of the farm are secure there is limited opportunity for any unwanted visitor to gain access.



Richard covered the worm egg count survey that is currently on offer to GVG clients (as covered in last months Talkshop, available on the Pig Team website <http://www.georgevetgroup.co.uk/pig-practice/talk-shop/>) and Alex introduced the GVG scanning service. This service provides real time ultrasound scanning either for routine pregnancy diagnosis, investigation of reproductive issues or to provide

training for those scanning their herd. This service can be individually tailored to your needs so please get in touch if you would like further information.

Once again thank you to all those who attended this year's event and also to our sponsors without whose support the GVG Pig Fair would not be possible.

Alex