PIGS

September 2023

Edited by Amy Quinn

Welcome to the September edition of our monthly newsletter.

We are currently in the final stages of preparing for this year's Teagasc Pig Farmers' Conference, which will take place on October 17th in the Hotel Kilmore, Cavan and on October 18th in the Horse and Jockey Hotel, Co. Tipperary. The event will begin at 1pm on both days with a light lunch provided and the conference programme commencing immediately after.

We have carefully put together a varied technical programme for this year's event and will be joined by three guest speakers this year. We look forward to welcoming so many of you there over the two days of the conference. In this month's Pig Edge episode, which can be found here, I am joined by Ciarán Carroll where we discuss the conference details including an in-depth discussion on the event speakers and their presentations.

This month saw the first pigs move into the new low emissions high welfare finisher building in the Teagasc Pig Research Facility, which many of you viewed at our Pig Research Open Days early in the year. We are carefully monitoring these pigs and we endeavour to keep you up to date through our farm update videos on how these pigs and the subsequent batches progress.

The Pig Development Department (PDD) had a busy few days at the National Ploughing Championships last week in Ratheniska, Co Laois. We were delighted to welcome so many of you to the Teagasc marquee, despite the mud, for plenty of discussion. We took this opportunity to promote the upcoming farm apprenticeship programmes both to pig producers and to potential students amongst other topics.

In this issue:

Agriculture and Food Development Authority

Ear Necrosis – Know thy enemy!

Michael McKeon

'Know thy enemy and you will never be in peril' is a famous quote by the Chinese general & philosopher Sun Tzu. While it applied to war craft over 2,000 years ago it's also very applicable to the problem of ear necrosis on Irish farms today!

Ear necrosis is a relatively new problem in pig production that has developed over the last 20 years but in particular during the last decade. In order to control / reduce / eliminate the problem, we need to 'know thy enemy' of how it originates and develops. In simple terms ear necrosis appears to be a bacterial infection that enters the pig and travels to the extremities of the pig's body (tail or ear tips) where there is little blood circulation. At these extremities the bacteria multiplies and causes the tissue/flesh to die (necrosis), resulting in the tissue turning black. Adjoining tissue forms a scab and 'oozes'. When the infection gets sufficiently established the pig's immune system becomes stimulated to react and fight the infection. Usually by the time the pig is mid-way through the finisher section the infection has been eliminated, however by that stage the damage is done.

A further problem can occur when the 'scab' is rubbed-off, either against other pigs or pen walls etc. which leads to some raw tissue becoming exposed. This attracts the attention of pen mates who may start to chew the ear / tail, which further exacerbates the problem.

So how does the infection enter the pig's body in the first place?

There is no definitive causation of the problem, however anecdotal evidence appears to suggest it may occur by two different pathways. The first is 'leaky gut syndrome' whereby the junctions in the small intestine wall remain open after the first 24-48 hours of life, rather than closing as per normal. This 'extended opening' allows bacterial infection to cross the intestinal wall and circulate around the piglet's body. The second suggested pathway is bacterial infection on the sow's skin getting transferred to the piglet's skin during suckling. This bacteria then enters the piglet's body after weaning, when piglets are fighting to establish the pen pecking order and therefore develop open cuts and scratches. The bacteria from either pathway then gets established and causes clinical infection a number of weeks later.

We have been weaning pigs like this for decades, why has ear necrosis only emerged in more recent times?

The ear necrosis emergence in the last 10 years may be due to the elimination of antibiotic usage in weaner feed. The Irish pig industry has virtually eliminated the use of zinc oxide and has made huge reductions in antibiotic usage, but a side-effect is that infections during the weaner phase can now get more established than in previous times. Another potential contributing factor is that sows traditionally used to be washed when entering the farrowing house, however this

practice diminished in more recent times due to lower staffing levels on farms.

So now that we 'know our enemy', what is the solution?

That is the 'six-marker', it really depends on which infection pathway is the causation**!** There is limited information on the causation of 'leaky gut' syndrome and this area is currently being extensively researched in pigs and humans. Hopefully we will know more about this syndrome in the coming years but in general the following practices may reduce the incidence/risk; reducing the disease load through vaccination, achieving high birth weights, stimulating high colostrum production & piglet intake.

The second suggested infection pathway arising from cuts getting infected from skin bacteria (Straphylococcus Aureus?) is easier to treat. Eliminate/reduce the source of the bacteria by washing the sows with disinfectant either prior to or immediately on entry to the farrowing room. Then aim to minimise piglet aggression at mixing and when it occurs disinfect the wounds/cuts. A number of pig producers I have worked with recently have found the regime below has significantly reduced the incidence of ear necrosis on their units.

Hopefully by knowing more about this enemy it may help to eliminate this problem on your unit!

Suggested ear necrosis battle plan!

1. Wash the sows with disinfectant prior to entry into farrowing house
2. Ideally a couple of days before weaning, lift sufficient dividing boards between farrowing pens to allow piglets to mix. Mix the required number of litters to match your weaner pen accommodation e.g. if a weaner pens hold 35 pigs then mix 3 litters in the farrowing house and move this entire group into a single pen at weaning
3. If mixing piglets in the farrowing house, spray them with disinfectant on the day the boards are lifted /mixed, to keep any cuts clean
4. **DO NOT** grade pigs at weaning, it **does not** help performance and will increase the fighting intensity, producing more injuries
5. Do not 'sex' your piglets at weaning
6. Spray weaned pigs with disinfectant in the weaner house on the day of weaning & for the following 2 days (3 days in total) to ensure all cuts are kept clean
7. Ensure pigs have the proper floor space allowance and optimum feeder access/space
8. Ideally wean all damline piglets (males & females) together into pens on their own
9. Consult your unit vet to fine-tune the recommendation for your unit

Ten years of research on tail biting – Part 2: Where are the risks on Irish farms

Laura Boyle, Roberta D'Alessio & Keelin O'Driscoll

In the first newsletter article (July 2023), we discussed how the biggest risk factor for tail biting in pigs is the presence of a tail, and Irish pigs are mostly tail docked to address this. Nevertheless, it

does not entirely eliminate the problem, especially if husbandry issues are unresolved, as confirmed by the data presented on slaughterhouse tail lesion prevalence and severity described in the previous article. This article we will share some preliminary data from the PigNoDock project, which gives us some insight into the risk factors for tail biting on Irish farms. This work was carried out in collaboration with AHI, whereby we were given confidential access to the risk assessments for tail biting that were carried out on 27 Irish pig farms. Permission was granted by the farmer and their private veterinary practitioner (PVP) to analyse the data, and from these reports, we were able to single out the main risks that the assessors (PVPs) identified.

The risk assessment tool

The AHI tail biting risk assessment tool is quick and easy to use. PVPs assess 6 pens per farm, spread across the production stages, and carry out a number of measurements, taking about 15 minute per pen. The first part of the assessment for each pen is to complete a section regarding pig housing and management. This includes measurement of pen length and width, estimation of the proportion of solid flooring, the sex of the pigs (male, female or mixed), the final weight achieved in the pen, tail length (docked, undocked or mixed length), whether pigs can all feed at the same time, the number of drinkers, and whether the assessor considered the vaccination schedule to be appropriate. Next, the assessor details the type (optimal, sub-optimal or marginal) and amount of environmental enrichment in the pen.

Following this there is an assessment of physical and behavioural welfare indicators. The number of pigs in the pen are counted, and then the number affected by the following conditions: injured tails, injured or imperfect ears, flank lesions (circular), aggression lesions (straight), dirty flanks and tucked tails. Finally, there is a 5 minute period of behaviour observation, focusing on the following behaviours: tail biting, ear biting, damaging biting of other parts of the body, investigation of fixture and fittings, investigation of enrichment material, aggressive biting.

Using these data the assessor considers whether or not there is an overall risk of tail biting occurring in the pen, and the level of risk (none, minor or major) associated with the following six broad categories: environmental enrichment, thermal comfort, pig health, competition, pen design, and feeding processes. These categories were selected because these areas are considered important for risk assessment by the European Commission.

Where was risk identified?

Across the 27 study farms a total of 158 pens were included in the final study (finisher stage= 85 pens; weaner stage phase 1= 29 pens; weaner stage phase 2= 44 pen. The total number of pigs in the inspected pens came to 6421, with on average about 40 pigs per pen. The PVP's considered overall that there was a risk of biting in 58% of pens. Nevertheless, for all the categories above, other than environmental enrichment, for most of the pens (76% - 87%) the level of risk assigned was minor. However the level of risk assigned to environmental enrichment was considered 'major' in 87% of pens.

Figure 1 shows an overview of the results regarding pig management. When it came to enrichment, 12% of pens did not contain any form of enrichment, and as such this is an area that

producers should focus on, as it is a legal requirement. As stated above, the assessors considered environmental enrichment to be a major risk factor for tail biting in 87% of the pens assessed. This is likely because even when it was provided, there were very few pens with 'optimal' enrichment (i.e. loose material). Providing optimal enrichment materials is complicated by the presence of fully slatted floors, which you can see in the figure was the case in 92% of pens inspected. In Moorepark we also have fully slatted floors and so provide loose material in racks that hang from the side of the pen. Another option to improve enrichment is to simply add more of what is there already – in 37% of the pens there was only one item. This could be planks of wood, or commercially available chew toys. Chains are considered minimally effective as enrichment for pigs, and there should always be something else provided in the pen as well, ideally items that are destructible for the pigs.

Positively, in 99% of pens the assessor considered that the vaccination programme for the pigs was appropriate, and in 14% of the pens the pigs could all feed at the same time, which significantly reduces tail biting risk. Likewise, 55% of the pens had 2 or more drinkers. Although the pigs in the Moorepark unit cannot all feed simultaneously, we assessed double compared to single feeders, and found that the former significantly reduced aggression at the feeder, and improved FCE (Pig newsletter August 2022). Thus if you are upgrading feeders it is worthwhile replacing them with ones that allow more pigs to feed simultaneously. Of further concern was that in 20% of pens, the pigs were overstocked which is known to be a major stressor and trigger for tail biting. However, it must be noted that these inspections were carried out between 2020 and 2022, when the COVID pandemic resulted in an unavoidable backlog of pigs on many farms due to lack of capacity at the slaughterhouse.

Conclusions

Tail biting is multifactorial which makes it unpredictable and difficult to control. The only way to manage it is to identify the risk factors on your farm, particularly if you are already docking tails. Use of a risk factor identification tool can help to identify where risks are on your farm. Moreover, when results from multiple farms are

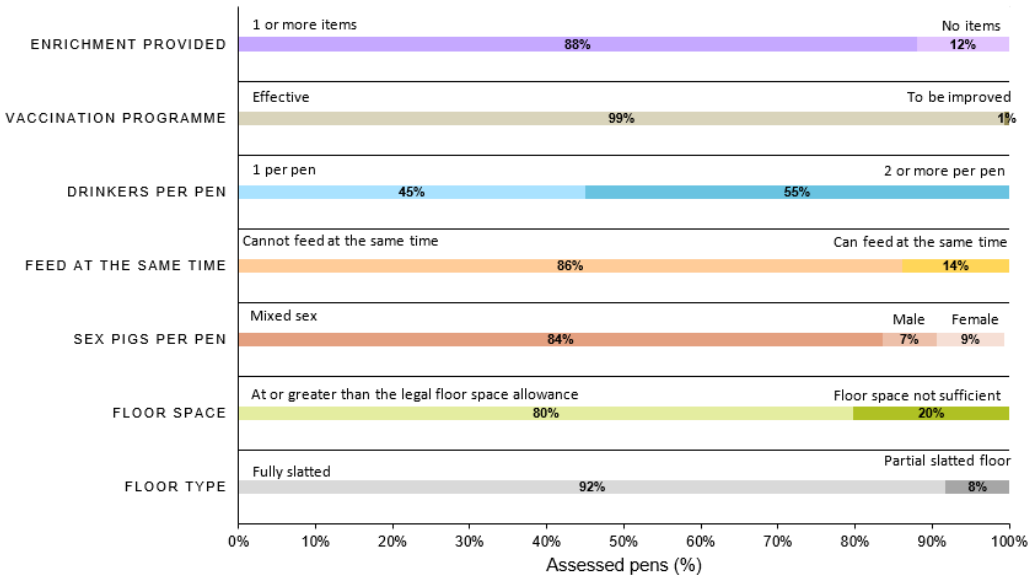

Figure 1. Results regarding pig management in the pens assessed.

combined, they can give an overview of common industry issues that should be focused on, whether via advisory services, or in the form of financial schemes to support farm infrastructure and management improvements.

As part of this ongoing work, we developed a more detailed risk assessment tool in Moorepark which will provide more tailored advice to individual producers. We are currently recruiting farms to take part; it includes an on farm assessment, as well as inspection of tails in the slaughterhouse, and you will receive a personalised report. If you would like to take part, please get in touch with Roberta D'Alessio (RobertaMaria.DAlessio@teagasc.ie), or your Teagasc pig advisor. All data collected as part of the project will be anonymised and confidential.

Previewing the Teagasc Pig Farmers' Conference 2023

Amy Quinn

The Teagasc Pig Farmers' Conference takes place on October 17th in the Hotel Kilmore, Cavan and on October 18th in the Horse and Jockey Hotel, Co. Tipperary. The event will begin at **1pm** on both days with a light lunch provided and the conference programme commencing shortly after.

The PDD have carefully designed a strong technical programme for this year's event and we are delighted to welcome three guest speakers to join our PDD line up for this event; Francesc Illas, Johannes Vugts and Des Rice.

Francesc Illas works for Grup Batallé, a fully integrated company that manages 30,000 sows from genetics to final product, where he is the Technical Director and Head of Production. Francesc will discuss measures to minimise increasing costs and how companies are dealing with current challenges based on his experience, focusing mainly on finisher feeding and staff.

Johannes Vugts is a Senior Pig Production Adviser with HKScan, a Scandinavian food company and the fifth largest food manufacturer in Europe, mostly working on improving management on larger sow units in Finland and has also advised piglet producers in Sweden and Estonia. In recent years a lot of his work focus has shifted from maximising production to improving quality and welfare. Johannes will give Insights from the Finnish pig industry in relation to long tails.

Des Rice, who began his career as veterinarian, is a business Coach and psychotherapist and providing coaching and mentoring services on strategic, human-behaviour and stress management issues to many businesses and to various community groups. Des will discuss techniques for staying calm in spite of difficult circumstances.

The full Conference programme is available on the next page and the latest episode of "The Pig Edge" offers a detailed insight into what to expect from our speakers. We strongly encourage all those engaged in the industry to join us at the conference and take advantage of the opportunity to connect with fellow producers and stakeholders and enjoy the offerings of this year's event. We look forward to seeing you there.

CONFERENCE SPEAKERS

MOOREPARK WEIGHS IN ON FARROWING ROOM FEEDING

Aisling Holmes & Kieran Keane, Teagasc

MEASURES TO MINIMISE INCREASING COSTS: HOW COMPANIES ARE DEALING WITH CURRENT CHALLENGES

Francesc Illas, Grup Batallé

OPTIMISING POST-WEANING FEED INTAKE: EFFECTIVE MANAGEMENT & NUTRITIONAL STRATEGIES

Louise Clarke & Peadar Lawlor, Teagasc

INSIGHTS FROM THE FINNISH PIG INDUSTRY

Johannes Vugts, HK Scan

ELEVATING GESTATING SOW WELFARE: A WIN-WIN FOR SOW & PIGLET PERFORMANCE

Keelin O'Driscoll & Laura Boyle, Teagasc

STAYING CALM IN SPITE OF VERY DIFFICULT CIRCUMSTANCES

Des Rice, Creating Collaborative Organisations (CCO)

FEEDING FOR HIGHER PROFIT

Michael McKeon, Gerard McCutcheon & Emer McCrum, Teagasc

More information: amy.quinn@teagasc.ie

Teagasc
Agriculture and Food Development Authority

Slurry spreading period extension

In light of the recent wet period of weather and considering the scientific criteria to determine whether the period for slurry spreading can be extended beyond the 30th of September, Darragh O'Brien T.D, Minister for Housing, Local Government and Heritage, in consultation with Charlie McConalogue T.D, Minister for Agriculture, Food and the Marine, has agreed to extend the slurry spreading period by seven days. This is in line with the maximum period that can be granted at present based on the published criteria.

The closed period for slurry spreading will therefore commence on the 8th of October 2023.

National Ploughing Championship 2023

The National Ploughing Championship 2023 took take place from the 19th to 21st of September at Ratheniska, Co Laois. Several members of the PDD manned the pigs stand in the Teagasc marquee over the three days. We were delighted to meet so many of you up there, its always an ejoyable opportunity to catch up with so many involved in the sector.

Apprenticeship programmes

Any farms that are interested in hosting a farm apprentice for either the the Level 6 Farm Technician Apprenticeship or the level 7 Farm Manager Apprenticeship, should register their interest without delay this link after which there will be follow up steps to complete registration (including a phone call and site visit). Only after a farm is approved by SOLAS can an individual apply to become an apprentice. Both of these courses will be commencing shortly with the PDD contributing teaching resources to both courses.

Jen Yun Chou returns to Moorepark

Dr. Jen Yun Chou has returned to Moorepark to continue her Marie Curie Postdoctoral Fellowship under the Research Leaders 2025 programme co-funded by Teagasc and the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement number 754380. Jen previously conducted her PhD research on strategies to manage tail biting in pigs from 2015 to 2019, and her current project PIGSMELL is focusing on pigs' social interactions to improve their health, welfare and performance. Jen has completed her outgoing phase of the project from January 2022 to August 2023 at the University of Veterinary Medicine, Vienna.

For more information:

Please visit our webpage at:
https://www.teagasc.ie/animals/pigs/

For any further information on newsletter content please contact the editor, Amy Quinn at: amy.quinn@teagasc.ie or +353 87 3779015