

# Pigs

January 2025

**Edited by Ciarán Carroll**



Welcome to the January edition of the Teagasc Pig Newsletter. As we start into the new year we look forward with anticipation to what 2025 will bring! It was

disappointing to see a price drop so early in the new year, however prospects are good, so hopefully this drop will soon be reversed!

The Foot and Mouth (FMD) outbreak in water buffalo in Germany serves as reminder of when FMD was much closer to our shores back in 2001. It also serves as a timely reminder of how critical good biosecurity is, so make it one of your new year's resolutions to improve biosecurity around and on your farm.

We have a number of interesting and useful articles in this month's newsletter. Louise Clarke continues our focus on Sow Culling &

Replacement Rates and explains what your ideal herd parity profile should look like, while Edgar Garcia Manzanilla gives us a brief review of some of the recent Teagasc pig research and an overview of the research projects that we have starting over the next few years.

As always, we welcome your feedback so if there are projects or areas of research that you think we should be working on, please let us know.

## In this issue:

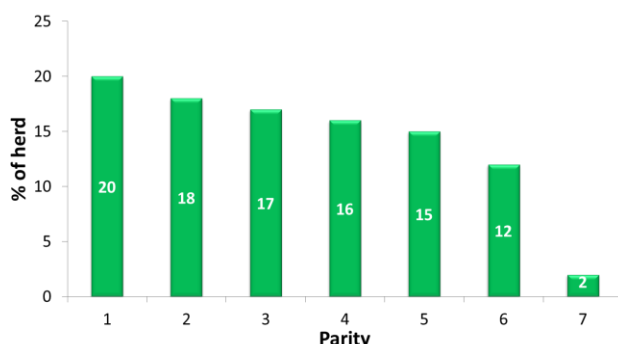
- Replacement & Culling Rate
- Research - Review & Outlook 2025-2026
- Welcome New Arrivals!

## Replacement & Culling Rate

Louise Clarke

Performance from, and management of gilts has a large impact on sow productivity. Profitability and future reproductive success is directly linked to a strong gilt breeding policy. Gilts do not breakeven in the herd until the 3rd parity and yet currently in Ireland 13% of gilts are culled before the 1st litter and 32% are culled by the 3rd litter. This means that 32% of sows do not cover their rearing costs. It is especially important to ensure that there are sufficient gilts available to serve in the correct condition, at the required time. This enables the planned culling of old or less productive sows and maintenance of the target herd parity profile.

**Figure 1: Ideal Parity Distribution**



### Reason for culling

A sound culling policy is an integral part of herd management. It provides for the removal of less productive sows and the entry of replacement females on a regular basis without disrupting the overall performance of the breeding herd.

However, data indicates that sows are being culled at a younger age and this has a negative impact on farm profitability. The decision to cull should be taken based on the biological condition of the sow (voluntary culling- performance, age, parity), and a proven healthy sow may in many cases be less of a risk for poor future performance than an unproven replacement gilt. Involuntary culling, on the other hand occurs when the stockperson has no choice over whether to cull the animal, for instance due to a health problem (lameness is the most common), or infertility.

**Table 1: Sow culling rate**

Year	2018	2019	2020	2021	2022	2023
Sow Culling Rate %	49.2	48.3	50.2	51	52.2	52.4

(Source, Teagasc Profit Monitor)

### How many gilts do you need?

Replacement rate and culling rate go hand in hand with each other so if our culling rate increases then we need to make sure we have enough gilts available to replace those animals that we are removing from the herd.

For example, if a 500 sow herd had a replacement rate per year of 52%, they would have 260 replacement females bred per year and be entering 5 gilts into the herd per week. In order to maintain a gilt pool of 12% of the target herd size this would mean the farm would need to

# Pigs

have 60 replacement females in stock at all time. It is extremely important to keep an eye on your annual replacement rate and if it is higher than recommended, investigate the factors that may be contributing to this.

High replacement rates mean:

- Larger gilt pool required
- Higher sow feed usage
- Poor parity distribution
- Over-crowding of gilt pens
- Negative impact on herd health & welfare
- Gilts bred below target weights
- Lower weaning weights
- Milk yield and quality reduced
- Less healthy piglets (antibodies and acute phase proteins)

- Staff morale and performance declines
- Costs of biosecurity interventions

Managing sow culling properly is a key factor in maximising profitability in pig production. Sows are being culled at a younger age and this has a negative impact on farm profitability. Strategies to improve sow longevity must be targeted at replacement animals. Gilts must be managed, housed, and fed appropriately during the developmental phase to improve retention and reduce involuntary removals.

How does your herd compare to the parity analysis shown in Figure 1 above?

## Research Projects – Review and Outlook for 2025-2026

### Edgar Garcia Manzanilla

The last 2 years have been good for the pig sector and Irish pig farmers have recovered, to some extent, from the 2022 crisis. Thus, this is a good moment to invest in the future sustainability of the farms and the sector. The technical input from the Teagasc pig department, among others, will be key to guide the investment based on solid evidence. To provide farmers with the best information, the pig department has several projects ongoing in different areas to identify international good practice and test it in Ireland and to develop new approaches that are needed in Ireland.

#### The last 2 years of research

In the last 2 years, we have tested several innovations. We assessed the viability of the use of supplementary milk in farrowing and weaning facilities, we have shown the benefits of the use of pain relief for farrowing sows, we have tested different cleaning protocols, we have studied the benefits of co-mingling in commercial farms and we have shown how small adjustments in space allowance or feeder space can improve production performance. The pig department has also started research on added value for pig products and has started the pig component of [Agnav](#) which should highlight the low carbon footprint and efficiency of the pig industry.



# Pigs

One of the pieces of research that we started last year was the testing of the new low emissions building in Moorepark. The building follows the design of facilities in Germany or Austria and some elements like the scrapers and the external covered tanks have proven to work brilliantly to reduce emissions and improve the environment of the facility. The building has also been very useful to optimise the design and management of such facilities, and it has shown the potential hygiene issues associated with solid floors (Figure 1) if facilities are not well designed. This information has been key to guide the recommendations for TAMS and will be very relevant to avoid similar issues in future farms.



*Figure 1. A general view of the low emissions building in Moorepark with the first batch of pigs. A couple of issues that had to be sorted was the cleaning of the manure in the solid floors once empty and the inadequate use of the resting area as toilet if the management is not adequate.*



# Pigs

## Focus on slurry management

Probably the main issue for Irish pig farms in the last two years has been slurry management. Teagasc needs to produce as much information as possible in this area to help farmers make the best decisions for the near future. In the last year, Teagasc has developed project LE-FARM to test some strategies to reduce ammonia emissions and to refine the methods to measure it. Being able to assess new good practices so that they can be accepted by policy makers and adopted by farmers as soon as possible has become a key development for the next year.

Last year, Teagasc also joined [Nutritive](#), an EU project where 22 partners from 9 EU countries and China will be sharing and testing good practice to manage manure and reduce emissions (Figure 2). This project has an important component of farmer involvement visiting other farms and sites to get the details on the technologies. Another project starting in 2025, project TAILWARDS, it also has an important component of testing manure management systems in commercial farms (solid/liquid separation, liquid fraction purification, shallow tanks, scrapers).

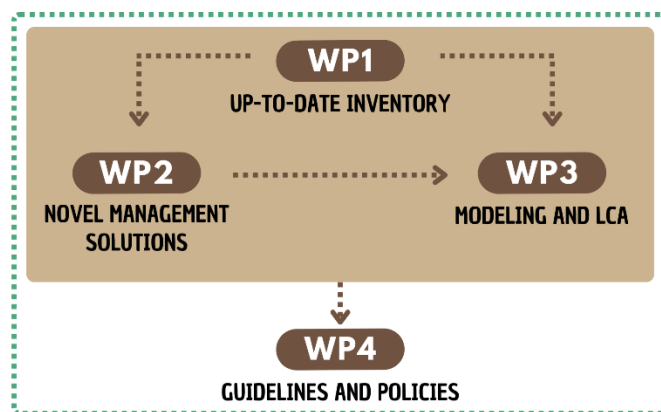


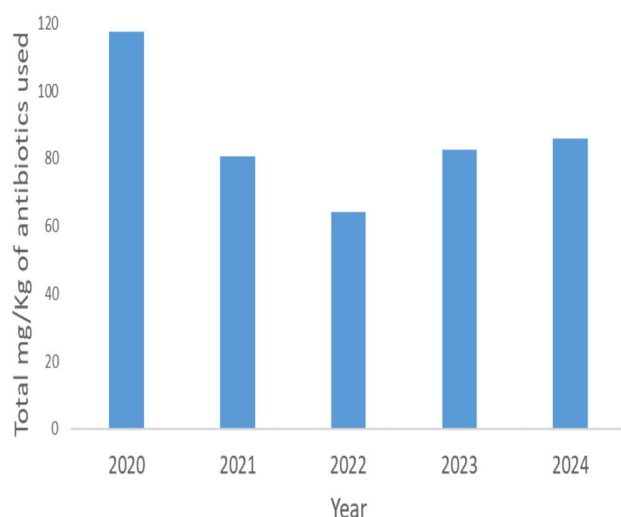
Figure 2. Project NUTRITIVE is creating an inventory of best practices for slurry management to help farmer decide what is the most suitable solution for them and to guide policy in a more evidence based approach.

## Health and welfare, work in progress

The new regulations affecting antimicrobial and ZnO use are in place for a while now and Irish farmers are adapting to the new reality of pig farming. The progressive removal of zinc oxide during the last two years has resulted, as expected, in a slight increase in total antibiotic use (Figure 3). We should be back to the previous downward trend soon with a few adjustments. Some good news is that farmers have been able to keep the reduction of critical antibiotics (those that should be only for human use) despite the recent increase in total antibiotic usage. There are still a few projects ongoing on new strategies to raise pigs without antibiotics/zinc oxide (MonoGutHealth, FARM-CARE, AMU-FARM, Biosecure) but we probably have enough research done in this area and we need to focus on helping farmers implementing good practice. Some of the research ongoing in this area is specially focused on the implementation of good practice in biosecurity, looking at how to transfer the knowledge to the those actually performing



the tasks in the farms. Providing farm staff with the right technical information and tools is going to become more and more important in coming years.



*Figure 3. Total antibiotic use in Irish pig farms over the last 5 years (provided by AHI).*

The new EU welfare legislation was not released on the announced dates (end of 2023), probably due to the EU elections, and it is not expected to be released until at least 2026. This delay creates uncertainties for those farmers that are investing in their farm right now. However, the delay in the release of these regulations also allows farmers to contribute to shape the final draft. Teagasc and IFA are involved in an EU innovation network, [WelFarmers](#), to collect good practices related to pig welfare all over the EU. This good practice will allow the pig sector to make progress on animal welfare considering the input of farmers as final users. The results of this project will not only help farmers and technical services but also will inform policy makers on the most effective ways to improve pig welfare in coming years while keeping pig farms sustainable. One of the main

points in the WelFarmers project and in the new EU regulations will be the need to use free-lactation systems with minimum requirements. To start testing the options for new farrowing systems, the pig department started 2 projects last year (FitToFarrowFree and IDEAS-AMED) and has the plan to change half of the farrowing crates in the Moorepark Pig Research Facility to a new system of free-lactation.

### Thinking on 2026 and beyond

All these projects account for a significant amount of public funding, mainly from the EU and DAFM. Thus, some of the projects have an important focus on meeting the societal demand on animal health and welfare and public health while keeping the pig sector sustainable. Good examples of this are project Tailwards, where a PRRS control programme will be piloted in an effort to improve the general health and welfare of the Irish pig herd, or project TICSalmPig, which includes general improvements of farms to reduce Salmonella prevalence. These are a few of the projects we have ongoing in the Teagasc Pig Department and these projects should be useful to future-proof the Irish pig sector. Thus, please let us know anything that you think we are missing or any ideas that you think need to be developed in the near future.

# Pigs

## Welcome to our new arrivals!

This month we welcome a few new faces to the Pig Department to work on ongoing projects.

**Maria Bernad** and **Barbara Terezo** will be working with Edgar Garcia Manzanilla on the DAFM project TICSalmPig which aims to work with farmers to reduce Salmonella levels in Irish pig farms with a wide range of interventions. Maria did her PhD in the Universidad de Zaragoza on strategies to control Salmonella in commercial companies in Spain and will be a researcher in the project. Barbara completed her veterinary degree in the University of Lisbon and worked in AHl for 6 months before joining Teagasc for her PhD.

**Mario Ornelas** will be working with Edgar too and will be developing a new economic model to measure the cost of pig disease using an international methodology (GBADs) that will put Ireland on the map when it comes to disease prioritization. Mario recently completed his PhD with Teagasc working on the reduction of antibiotic use in pig farms by using biosecurity and hygiene.

**Neil Tirchett** will be working with Ciarán Carroll and Amy Quinn on the WelFarmers project, with farmers all over Europe to promote welfare improvements that are realistic for farmers. Originally from Malta, Neil completed a Masters in Animal Science in Wageningen University and has worked with the Ministry of Agriculture in Malta, EFSA and also completed a placement with Teagasc last year.



*Maria, Barbara, Neil & Mario*

## Reminder: Survey of the status of PRRS on pig farms

Porcine Reproductive and Respiratory Syndrome (PRRS) – Blue Ear - is a viral disease infecting sows and pigs leading to reproductive failure, and causes pneumonia and increased mortality in young animals. It is one of the most economically important diseases for the global pig industry. To explore the possibility of developing a control programme for PRRS at national level in conjunction with Northern Ireland, the first step is to pinpoint all pig farms on a map including their current status for PRRS. We are asking for your collaboration in completing this very [short survey](#). When presenting the map to stakeholders the exact locations of the farms will be anonymised so no individual farm can be identifiable.

## Save the Date

The Pigs R Us conference will take place on Wednesday 26<sup>th</sup> March in the Glenavon House Hotel, Cookstown, Co. Tyrone. The industry trade session will get underway from 6:30pm with commercial companies exhibiting from all sectors of the industry. Talks will commence at 7:30pm covering a range of topics including health, welfare and productivity.