

Edited by Ciarán Carroll

Welcome to the August Newsletter



Welcome to the August edition of our monthly newsletter.

Irish pig prices have dropped further since last month and are now at €1.60c/kg – €1.64c/kg. The recent Covid-19 clusters in meat processing factories and the unscheduled closures of two plants raise concern within the industry. It's disappointing to see prices dropping when export demand, particularly from China is very strong.

The latest edition of our Let's Talk Pigs webinar series, 'Rearing pigs with intact tails' with Mirjam Lechner, was an excellent presentation which received a lot of interest. You can watch recordings of all webinars to date or register for upcoming webinars on our website, more details later in this newsletter.

Our Podcast series, The Pig Edge, has grown a good listenership and has so far covered topics including; energy use on farm, optimizing lactation

feed intakes, mycotoxins, African swine fever and more. All episodes are available on our website, the iTunes store & Spotify, with a new episode released fortnightly.

We will be launching the Teagasc Pig Development Department Skills Series, a series of educational videos and factsheets focusing on key skills in pig production in September. More information later in this newsletter.

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Increasing performance in the Teagasc Pig Research Facility

Tomás Ryan and Edgar Garcia Manzanilla

With the current favourable pig prices expected to last for at least 3-4 years, the Teagasc Pig Development Department decided to increase the productivity of its Pig Research Facility (PRF) in 2020. Maximizing productive indices is not always possible in the PRF because its main objective is to perform research and this research often affects performance negatively. However, the research planned for 2020-21 allows for an increase in productivity. This increase in productivity obviously comes with more pressure on the animals. Thus, some changes were needed in the management of the pigs to reduce aggression and maintain efficiency. The changes made and the reasoning behind those changes may be of interest for farmers implementing similar changes in their farms.

The Teagasc Pig Research Facility in a Nutshell

The PRF in Moorepark is a 200-sow farrow-to-finish farm. Production is organized in 3-week batches of 28 sows each. Farrowing houses are rooms of 7 or 14 up to a total of 56 places. Piglets are weaned at 4 weeks into rooms of 30 pens where they stay for 7 weeks and then are moved to finisher rooms with 30 pens. Figure 1 shows the basic structure of one of the rooms for weaners.

The growth of the pigs in the PRF is good because the farm is free of most of the main pathogens. The pigs are sent to the abattoir at an average age of 21 weeks weighing around 115kg. However, the unit is designed to have the pigs up to a maximum age of 22 weeks. Any delay on this would create space issues.

Increase in production

The unit produced a total of 5,000 pigs in 2019 which is around 25 pigs/sow/year. The high number of gilts used in one of the trials carried out

in the unit was probably related to this low productivity. Once research on gilts is finished, the total production in 2020 is expected to be around 5,700 pigs which is around 28.5 pigs/sow/year. The target for 2021 would be to produce around 6,200 pigs which would be 31 pigs/sow/year.

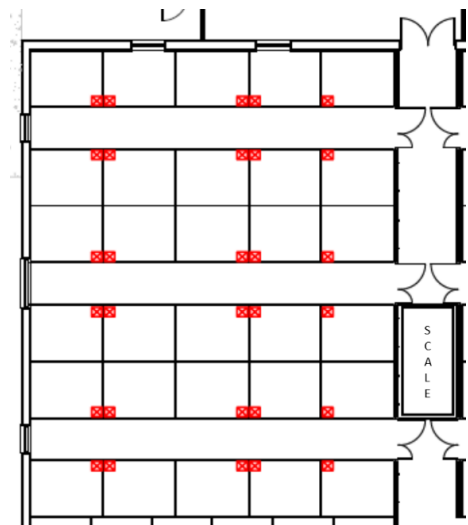


Figure 1. General structure of a weaner room in the Teagasc Pig Research Facility. Pens are equipped with wet-dry feeders and have space for 10-14 pigs.

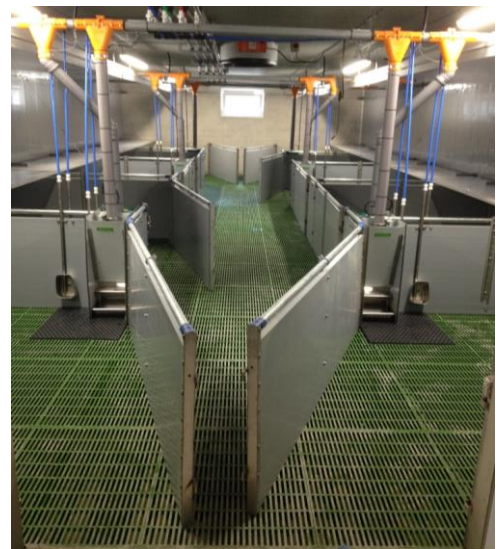


Figure 2. Design of the weaner pens in the Moorepark Pig Research Facility.

How do we plan to achieve this target?

The sows in Moorepark are producing around 14 weaned pigs per sow. If the number of sows was kept as it is at the moment (28 sows/week), we could target around 6460 pigs produced per year as shown in table 1. However, in recent results obtained in [pigfeed](#) project we observed that for the pen design used in Moorepark, stocking above 12 pigs per pen has a direct effect on performance of 3-4kg less at sale. Thus, after analyzing the [economic benefits](#) of both options, the decision was to remove pressure from the farrowing rooms and target for 27 sows per week.

Table 1. Number of pigs produced in the Teagasc Pig Research Facility per batch.

Sows per week	Pigs weaned per sow	Total pigs weaned	Weaner pens	Pigs per pen	Total pigs per year*
26	14	364	30	12	6002
27	14	378	30	12-13	6200
28	14	392	30	13	6464
30	14	420	30	14	6925

Accounting for 3% mortality in weaners and finishers.

Key changes last year

Weaning pigs as intact litters: In the past, all pigs in our PRF were reorganized by size at weaning to keep homogeneity. Based on research carried out in Moorepark this mixing results in high levels of aggression and affects performance. Pigs are now moved as intact litters which also minimizes the time for weaning. Then litters are equalized to an average number of pigs by removing the small pigs from each litter. Because the rooms have 30 pens each, with 27 sows farrowed per week, there is

always 3 pens dedicated to small pigs in the room. These pigs are always moved with the group keeping a strict all-in-all-out.

Not mixing pigs along the cycle: Pigs are moved again as intact litters to the finisher pens. In a recent experiment carried out in Moorepark, mixing pigs when moving to finisher stage resulted in a reduction of 6 kg in sale weight. Keeping intact litters from birth to sale is not possible in all existing facilities but should be considered in all facilities built in the future due to the clear benefits on performance.

Increase in sale weights: Stopping the mixing of pigs in the finisher stage has allowed an increase in sale weight of the animals with the same facilities (+5kg). When comparing the options of having 27 or 28 sows per week, one of the main factors in the decision was the fact that with 27 sows we will be able to keep the increase in sale weights which maximizes net benefit. With 28 sows the pressure on the pigs will potentially reduce growth and reduce net benefit.

Taking the time to do the calculations

In pig production we tend to keep going as we are because there are always things to do and little time to think. This example in our PRF shows that it is worth re-thinking what you do in your farm every now and then, considering new research results. Each farm is different, and you must take your context into account; health status, performance, facilities available. However, it is often the case that farms can make simple changes to optimize space and maximize profit.

For an Easier Life – Maintenance on Farms

Tom Fallon

Farm Buildings & Infrastructure Specialist

Are there maintenance jobs or improvements that could be made around your farm to make life easier? It might be helpful to think of things that have gone wrong or problems noticed previously or perhaps near misses. Beware of anything that can cause injury to pigs such as protruding gates, pen divisions, worn feeders, etc.

A good starting point would be making a list of what's wrong or needing improvement. It might be helpful to think in terms of what frustrates you or others working in the farm. What do other family members, fellow discussion group members, your Vet or Teagasc Advisor think? It may be as simple as having more hanging gates or barriers so that pigs can be moved efficiently. Think also in terms of reducing stress and injury to pigs.

Apart from reducing stress, doing regular maintenance and improvement to the farm will also improve profitability. Buildings are expensive assets and they will have a greatly reduced lifespan if not properly maintained. Many farmers have found that overcrowding and inadequate facilities have a big impact on animal performance and profitability. There is a realisation that more can be made with less- keeping less stock can increase profitability.

The cost of doing small jobs can mount up so we recommend that you do a budget and calculate how much you'll need to complete the job(s).

Smooth slats and worn surfaces

Slipping can cause serious injuries to animals. Pay particular attention to the condition of surfaces in passageways and around feeding areas of pens. Here pigs crowd and push each other as they compete for feed. Smooth surfaces and broken edges can lead to falls or damaged hooves.

Slippery surfaces will potentially reduce thrive and increase stress levels. Sand blasting (great care needed) or overlaying with slat mats can help to sort the problem. Slat mats can also provide temporary cover for worn slats around feeders. Worn or cracked floors can become a health hazard as they are impossible to adequately clean.

Time to Check Slats?

The design lifespan of most shed components built to grant specification is at least 20 years. Intensive use, slurry reaching the slats, continual stocking with pigs (now being sold at heavier weights) will shorten the lifespan of slats.

Slats and manhole covers need to be replaced before they fail. It is important that they are checked each year. Manhole covers need to be checked after every use: check for any damage, and that they are lying down or have been put back properly.

Power hose out the house completely and use the hose to clean the sides of the slats as far as possible. Examine the entire floor (but especially the centre of the slats) for sagging, cracking, rust staining and spalling of concrete (breaking of layers or pieces of concrete from the surface edges). The placing of a straight edge across the centre of the slats will indicate which slats have sagged. Check for longitudinal cracks along the sides of the slats (a few cm up from the bottom of the slat). If present use a fork to push at the crack to see if the concrete at the bottom of the slat comes away. It will be easier to see this if the slurry is about a metre from the top. If any concrete comes away from the bottom of any slats they all need to be replaced.

Farmers might be tempted to get an extra year or two out of the slats but this would be foolish. Grant aid is available under TAMS II to replace slats. When replacing slats it is wise to take the opportunity to remove the inevitable silt build up at the bottom of tanks. See Department of Agriculture, Food and the Marine Specification S123S (available on www.agriculture.gov.ie).

Teagasc does not recommend any farmer entering a slatted tank. There are specialist companies that use a breathing apparatus or an external fresh air supply to enter tanks and check slats.



An endoscope type attachment for a mobile phone/camera (costs about €30) could be very useful to check the underside of slats.

5 Tips on Building Maintenance

- Get an electrician to check/audit the electrical or power system that it hasn't become compromised from vermin etc.
- Fix leaks in drinking water systems and improve frost protection on pipework that had problems in the past, consider

installing flow meters as an early warning system.

- Repair, improve or replace degraded surfaces and pen slats
- Paint/Oil all steel work subject to corrosion
- Clean out all gutters and repair or replace damaged gutters and downpipes

Other areas that could be addressed: cleaning lamps/lights and replacing old fluorescent tubes with LED lighting; replacing translucent roof lights with new sheets that have safety grids.

**SAFETY
FIRST!**

Please always prepare a Safety Plan before undertaking specific projects, too many farmers have fallen from heights or had mishaps around welders, etc.

Do a written risk assessment on all these tasks before any work commences. Think about dangers involved especially the foreseeable, more risky, and more likely ones. Write down the risks and hazards and make sure everyone involved is made aware. Use the right equipment and wear appropriate PPE. As some of this type of work is not the normal day to day work on a farm it may be safer to employ someone competent in this area instead.

New Tools to Benchmark your Farm Coming Soon

Edgar Garcia Manzanilla

What is benchmarking?

All farmers benchmark their farms all the time even if they do not do it consciously. When you are asking another farmer about his/her figures, when you are comparing costs between farmers, or when you are comparing your performance with farms in other countries, you are benchmarking your farm. This helps farmers to keep track of the progress made by other farms, to set targets for their farms and ultimately to improve their production performance.

When benchmarking is done with large numbers of farms in a coordinated way, the improvement in performance is even faster. This is one of the reasons why countries like USA or Spain are so efficient in producing pigs even when some of the costs are not the lowest; data is always available, and the changes are targeted to those farms and areas that will provide the most progress.

Benchmarking reports

The Teagasc Pig Development Department keeps production data from almost two-thirds of the sow herd in the country. This data is collected in the eProfitMonitor and is used to publish annual summaries and for advisory visits.

However, this data could be used even further for individual benchmarking between farmers in an anonymous manner. Teagasc will be sending from next month a benchmarking report to all the farmers providing data to the eProfitMonitor. A selection of performance indicators (born alive per litter; litters per sow per year; average dead weight sold...) will be included in these reports all presented with the same format. The basic format of the data has been already used by Teagasc in previous projects and is shown in figure 1.

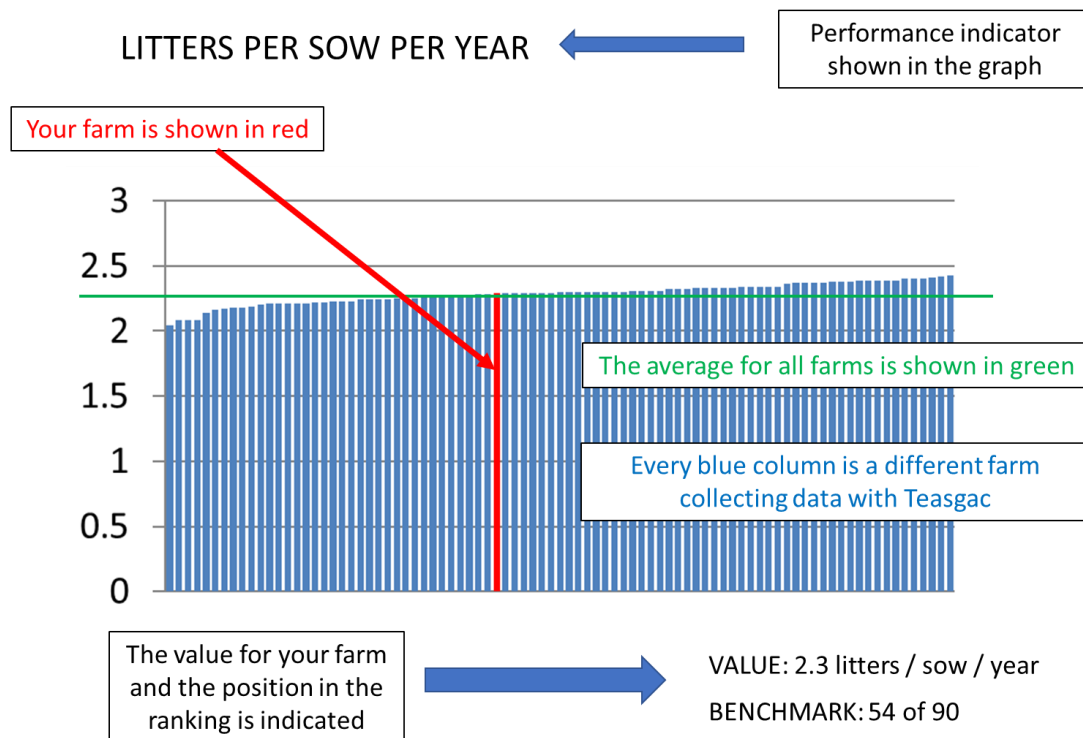


Figure 1. Example of one of the graphs (litters per sow per year) used in the dashboard system prepared by Teagasc.

With this report, each farmer will be able to compare his/her farm (column in red, figure 1) to all the other farms in the system without knowing who the rest of farmers are. For the farm in figure 1, for example, it shows that it is producing 2.3 litters per sow per year and that this is the 54th best farm of the 90 farms in the system. We can also see that the farm is around average (green line) in this performance indicator. It would be up to the farmers, looking at this and other performance indicators, to decide if they need to take any action to increase litters per sow per year or if they are ok with the current figures.

Animal Health Ireland (AHI) will also be using the same format in their PigHealthCheck programme. Thus, the data available to the farmer in this format will include not only production performance but also biosecurity scores, health status from carcass inspection or antibiotic use, among others. The final version will be an online dashboard and the data will only be accessible to the farmers and whoever they decide to give access.

What else can these data show?

These data are not only useful for individual farmers. The analysis of this data will also produce results like those shown in figure 2. In this figure you can see the feed conversion efficiency of the same farms shown in figure 1. Each column represents a farm. Those farms in blue are

negative to Blue Ear and those in red are positive. It is easy to appreciate in the figure that the concentration of farms positive to blue ear is higher when the conversion efficiency is higher. It does not mean that you cannot have good performance being positive for Blue Ear, but chances are that it takes more work and money. Based on this observation, if we think that Blue Ear is a main factor for efficiency, we can do an economic analysis and decide if it would be worth repopulating the farm at some point.

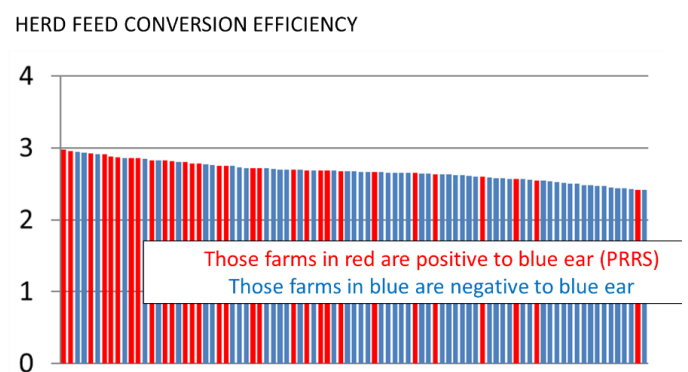


Figure 2. Benchmarking of Irish pig farms by herd FCE showing Blue Ear status.

These are only two examples of how this data can be used but the benefit for the farmers will be more as the data becomes available. Remember that Teagasc will be sending the reports by mail next month. If you are providing data to Teagasc eProfitMonitor and you do not receive your report in October please contact your advisor.

Skills Series Videos Coming Soon

We have been working on a series of educational skills videos and factsheets, focusing on a variety of essential skills in pig production, which will be launched in September with new videos available on our website fortnightly.



Digital Media

Our digital media resources have been growing, with our Let's Talk Pigs webinars and new episodes of The Pig Edge available every second Friday, as well as new posters and infographics on a range of subjects. All available in the publications section on our website <https://bit.ly/PDDPublications>

Let's Talk Pigs Webinars

The next webinars in our Let's Talk Pigs series will focus on 'Antibiotic use & reduction' with Jens Sorensen on Friday 21st August at 1 pm, and 'Supplementary milk in the farrowing room' with Charlotte Lauridsen on Friday 4th September at 1 pm. To join us for these live lunch time webinars register here <https://bit.ly/LetsTalkPigs>

Best of Luck to Maria

The Pig Development Department wish Maria Rodrigues da Costa the very best of luck as she leaves Teagasc after five years to take up a new position with SRUC in the Epidemiology Research Unit in Inverness. Maria completed her PhD and post-doctoral research with the pig development department, working on the PathServPig and AMURAP projects. Maria has been a fantastic colleague and we wish her every success in this next chapter.



"After almost 5 amazing years in Teagasc, it is time for a new adventure. It was a pleasure to study, learn and grow with my colleagues in the Pig Development Department. Thank you to all the farmers and slaughterhouses who welcomed me so dearly over these years. Thank you to all the pig vets who so often put up with my questions and taught me so much. Keep up the great work, I'm sure we will keep in touch." – Maria



For more information visit our website
www.teagasc.ie/animals/pigs

This newsletter was edited by Ciarán Carroll
Teagasc, Moorepark, Fermoy, Co. Cork.

For more information on any of the content
contact Ciarán at ciaran.carroll@teagasc.ie