

Edited by Amy Quinn



Welcome to the September edition of our monthly newsletter. The start of this month unfortunately saw another drop in pig price. This along with labour shortages and the resultant reduced

slaughter capacities is still very much a major concern for producers.

The Teagasc Pig Development Department (PDD) team are currently hard at work preparing for this year's Virtual Pig Week, which will take place from October 19<sup>th</sup> to 22<sup>nd</sup> from 1-2 pm each day. We have put together an exciting and varied schedule of events over the four days. We urge all those involved in the sector to register for this event. Full details on the event and how to register can be found later in the newsletter.

The PDD team are also currently working on scheduling many in-person events over the coming months including a number of workshops, as well as the return of our discussion groups and QQI Level 5 Pig Production course in November. In relation to workshops, several welfare workshops will be run throughout the country. If your farm

needs someone to complete this certified workshop please make sure to register your interest by contacting your specialised pig advisor. We are delighted to be able to plan these activities and look forward to seeing everyone over the coming months.

Finally, we would also like to take this opportunity to wish our colleague Dan O'Donovan all the best in his retirement. Dan was the Mill Manager for the PDD for the past 49 years.

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**Virtual Pig Week 2021: October 19<sup>th</sup> – 22<sup>nd</sup>****Amy Quinn**

This year's Virtual Pig Week will take place from October 19<sup>th</sup>-22<sup>nd</sup> on our virtual platform. The event will cover a different topic on each of the four days. It will run from 1-2 pm each day, by doing so we hope this will facilitate all those involved on farm and in the industry in attending. The details of each of the days can be found below. We look forward to welcoming you to this event.

**Day 1: Teagasc Pig Research Facility – A Focus on production** - Tuesday the 19<sup>th</sup> October

On day one, the focus will be on the Teagasc Pig Research Facility (TPRF). Farm Manager, Tomás Ryan and Research Technician, Aisling Holmes will join host Amy Quinn, Teagasc Pig Development Department (PDD) Specialist Advisor. They will focus on the gestating sow and the factors contributing to the persistently high farrowing rates. They will also examine the high weaning weights in the unit and how these are being achieved. They will discuss how their detailed record keeping and database of information contribute to these successes.

**Day 2: Wet feeding – The main problem areas-** Wednesday 20<sup>th</sup> October

On day two, Gerard McCutcheon, Teagasc PDD Specialist Advisor will host a webinar on wet feeding with Joost Leijten, an independent consultant on wet feed systems. He will look at some of the most common quality control deficiencies and system delivery problems associated with the wet feeding of pigs. He will

examine three main problem areas, including how to identify the issues, possible resultant performance effects and how to rectify the issues.

**Day 3: Milk Supplementation – An overview and farmer experiences** - Thursday 21<sup>st</sup> October

On day three, Louise Clarke, Teagasc PDD Specialist Advisor will host a focus on Milk Supplementation. Teagasc PDD researchers and farm staff will share some of their knowledge on the evolution of milk supplementation and the key technicalities around its use. Two pig farmers will also share their experiences with milk supplementation systems on their units. The focus here will be on the general management, key husbandry practices, performance and tips that they have experienced to date.

**Day 4: Topical issues – A live panel discussion -** Friday 22<sup>nd</sup> October

On day four, Ciarán Carroll, Head of Pigs Knowledge Transfer, Teagasc PDD will host a live panel discussion on topical issues facing the pig sector including the fast approaching ban on Zinc Oxide in pig diets as well as pig meat supply, market opportunities and outlook. The panel for this event will include a number of people from the Irish pig sector.

**Registration**

You need to register for this event at the following link: <https://hopin.com/events/teagasc-virtual-pig-week-2021>.

## Hospital pen function & design

Emer McCrum

This article will focus on the function and design of the hospital pen, but first it is important to begin by stating that swift detection of sick animals is vital. Early identification and appropriate treatment of compromised animals improves the chances of recovery and reduces the risk of suffering and suboptimal welfare for individual pigs. Responsible management and care of compromised pigs requires appropriate and timely action on the movement/isolation, treatment, care and if necessary, prompt decisions on euthanasia. As such, a Health and Welfare Plan containing guidelines on the above should be developed in consultation with the unit vet and made available to all farm staff.

Specialised hospital accommodation should be designated for each section including sows, weaners and finishers. The purpose of hospital pens is to individually manage compromised pigs by providing these animals with improved housing conditions and a higher quality diet. Pens should be designed to minimise the spread of infection and optimise recovery rates. This article provides an overview of key design features to ensure optimum accommodation for the care and management of sick and injured animals on farm.

### Biosecurity

Hospital accommodation housing sick animals should ideally be located away from the main flow of animals to minimise the spread of infection to healthy animals. Separate equipment should be provided for use only within each hospital

accommodation area to reduce the risk of cross contamination between sections. Foot dips and hand washing facilities should be available for use upon entry and workers attending to the hospitalised pigs must wash their hands, change overalls and thoroughly clean their boots before moving back to the healthy pigs. Separate hospital pens should be provided for different “sickness” categories of animals and as such, acutely ill pigs should not be housed with injured or recovering animals. Separate recovery pens should be available to avoid housing ill pigs with recovered animals. Avoid a continuous flow in the hospital accommodation and ensure all pens are thoroughly washed, disinfected and dried when emptied.

### Housing

Pens should be free from draughts, well lit to allow for thorough inspection and have a comfortable lying area with bedding (shredded paper, straw or wood shavings) or a mat provided at all times. A solid lying area in hospital pens is recommended for injured sows. Warm temperatures must be maintained within hospital pens particularly for younger animals which may require the provision of additional heat via infrared lamps, heaters or heat pads. For older animals a canopy may be used to create a microclimate within the pen but this canopy must not hinder the thorough inspection of animals. Pens should be kept dry at all times and where bedding is used it should be replenished regularly. Any build-up of dung on bedding or mats and any damp bedding should be removed daily.

Small group sizes and generous stocking rates are advised with ideally no more than six animals per pen from a maximum age range of three weeks. Any overstocking of sick animals can delay recovery and even exasperate the condition.

### Nutrition

There should be sufficient access to fresh feed and water in hospital accommodation at all times. Feed and water should be readily accessible particularly for younger animals with supplementary trays or drinkers/bowls provided as required. Hospital pigs should be fed a highly palatable and digestible ration for the age of the pig to encourage intakes and aid recovery. Feed should be offered little and often to acutely sick pigs with a reduced appetite to avoid feed going stale and available ad lib to recovered animals with normal eating patterns.

### Management

Once a pig is moved to a hospital pen, it should be identified using a tag with the ID of the animal, date of entry to hospital accommodation and initial assessment recorded without delay. The cause of the illness or injury should be identified and if any doubt exists as to the cause of ill health or the most effective treatment, contact your vet. Prompt and appropriate treatment is essential to avoid unnecessary suffering and the further spread of infectious diseases. All treatments should be recorded and any prescribed medication must be recorded in the Veterinary Medicines Register. A thorough recording system must be in place to monitor the progress of animals and avoid the incidence of lingering pigs.

Pigs in hospital pens should be examined and assessed twice daily. During these inspections the condition and progress of all animals should be noted. These inspections should also include routine checks on the availability of feed and water, comfort of the animals and temperature of the house. Pigs that are not responding to treatment, animals with untreatable conditions that compromise welfare and pigs that cannot be transported humanely should be euthanized. Additionally animals showing no improvement or that have no prospect for improvement after two days of intensive care should be humanely euthanized without delay. When recovered animals have reached sale weight they can be sent to the factory with other stock but only if they are fit to travel and the required withdrawal period for any medications used to treat the animal has lapsed.

The hospital pen plays a crucial role in the management of pig health and welfare on farm. Well managed and properly designed hospital accommodation will give compromised animals the best chance of recovery while protecting the overall health status of the unit. If you would like more information on euthanasia and the casualty pig, Teagasc Researcher Dr. Laura Boyle covered the topic on the Pig Edge Podcast earlier this year. The episode is available on the Teagasc website or wherever you get your podcasts. A decision tree tool for farmers and farm staff to aid on treatment and euthanasia decisions is available here: <https://www.teagasc.ie/media/website/publications/2021/The-Casualty-Pig-Poster.pdf>.

## Implications of the 'End the Cage Age' for housing pregnant sows in stalls

Laura Boyle, Martyna Lagoda & Maria Costanza Galli

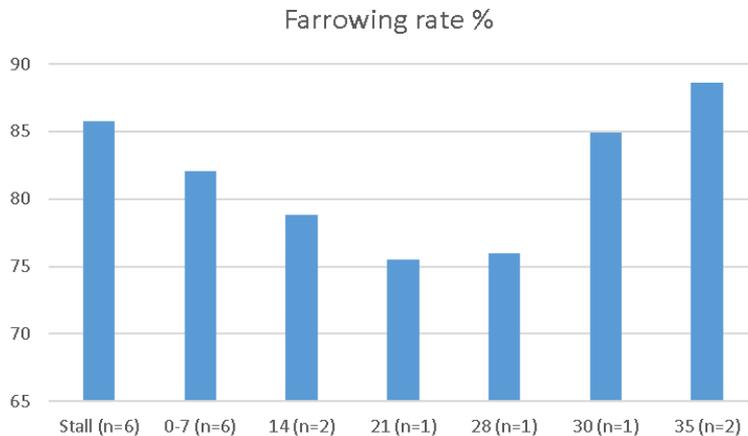
A review of the EU's animal welfare legislation is currently underway driven by the European Union's new Farm to Fork (F2F) strategy. Animal welfare is an integral part of the F2F strategy, which aims to make agriculture practices in Europe more sustainable through an integrated food policy that covers the full supply chain. In 2020, the EU initiated a comprehensive evaluation of its animal welfare legislation through the European Food Safety Authority (EFSA). EFSA was asked to revise the existing scientific opinion on pig welfare to include new advice that reflects the most up-to-date scientific research and data. To do this they established a new Pig Working Group and Laura Boyle, Teagasc PDD is one of the hearing experts. The new scientific opinion under development by the group will describe current pig husbandry systems and practices; identify relevant hazards, welfare consequences and associated animal-based measures; and provide recommendations for preventing or correcting negative implications for pig welfare.

This review of the welfare legislation is timely considering the European Commission's announcement in June this year to put forward a legislative proposal by the end of 2023 to phase out and prohibit (by 2027) the use of 'cages' for hens, sows, calves, rabbits, ducks, geese and other farmed animals. This was in response to the results of the European Citizens Initiative (ECI) to 'End the Cage Age'. This ECI gained over 1.6 million citizens signatures to a petition calling for a ban on 'caged' farming in the EU.

This 'End the Cage Age' ECI clearly threatens the continued use of gestation stalls for pregnant sows. Currently, under the EU Directive, sows and gilts can be kept in gestation stalls for four weeks after service and for one week before farrowing. In Sweden, sows and gilts are always housed in groups, except farrowing sows and sows one week before farrowing. While in The Netherlands, sows and gilts are kept in groups starting from 4 days after service until one week before farrowing. In Ireland, there are a mixture of practices. Most producers who built new sow housing around 2013 opted to move sows directly from the service house into the group housing but some still keep sows in stalls up to 4 weeks after service. Hence, the likely change in the legislation could impact a number of Irish pig producers.

In reality, there is little research on effects on sow welfare and performance of differing amounts of time spent in gestation stalls during the first month post-service (Galli *et al.* under review with the Italian Journal of Animal Science). EFSA's Pig Working Group identified only 20 scientific papers with all focusing on the acute effects of mixing at different times in the first month post service. Most of the findings from these papers are inconsistent. For example, there are no clear effects of mixing early or late on immune function and aggression though there are some tentative indications that stress hormones (cortisol levels) are higher if sows are mixed at about 35 days post-service compared to in the first week after service. Contrarily, it seems that mixing in the first week is

associated with worse lameness and skin lesions than mixing 4 weeks post-service. The main consistent finding is the already well-known detrimental impact of mixing around week 2-3 post service on farrowing rate (Figure 1).



*Figure 1: Farrowing rate (%) of sows kept in stalls compared to sows mixed at different days post-service (0-7 days to 35 days). Number of studies represented by each mixing period shown in brackets.*

This graph clearly indicates that you should either mix in the first week post service or wait until 4 weeks later to preserve the farrowing rate >85%. It is important to note that while mixing around 2 to 3 weeks post-service is clearly worse for the developing embryos this relates more to their susceptibility relative to the time of implantation in the uterus than to the degree of stress experienced by the sow (where the research findings are less clear).

The EU made group housing of pregnant sows mandatory in 2013 because of established welfare benefits to sows compared to continuous housing

in stalls. However, the benefits depend on the type and quality of the group housing system and the associated management. Arguably, sows, especially thin or otherwise vulnerable (i.e. young) sows, may benefit from a longer period in stalls post-service particularly if they are entering an unforgiving group housing system such as one where the space allowance is low, the group structure changes regularly or there is competition for access to resources. However, there is no research investigating whether it is better or worse for the welfare of sows over the entire pregnancy to spend a longer or shorter time in stalls in early pregnancy. An interesting observation from a current trial on a commercial farm is that sows with access to self-closing stalls spend so much time in the stalls that it takes longer for the dominance hierarchy to establish than the usual 24 hours to one week. We see sows fighting to establish dominance two to three weeks after introduction to the group. This is because they simply haven't yet encountered all of their unfamiliar penmates in the group area. In reality this could mean sows 'mixed' into a free access stall system 5 to 7 days post-service continue to experience severe aggression around the time of embryo implantation a few weeks later which could have detrimental consequences for farrowing rates.

We're hoping to address some of these knowledge gaps during the final year of the SowWeanWel project and to thereby inform the evidence base which will be consulted when legislative proposals to 'End the Cage Age' are being drafted by the EU Commission.

## Why do pigs cough? (Part 2)

Joana Pessoa & Laura Boyle

In last month's newsletter we discussed how coughing frequency measurements are useful in detecting and managing respiratory disease based on findings from the PLFpigCarc study. By providing farmers and veterinarians with information on coughing frequency, adjustments to vaccination and treatment protocols can be made. This article discusses a subsequent study from this project.

### What about healthy pigs?

Based on the findings of our first study we carried out a trial that aimed to classify patterns of coughing according to environmental risk factors, and to verify the baseline coughing levels in healthy pigs. From March - January 2020, we followed three batches of finisher pigs, housed in six rooms (from 10 weeks of age to slaughter) on a respiratory disease-free farm. To characterize the pigs' environment, we installed several tools in each room to measure cough frequency, temperature, relative humidity, ammonia levels and dust concentration in each room.

### And... Do healthy pigs cough?

Yes, they do. However, we found that coughing levels were considerably lower when compared to those recorded in our first study. What we found was that variations in ammonia concentrations had an impact on how much the pigs coughed.

### Why are ammonia concentrations varying?

Most farmers control the ventilation in the pig rooms by adjusting fans according to room temperature. This means that when it is cold

inside the fans will close and when it is hot the opposite occurs. We found that the lowest ammonia concentrations were recorded for the batch that was reared during summer. Indeed, when higher outside temperatures occur, ventilation rates increase to maintain the desired temperature indoors. Likewise, the batch reared during winter showed the highest ammonia concentrations, thus we can follow the same logic: lower temperatures outside dictate lower ventilation rates, therefore air circulation is diminished and we can expect poorer air quality. This even happens on a daily basis. We systematically found that higher ammonia concentrations can be found during the colder periods of the day (i.e. during night time). With the advancement of precision technologies, in the future we may see that the best way to control the pigs' environment will be to adjust ventilation according to more variables than just temperature.

### Does this apply to all farms?

We are currently carrying out a trial on several farms to understand if our findings are applicable to other farms. First, we selected two farms with high prevalence of pneumonia, two with high prevalence of pleurisy, and two respiratory disease-free farms. We want to evaluate differences of coughing frequency through finisher period according to farm respiratory health status. We also want to better understand the relationship between coughing levels and environmental conditions.

## Good luck Dan

After 49 years with the Teagasc PDD we would like to wish Dan O'Donovan a happy retirement. Dan was the mill manager at the Moorepark mill for the vast majority of his service and has played a vital part in nearly half a century of pig nutrition trials. Dan was an invaluable member of our department and possess a unique skill set that would be the envy of many. As well as in depth technical knowledge around diet formulation and manufacture he also has a high degree of competency in mechanical and electrical processes. As mill managers go Dan is a complete all-rounder. We thank Dan for all his years of service and wish both he and his family a long and happy retirement together.

## Teagasc/UCD Michael Smurfit Business School certificate in Business Strategy

Teagasc will run this business course for the seventh time, starting in November/December 2021. There has already been great interest but a small number of places are still available. Key features are:

- Course accredited by UCD.
- Create a strategy unique to your business
- Residential for excellent networking
- No academic entry requirements
- Content delivered by world-class Smurfit staff

For more information contact Mark Moore of Teagasc on [mark.moore@teagasc.ie](mailto:mark.moore@teagasc.ie) or 087 4179131.

## Welfare workshop

The PDD will be running a number of Welfare

workshops in November and are currently seeking interest from pig producers. Keep in mind the Bord Bia Pig Quality Assurance Scheme requires that there must be one person on each farm who has completed welfare training. If you are interested in the workshop please contact your Teagasc Pig Advisor or email [amy.quinn@teagasc.ie](mailto:amy.quinn@teagasc.ie).

## Tail biting workshop

The Teagasc PDD will be running a workshop on the topic of tail biting in November. As we are all aware, tail biting is hugely difficult to prevent and control in conventional pig farming systems because the causes are multifactorial. The most effective method of reducing the risk of tail biting is tail docking, which has become routine practice in many countries worldwide, but this does not address the underlying causes of biting behaviour, or entirely prevent it. Thus the process of terminating tail docking as a preventive measure is extremely challenging. The workshop will present the current status in Ireland with regard to both tail docking and biting, as well as ongoing research conducted on the use of technology and digitalisation as a method to address the tail biting challenge. Participants will be divided in breakout rooms to discuss the implementation of such a digitalised tool and will be asked to answer poll questions.

The workshop will be open to Irish stakeholders within the pig industry. It will be recorded as part of data collection for a larger research project investigating development of a PLF tool to detect biting behaviour. Prior to the workshop, participants will be asked to sign a NDA and an informed consent form.



### For more information:

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

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