

Talkshop April 2025

SOMETHING OLD, SOMETHING NEW!

There are many things in life we all simply just take for granted, life's just too busy isn't it!

Recent development work within the practice has highlighted several areas that have challenged some of our more traditional thought processes, and I wanted to delve a little more deeply into 2 of them.

- 1: Iron supplementation of piglets.
- 2: Use of one-shot EP/PCV2 vaccines

When asked the question "why are you doing that ?" the answer is often a rather unthinking "well we just do it, don't we!"

Iron supplementation of piglets

Spare me a moment to outline some of the basic science here, Piglets need Iron! Red blood cells are one of the major components in blood and carry out the important function of carrying oxygen absorbed in the lungs to all bodily tissues. Central to this oxygen carrying capability of the red blood cell is the haemoglobin molecule, and at its heart isIron ! Don't let's forget that average piglet birth weights of 1.4kg are transferred into often targeted weaning weight of 8kg at 28 days ie. They're over 5 times as big as when they were born! They therefore need to manufacture at least 5 times as much blood, or risk becoming anaemic. Complicating this delicate balancing act further.

- Sows milk is a poor source of Iron
- Piglets absorb oral iron relatively poorly.
- Modern genetics have phenomenal potential in terms of growth and therefore iron requirements.....

It is only actually within the last 10 years that iron supplementation of piglets outdoors has become the norm, rather than the exception.

Indoors, the vast majority of piglets receive a 200 mg dose of iron in the first few days of life but important questions remain:

- Is this the right amount ?
- Is this the right time ?

Don't forget the 200 mg we routinely administer is probably enough to sustain only about 4kg of growth! If piglets don't receive sufficient iron, they risk becoming anaemic and this will :

- Suppress growth
- Make them more susceptible to infections, especially those causing diarrhoea.
- Depress post-weaning performance and immune response.

We can now perform cheap and accurate on-farm testing of blood haemoglobin levels using our Hemocue devices – only a drop of blood from a scratched ear vein is required.

This can be really useful in terms of allowing us to answer some of the questions posed above and fine line iron supplementation strategy at an individual farm level. Sometimes it's the simplest things

Use of One Shot EP/PCV vaccines

Edward Jenner was born and worked in Berkeley, Glos and he is considered to be the inventor of what we now call "Vaccination". The clever gentlemen that he was, in the early 19th Century he noted that local milkmaids somehow seemed immune to Smallpox – unfortunately at the time a very common debilitating, disfiguring and highly fatal viral disease. He postulated that exposure to Cowpox was somehow protecting these milkmaids and preserving their beautiful complexions. In a rather convoluted trial, he set out to prove his theory by collecting samples of pustule pus from the hands of a local milkmaid called Sarah Nelmes, who had contracted Cowpox (a zoonosis) from one of her cows called Blossom. Jenner then deliberately inoculated this material into the skin of an 8 year old boy, James Phipps, the son of his gardener. He subsequently attempted to infect the boy with human Smallpox but, he remained healthy.

An amazing story and useful to recount in terms of realising just how far we have come, and also how we actually now take vaccinal protection of ourselves, and our animals, somewhat for granted.! Single -shot combination vaccines at weaning remain effective and cost/labour saving interventions to protect pig health on many farms. Licensed vaccines work well, they have to as a condition of licensing from the VMD, but, that protection is never absolute, and we especially expect a lot from the "single-shot " vaccines.

Over the past couple of years, and with technical support from Zoetis, we have been able to really evaluate the effectiveness of our existing health control programs, including vaccination. This more tailored approach to health control at an individual building or farm level, or on a risk-based seasonal approach is really paying dividends , allowing us to refine our vaccination programs for the best of the pigs.

If you've not yet signed up to our Pig Health Scheme, please get in touch, and if you are, please make sure you engage with your vet regarding your data, and ask the question – "what does optimum look like"?

Food for thought !

Richard B Pearson BVSc MRCVS