

Editor: Amy Quinn

## Welcome to October's Newsletter

Ciarán Carroll



Welcome to the October edition of our monthly newsletter. Pig prices and margins remain good for the sector and there's an expectation of another pig price increase coming soon.

The main event for the Pig Development Department (PDD) during October was the Annual Pig Farmers' Conference held at Horse & Jockey and Cavan. Both days were very well attended with a good atmosphere on the back of current margins. The theme of the conference was "Focusing on the Future" and there were some excellent presentations highlighting what we need to do to thrive in the future. The Panel Discussion was new and gave attendees the opportunity to question the panel on key topics of the day. One area that received a lot of attention was the threat of African Swine Fever and what we need to do to prevent it from entering Ireland. Biosecurity on farms is a must but we also need to improve our efforts at a National level at ports and airports, to inform the

non-farming general public about the risks associated and what they can do to help.

Our guest speaker at the conference was renowned geneticist, Dr. John Mabry from Iowa. John gave a great presentation on the economic impact of genetic progress on fitness traits in our pigs which resulted in plenty of discussion at the conference and in the following days.

We are looking for nominations for the EUPIG project 2020 Best Practice awards. This project has been running for three years now and each year holds a Best Practice Grand Prix under four themed areas (Health Management, Precision Production, Animal Welfare and Meat Quality). More details are provided further in this newsletter.

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- A letter to the IFA Pigs Committee
- Record 3 form - Why not do it now?
- EUPIG Grand Prix 2020 now open
- Pre-weaning rearing environment & post-weaning growth

## A letter to the IFA Pigs Committee on the future of the Irish pig industry

**Edgar Garcia Manzanilla**

The following letter was prepared at the request of the IFA Pigs Committee in response to a consultation meeting.

*To the IFA Pigs Committee,*

*The unfortunate spread of ASF (African swine fever) to China and other Asian countries has changed the meat market at an international level and this effect will last for some years. However, we should not think this situation will last forever and we should prepare for the long term future while ensuring that we are doing all we can to avoid ASF reaching Ireland.*

*In response to the new international context, countries like Brazil and Spain, among others, plan to increase their production of pig meat. Brazil is expecting an increase of around 12% in production in the coming years and Spain continues to increase year on year with a 2% increase last year. China's pork demand will absorb all this meat for the moment.*

*How and when China's pig sector will recover from ASF is difficult to predict. However, we know China has shown an impressive ability to recover from such problems in the past. Examples like avian flu tell us that the Asian market could recover from ASF faster than predicted by using approaches like zoning and compartmentalisation.*

*Pig production is also under more social pressure than ever due to issues like antimicrobial resistance, ZnO use and welfare concerns.*

*Countries like Denmark and the Netherlands adapted to these public demands fast as a commercial strategy. Now countries like Germany and Spain are taking advantage of the economic context to upgrade their pig sectors for future competitiveness. As an example, Spain has carried out biosecurity surveys in all pig farms in collaboration with the government (with specific investment in aspects like external fencing against ASF), the Spanish pork board (Interporc) has established a new certified animal welfare scheme to endorse good practices within the industry (<https://www.interporcspain.org/animal-welfare.html>), and the reduction in the use of antimicrobials is progressing very fast.*

*The Irish pig sector also needs to adapt to the new challenges, as rapidly as possible, taking advantage of the good economic situation. With Brexit coming, and once China has recovered from ASF, the exports market will be more demanding than ever, and Ireland needs to be, at least, as good as their direct competitors. This will require collaboration and coordination between the different stakeholders following the example of other countries.*

*Teagasc, AHI and DAFM have started programmes on the area of health and welfare to catch up with the advances made by other countries. So far, assessments for biosecurity and welfare, funded through the Rural Development programme, are available to farmers through AHI in collaboration with the PVPs in the pig sector. Antimicrobial use recording as part of the iNAP will start in November 2019 (a letter was issued*

recently to pig farmers about how to enter their antibiotic usage data in the national AMU database using the DAFM AgFood website). These programmes will hopefully become part of the next Bord Bia requirements to keep the Irish pig sector competitive at an international level. At the same time, Teagasc, Bord Bia and DAFM are rolling out the use of LEAN methodology in Irish pig farms to improve efficiency. These actions are

a good start and more actions are planned for 2020 involving more stakeholders.

The coming years will be critical for the future sustainability of the Irish pig industry. From Teagasc, we will offer all the support and resources available to assure that Irish pig farms remain competitive.

Teagasc Pig Development Department

## Record 3 form - Why not do it now?

Gerard McCutcheon

All farmers who supply organic manure/fertiliser produced on their farms to other farms are required to submit records to the Department of Agriculture, Food and the Marine before December 31<sup>st</sup> 2019. This applies to any farmer who exports any “organic fertiliser” (including pig, bovine, sheep, or poultry manure) and is a requirement of the “nitrates” regulations (EC Good Agricultural Practice for Protection of Waters Regulation of 2017 - SI 605 of 2017).

The Nitrates Division of the DAFM have requested that movements of pig slurry are declared to the Nitrates Division on a **Record 3 Form only** and submitted by post or email before the legislated deadline of December 31<sup>st</sup>.

The “exporting” holding must submit the farmers’ names who took manure, their herd number and the volume of manure taken by each farmer in 2019 on separate forms for each recipient farmer. The form (Form 3) must be counter signed by the recipient farmer and by the farmer who “exports” the organic fertiliser. The Record 3 Form can be downloaded from the DAFM website at this link:

<https://www.agriculture.gov.ie/ruralenvironmentsustainability/environmentalobligations/nitrates/nitratesrecords/>

You must include details of

- The total volumes of manure taken from your holding by each farmer and specific dates
- Their herd number and address
- The total nutrients in the manure exported (i.e. Nitrogen and Phosphorus)
- The signature of the recipient farmer and the “exporting” farmer confirming that these details are correct

A copy of the signed form should be left with the recipient farmer for their records. These forms posted to the Nitrates Section of DAFM, Johnstown Castle Estate, Wexford. The only acceptable proof of postage will be an Express Post Receipt or Registered Post Receipt. There is also an option of e-mailing the forms (as a PDF file) through the year to [nitrates@agriculture.gov.ie](mailto:nitrates@agriculture.gov.ie). This option is worth considering to reduce the burden of paperwork later in the year. Do not send a copy in the post if you have already emailed it and always include the Herd number of the “exporting” farm in the email subject title.

**This must be submitted before 31<sup>st</sup> of December, 2019. Do it sooner rather than later!**

## EUPIG Grand Prix 2020 now open

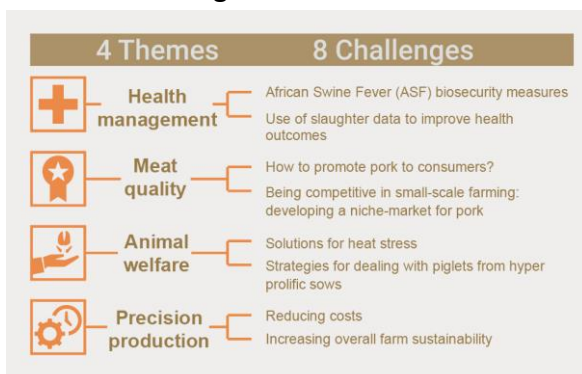
Ciarán Carroll



Submissions to the 2020 EUPIG Grand Prix are now open. This project, involving a network of organisations from 13 EU countries, seeks to identify and promote the best practices used on EU pig farms. Ireland had a winner in the inaugural year (2017) and again this year. The closing date for submissions is Friday 31<sup>st</sup> January 2019.

There are four theme areas (Health Management, Precision Production, Animal Welfare, Meat Quality), with two challenges per theme. If you have a best practice for submission contact Ciarán Carroll at [ciaran.carroll@teagasc.ie](mailto:ciaran.carroll@teagasc.ie) or your Specialist Pig Development Advisor to upload the best practice to the EUPIG portal.

The 2020 challenges are:



- **Health management**

- **African Swine Fever (ASF) biosecurity measures:** on farm and throughout the supply chain to include national initiatives where they are supported directly by a producer.
- **Use of slaughter data to improve health outcomes:** how the analysis of slaughter data can be used to improve the health of pigs.

- **Precision production**

- **Reducing costs:** use of management systems and styles such as LEAN management to lower the cost of production whilst maintaining or even adding value to the products from pigs.
- **Increasing overall farm sustainability:** novel technologies and processes (not separate) or processes and management strategies, that allow a reduction in either resource use as an input and or reductions in 'wastes' as outputs. To include reductions in greenhouse gases, plastic waste and waste energy.

- **Animal welfare**

- **Strategies for dealing with piglets from hyper prolific sows:** novel technologies, clear protocols or procedures that allow successful rearing of piglets i.e. higher target weight at weaning and lower mortality from hyper prolific sows.
- **Solutions for heat stress:** focusing on finishers/slaughter pigs and adult breeding stock e.g. dry sows.

- **Meat quality**

- **How to promote pork to consumers?** This could be producer informed in-store

- materials, working with the retail sector or wider promotional activities to reach the end consumer. A producer must be involved and their involvement would have to be made clear.
- **Being competitive in small-scale farming - developing a niche-market for pork:** for farms that have developed niche markets for their pig meat.

Full details on the project and challenges can be found on the EUPIG website at <https://www.eupig.eu/grand-prix>.

## Research update: Can pre-weaning rearing environment improve post-weaning growth?

Keelin O'Driscoll & Orla Kinane

An update on the pre-weaning mortality data from a recent free-farrowing trial was provided in the May newsletter this year. Further information from this trial is now available so this article will look at some of the further interesting findings from this study.

In general, free-farrowing crates have been associated with increased levels of pre-weaning mortality so the data from this trial was examined to see what could be causing this. In this study no difference in overall mortality rate was found between the free-farrowing FREE crates and the standard crates (CONTROL). The pattern we did see, however, was that older sows appeared to be responsible for much more crushing than gilts and lower parity sows. We also found that when it came to the timing of mortality, there was

indeed more crushing in the FREE crates than the CONTROL crates after day 4 post farrowing, when the crates were opened. However, when we looked at the other causes of death, these were much lower in the FREE crates, particularly mortality due to hunger. We concluded that for the piglets which don't get crushed, there were likely fewer health and welfare problems during the lactation period in the FREE system than the CONTROL.

It is widely understood that a good weight and health status are essential in preparing piglets for adapting to their weaned environment, and also in optimising their post weaning growth. (For a good overview of how to prepare piglets for weaning, see the 2019 pig conference presentation by Peadar Lawlor and Laura Boyle).

Thus it stands to reason that the piglets from the FREE system could be expected to perform better than those from the CONTROL system, not only prior to weaning, but for the rest of their lives. Therefore this study followed these piglets beyond weaning from their respective systems.

### Study design

In September 2018 we started the study, and it concluded in September this year when the last pigs were sent to the factory. Over the year, a total of 48 litters of piglets were tagged at birth, half from the FREE crates treatment, and half in CONTROL crates treatment. Piglets were weaned as intact litters, and those that had at least 10 survive until slaughter were included in the post weaning part of the study, to control for the effect of increased space allowance in pens.

Pigs were weighed at birth, at 7 days, 14 days and 21 days old, and at weaning. They were also individually weighed at transfer from the weaner house to the finisher house and at weekly intervals approaching slaughter weight, from approx. 9 weeks after entry to the finisher stage. At each of these final weighing days those that weighed over 105kg were sent for slaughter. On week 12 after entry to the finisher stage all remaining pigs were sent for slaughter, regardless of weight.

Feed delivered to each pen in the weaner and finisher stage was downloaded daily from the pig units feed system, and the average daily feed intake (ADFI) at pen level was calculated until the day that the first pigs from each pen went to slaughter. Combined with pen weights at weaning, the move to the finisher house, and at the first slaughter date, average daily gain (ADG) and feed conversion efficiency (FCE; ADFI / ADG)

for both weaner and finisher stages were calculated.

### Pre-weaning performance

Prior to weaning, we found that there was a tendency for the pens of pigs originating from the FREE crates to have heavier weights than those originating from the CONTROL crates as time went by (Figure 1). There was also a tendency for piglets from the FREE pens to have a greater ADG to weaning ( $0.249 \pm 0.007$  g/day) than those from the CONTROL pens ( $0.233 \pm 0.007$  g/day), which translated into a tendency for a heavier weaning weight (FREE =  $7.83 \pm 0.19$  Kg v's  $7.40 \pm 0.18$  Kg).

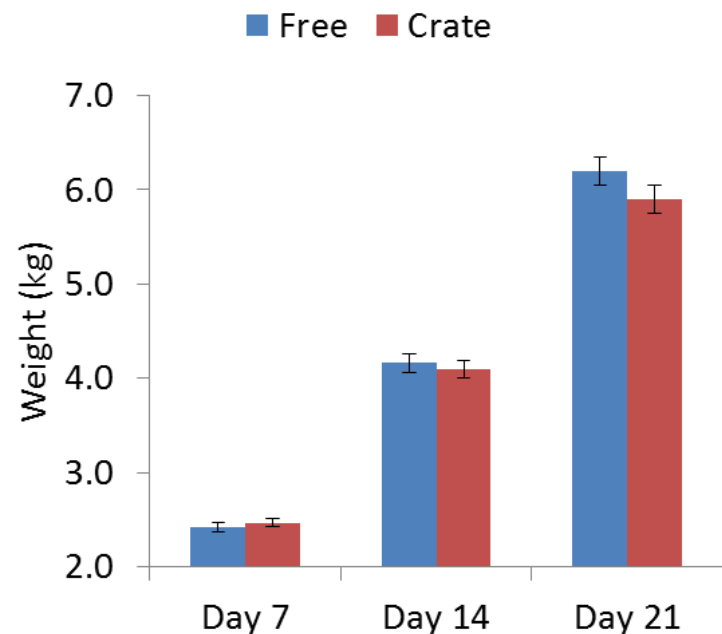


Figure 1. Weights of piglets at days 7, 14 and 21 of age in the free farrowing and crated sow pens

### Post-weaning performance

After weaning, the observed differences in performance became even greater than those pre-weaning. Pens of pigs from originating from the FREE crates had a higher ADG overall than

those in CONTROL ; Figure 2 A). This translated into FREE pigs being heavier overall. They tending to be so at the move to the finisher stage, and by the time of the first weighing date, 9 weeks into the finisher stage, the difference was significant ( Figure 2 B). There was no difference in ADFI between treatments, and due to this and the improved weights, pigs which had been in the FREE treatment tended to have an improved FCE overall ( $1.87 \pm 0.03$ ) than those in CRATE ( $1.94 \pm 0.03$ ). When it came to the final weight that pigs achieved when they were sent to the factory, again, pigs which came from the FREE treatment were heavier ( $114.7 \pm 1.2$  Kg) than those from CONTROL ( $110.8 \pm 1.0$  Kg), and on average, they took fewer days to get to the factory (FREE =  $147.6 \pm 0.6$  v's  $149.2 \pm 0.5$ ).

### Conclusion

This is the first scientific study to our knowledge that has followed pigs which were reared in FREE farrowing crates, up to slaughter age. We found clear benefits to animal performance post weaning in pigs from the FREE crates, which was an unexpected result. This demonstrates that the welfare benefits of the free farrowing system (a larger pen, more space to nurse, a more free relationship with the sow) clearly carried over to improvements in animal performance even after the animals were all in a similar environment post weaning. Thus adoption of FREE farrowing crates has potential not only to improve the welfare of piglets and sows, but could also have economic benefits for the producer. Results from this study will be entered into the Moorepark Pig Production Model, so that we can more accurately estimate the financial benefits.

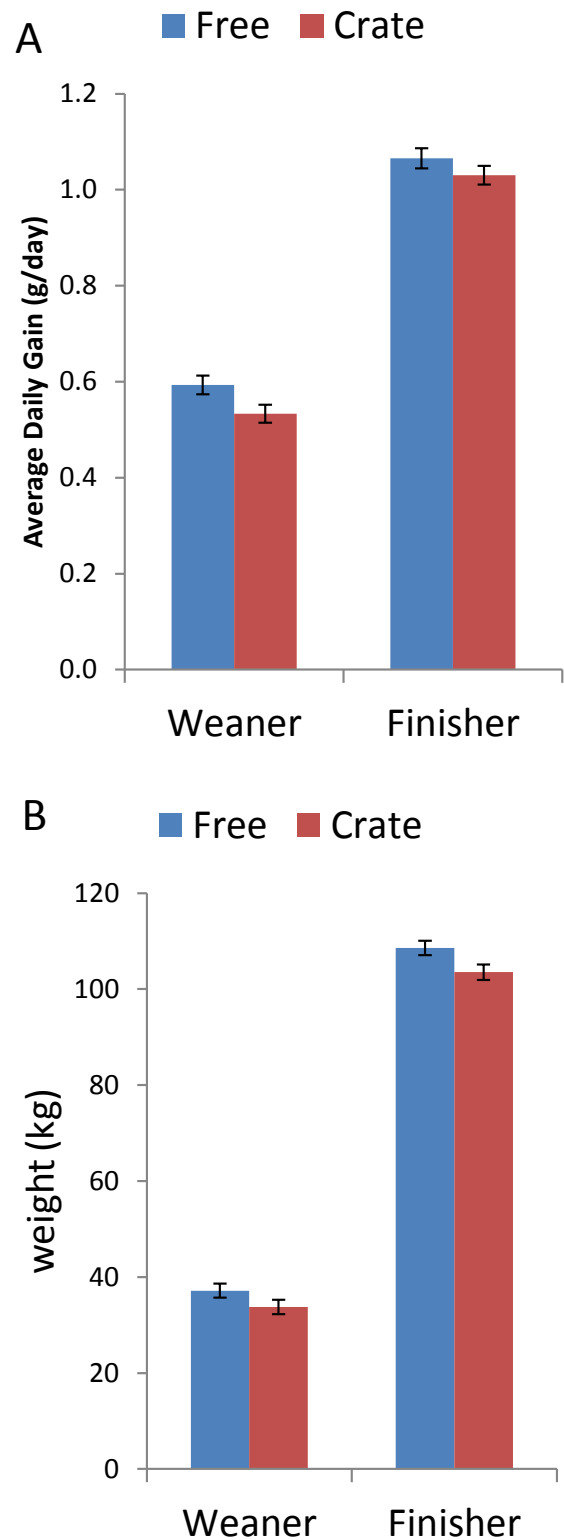


Figure 2. Average daily gain (A) and Liveweight (B) of piglets from the FREE and CRATE treatments during (A) and at the end of (B) the weaner and finisher stages

### ONE HEALTH: Awareness to Action Antimicrobial & Anthelmintic Resistance Conference

The forthcoming ONE HEALTH - Awareness to Action, Antimicrobial and Anthelmintic Resistance Conference, is taking place on 27th November in Tullamore Court Hotel. It will focus on increasing awareness amongst farmers and professionals serving the agri-food industry. There will also be an emphasis on clear concise practical actions which can be taken on Irish farms to reduce their need to use antimicrobials and anthelmintics.

Resistance to antimicrobials is one of the major current challenges facing the human population. It is estimated that by 2050 that 50 million people will die annually due to antimicrobial resistance (AMR) unless major steps are immediately undertaken to reduce antimicrobial usage.

Conference is free to attend but registration is required. For more information and to register please visit [www.teagasc.ie/amrconference](http://www.teagasc.ie/amrconference)

### QQI Level 5 Pig Course

Please send in your final names for the part time QQI Level 5 Certificate in Agriculture in Pigs. This course is aimed at enhancing the skills and knowledge of farm operatives and is due to start at the end of November. Please email [amy.quinn@teagasc.ie](mailto:amy.quinn@teagasc.ie) if you or any of your staff are interested in completing this course.

### Congratulations Hazel

The PDD would like to congratulate Hazel Rooney on recently submitting her PhD thesis "Maternal Feeding Strategies during Gestation and Lactation

to Optimise Annual Sow Output and to Promote the Growth and Development of Progeny from Large Litters", to UCD. Hazel will be staying on with the PDD as a post-doctoral researcher on the TOMI project. This project is a collaboration between PDD's Peadar Lawlor, the Teagasc Food Centre in Moorepark and CIT. The project will be producing infant milk formula by cascade membrane filtration as an alternative to thermal processing using the newly weaned pig as a model to mimic the infant gut, growth performance and total tract and ileal digestibility.

### Teagasc Pig Farmers Conference 2019



The 2019 Pig Farmers' Conference took place on the 22<sup>nd</sup> of October at the Horse & Jockey Hotel, Tipperary and on the 23<sup>rd</sup> of October at Hotel Kimore, Cavan. The theme of the conference this year was "Focusing on the Future" and all presentations on the day incorporated this theme. Our guest speaker Dr. John Mabry from Iowa was very well received speaking on the impact of genetic progress on fitness traits in our pigs. The conference booklet is available on our webpage and the presentations will be available in the coming days at:

<https://www.teagasc.ie/publications/2019/teagasc-pig-farmers-conference-2019.php>



**For more information:**

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

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