

Editor: Ciarán Carroll

Welcome to August's Newsletter

Ciarán Carroll



Welcome to the August edition of our monthly newsletter. Pig prices and margins remain under pressure, despite positive signs from recent significant pig price rises in Germany. The sector here awaits a much needed boost. Following on from last month's article on reducing production costs, the Pig Development Department (PDD) will deliver a series of Pig Seminars on cost reduction from 11th to 13th September at Ballyhaise, Portlaoise and Moorepark (full details on venues and times later in newsletter). August has been a busy month for the PDD. Meetings were held with AFBI on shared research ideas and with DAFM on antimicrobial use reduction. PDD staff attended the Energy in Agriculture open day at Gurteen Agricultural College, the Digestive Physiology of Pigs symposium in Brisbane and the annual meeting of the European Federation of Animal Science (EAAP) in Croatia. Indeed great success was enjoyed by PDD at the meeting with our student, Jen-

Yun Chou, winner of the EAAP 2018 Early Career Scientist Award (full reports to follow).

A very useful shared learning meeting was held in Portlaoise on the application of Lean Principles in pig production project. Farmers involved in the pilot project were very positive about what they learned. Discussions between Teagasc, Bord Bia, Enterprise Ireland and DAFM are now taking place to investigate the roll out of a new project to the broader pig sector. The National Ploughing Championships take place from 18th-20th September at Screggan, Tullamore. As usual the PDD will be well represented in the Teagasc marquee so make sure to call into us when you visit. Finally, our annual Pig Farmers' Conference is only around the corner (23rd October at Cavan and 24th October at Horse & Jockey). Put it in your diary now.

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InterPig 2017 Performance – How does Ireland Compare?

Gerard McCutcheon



The figures from the Interpig meeting which was held in Italy in July 2018 are due to be finalised and published in the next few weeks. These are the figures that were presented by each country representing their performance in 2017. They are a benchmark by which we can compare our performance.

The performance figures from Denmark, France, Spain, and the Netherlands are presented below. They are shown alongside the Irish performance. The Irish figures represent 77,000 sows or 52% of the national herd as compiled on the Teagasc e-Profit Monitor record analysis system.

Spain has become the largest pig producer in the EU. The figures comparing sow performance are shown below in Table 1.

Table 1: Components of the number of pigs weaned/sow/year for a number of countries

	DK	Fra	Spain	NL	Ire
Born Alive / Litter	16.9	13.8	13.5	14.8	13.5
Pre-weaning Mortality %	13.6	14.2	13.7	13.4	10.7
Weaned / Litter	14.6	11.9	11.7	12.8	12.1
Litters / Sow / Year	2.28	2.34	2.31	2.36	2.36
Weaned / Sow / Year	33.3	27.8	27.0	30.3	28.5

The born alive figures in Ireland have improved over the last number of years to 13.5 pigs born alive per litter in 2017. The average born alive figures went up 0.6 pigs per litter to 16.9 pigs in the Danish herd in 2017. While the Danes have higher pre-weaning mortality the number of pigs born alive still gives them a higher number of pigs weaned per sow per year.

The number of pigs produced per sow is the number born alive minus all mortalities. It is a very good parameter to use to compare performance. The post weaning mortality figures and the number of pigs produced/sow/year are shown below in Table 2.

Table 2: Post weaning mortality and the number of pigs produced/sow /year for a number of countries

Mortality	DK	Fra	Spain	NL	Ire
Weaner %	3.1	2.8	3.7	2.5	2.9
Finisher %	3.1	3.6	3.6	2.4	2.2
Post Weaning %	6.2	6.4	7.3	4.9	5.1
Pigs Produced/ Sow /Year	31.2	26.0	25.1	28.8	27.0

Each country has a different live-weight at slaughter. It is highest in France and the Netherlands (120.8 and 120.6 kg respectively), lower in Denmark (113.7 kg) and lowest in Ireland and Spain (110.8 and 110.4 kg LW respectively).

The Danes achieved the best average daily gain with Spain showing the lowest ADG from weaning to sale. These figures are shown below in Table 3.

Table 3: Feed performance from weaning to sale

Weaning to Sale	DK	Fra	Spain	NL	Ire
Days	139	163	174	167	148
Kg of Gain	107.2	114.1	104.4	112.8	103.8
Kg of Feed	261	285	245	274	249
ADG	771	699	600	675	703
FCE	2.44	2.50	2.35	2.43	2.40

Our growth rates compare favourably to the French and the Dutch but are lower than the Danes. Our feed conversion figures are similar to the Danes but higher than those figures achieved in Spain. There is a lot of contract rearing of pigs in Spain which is closely monitored by veterinary inspections and this may be the reason for the very good feed conversion even though the growth rates are lower.

When we look at the feed costs in each country we see that the Danes have the lowest feed cost followed closely by the French. Caution is advised here as the Danish and French farmers grow crops on lands that they farm and this appears to contribute to reduced feed costs from their tillage enterprise. Table 4 shows the feed costs reported in the Interpig database for each country. It seems much more sensible for us to benchmark our feed costs against the Dutch and Spanish as they are operating solely as pig producers with no associated land that could reduce their feed costs.

Table 4: Feed costs for each country

	DK	Fra	Spain	NL	Ire
Sow €/t	208	243	228	250	261
Weaner/Rearer €/t	298	335	398	357	389
Finisher €/t	213	214	251	258	261
Feed cost c/kg DW	79	83	91	90	100

The bottom line was that for 2017 based on their feed costs, and the figures above the average feed cost per kg of carcass was 10 cent lower in the Netherlands and 9 cent lower in Spain than in Ireland. For the previous year the cost differential was 20 cent and 13 cent lower in the Netherlands and Spain respectively.

We still need to work to reduce this cost differential. How do your feed costs compare? Are you feeding the correct nutrients to your pigs at the correct stage of growth or are there further efficiencies to be made on your farm?

A booklet has recently been published by Teagasc showing all the figures from the 2017 ePM records. The booklet is titled "National Pig Herd Performance Report 2017". This is available from your Teagasc Advisor or electronically on the Teagasc website at: https://www.teagasc.ie/media/website/publications/2018/Teagasc_Pig_Herd_Performance_Booklet_2017.pdf



Emerging Diseases - African Swine Fever

Ciarán Carroll

In recent years when we worried about emerging pig diseases on a world scale we talked about Porcine Epidemic Diarrhoea (PEDv), especially after its devastating effect on the US pig industry just over five years ago. At the time passing mention was given to African Swine Fever (ASF) as it was known to exist in parts of Eastern Europe. Unfortunately, over that five years ASF has not only spread around Eastern Europe, it is now much closer than before. While previous outbreaks were confined mainly to wild boar populations there have been recent outbreaks in both wild boar and domestic pigs in some European Member States, some involving large commercial farms. The most recent commercial farm outbreak occurred in Lithuania on 7th August in a breeding unit containing approximately 19,500 pigs. The total number of outbreaks in domestic pig farms in the EU in the first seven months of 2018 (750) has already surpassed the total number of outbreaks for all of 2017 which numbered 265 in total. This is largely due to the incursion of the disease into Romania and also a slight increase in the number of cases in Poland. In the past month four cases of ASF has been confirmed in China, so this disease is moving and spreading!

What is African Swine Fever?

ASF is a virus and is one of the most important and serious diseases of domestic pigs. There is no treatment or vaccine available to control it. It is commonly present in countries of sub-Saharan Africa. Until recent occurrences outlined above there were limited outbreaks occurred in Belgium in 1985 and the Netherlands in 1986.

It can occur in acute, sub-acute or chronic forms. The acute form causes severe disease from which the majority of affected pigs die. Clinical signs appear after an incubation period of 5-15 days.

The clinical signs of ASF range from mild to severe, depending mainly on the virulence of the virus. The signs may be very similar to those of classical swine fever (CSF) and other pig diseases such as porcine dermatitis and nephropathy syndrome (PDNS).

In acute disease you may see: sudden death of animals, with few signs; high fever (40.5-42°C); reddening of the skin (visible only in pale-skinned pigs) – tips of ears, tail, distal extremities, ventral aspects of chest and abdomen; decreased appetite, listlessness; inco-ordination within 24-48 hours before death; vomiting, diarrhoea (sometimes bloody) and eye discharges; death within 6 -13 days, or up to 20 days; abortion. Mortality rate often approaches 100% (in domestic pigs).

The virus is found in all body fluids and tissues of infected pigs. Transmission occurs by: direct contact with infected pigs, faeces or body fluids (including semen); indirect contact via fomites such as equipment, vehicles or people that have contact with pigs; pigs eating infected pig meat or meat products.

EU Requirements

ASF is a notifiable disease. If ASF is confirmed on a farm, EU legislation requires that all infected and exposed animals on infected premises are killed, carcasses are safely disposed of, infected premises are cleaned and disinfected, surveillance and tracing of potentially infected or exposed animals are carried out and strict control on movements of pigs and pig products within infected areas. ASF can be successfully eradicated if the disease is detected early and controls are rapidly introduced.

What can we do in Ireland?

Vigilance is the key to preventing it from entering our country. Adherence to strict biosecurity measures is a must. ASF can survive for a long time in pig meat and

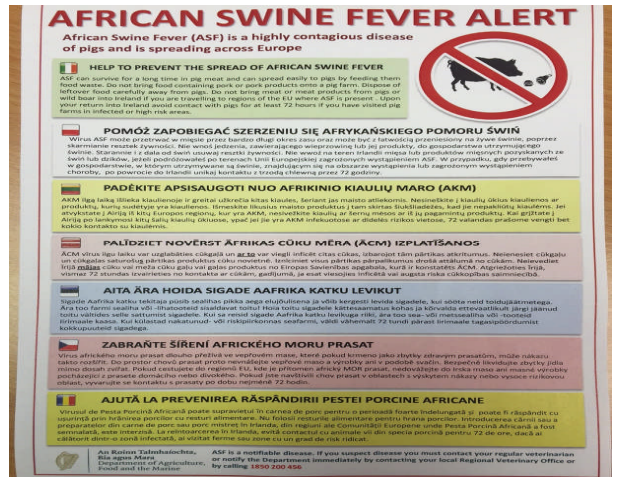
can spread easily to pigs by feeding them food waste. Do not bring food containing pork or pork products onto a pig farm. Dispose of leftover food carefully away from pigs. Do not bring meat or meat products from pigs or wild boar into Ireland if you are travelling to regions of the EU where ASF is present. Upon your return into Ireland avoid contact with pigs for at least 72 hours if you have visited pig farms in infected or high risk areas.

For farms with staff from abroad who may travel home for holidays it is important that you explain to them the risks associated with ASF and precautions they can take to prevent them from inadvertently bringing it into Ireland on their return, including:

- Try not to have any pig contact when they return to their home country for holidays.
- Wild boar hunting is a significant leisure pursuit in many Eastern European countries. We would advise that pig workers at home would desist from partaking in wild boar hunting while on holidays.
- Clothing and footwear are major vectors of ASF. Any footwear that may have been worn while at home should be properly cleaned and disinfected and preferably not worn when you return to Ireland after the holidays.
- A three-day gap should exist and be imposed on workers returning to work on Irish pig farms after the holidays. This could be verified using return tickets as verification of travel arrangements.
- Pork products and Salami-type meats are major vectors of CSF and ASF. Never bring foreign meats back to Ireland and never bring them in sandwiches or lunches onto Irish Pig Farms.

DAFM ASF awareness message

The Department of Agriculture, Food and the Marine has produced a multilingual poster for people who work on or visit Irish pig farms informing them of the risks of bringing pigmeat or pigmeat products such as sausages, salami etc. into Ireland from affected or high risk areas of Europe. The poster is translated into six languages including Polish, Lithuanian, Latvian, Estonian, Czech and Romanian.



It is available to view and download from the Animal Health and Welfare Section of the Department website in both the disease control section at DAFM - African Swine Fever <https://www.agriculture.gov.ie/animalhealthwelfare/diseasecontrol/africanswinefever/> and the biosecurity section at DAFM – Biosecurity <https://www.agriculture.gov.ie/animalhealthwelfare/biosecurity/>

Advice concerning African swine fever is also available for livestock transporters and this information leaflet is also available to download from the Department website in the Trade in Live Animals/Poultry Section DAFM - Animal Health & Welfare <https://www.agriculture.gov.ie/animalhealthwelfare/> and the DAFM - African Swine Fever section (address above).



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Grand Prix 2018 winners announced

Eight pig producers from across Europe have won international awards for their innovation in pig production. They are the winning entrants in the EU PiG Innovation Group (EU PiG) Grand Prix and have each been awarded the title of EU PiG Ambassador.

This annual competition is designed to identify best practice on pig farms and share it with pig producers throughout the European network and beyond.

Two Best Practices from each of four challenge titles (Pig Health, Precision Farming, Pig Welfare and Meat Quality) were selected as EU PiG Ambassadors for 2018. Summaries for each Best Practice are listed below:

Pig Health 1: Different feeds as zinc oxide alternatives (Belgium)

This farrow-to-finish unit is trialling three different types of feed, as alternatives to the previous feed which contained zinc oxide. They are: 1. Feed containing herbs, including oregano, 2. Feed with inert fibres added and, 3. Normal feed. Results to date are positive, e.g. the feed conversion ratio of pigs between 8 and 23kg has improved from 1.58 to 1.40 on the inert fibre feed, while the growth rate has gone up 20g/day to 318 g/day. Piglets from each of the three trial groups are weighed each day and amount of feed is measured. The farm has been antibiotic free since 2012 and has remained so since trying the new diets. The farmer wants to complete five rounds of the trial before deciding which feed type to use in future.

Pig Health 2: Cross-company approach to PRRS (Belgium)

A group of 13 pig farms in the same region have reduced PRRS problems by 30% in a three-year period by working together and learning from each other to help tackle the problem. They share information and have worked out a common plan which includes using a joint vaccination strategy, drawing up biosecurity plans for the individual farms and sharing information about health problems. They've learned that solving health problems on pig farms, both in general and with PRRS specifically, requires a total approach. There aren't any higher costs. They just try to align all the factors relating to PRRS.

Precision Farming 1: Daily manure removal to reduce emissions (Netherlands)

This rearing and finishing farm has improved pig health and growth rates using a daily manure removal system. There are lower feed and veterinarian costs, with the potential to remove antibiotic use. It can also deliver up to 40m³ of biogas per cubic metre by removing fresh manure every day, compared to 10m³ of biogas from 1m³ of old manure. Less ammonia is produced, resulting in a healthier climate within the shed which delivers these advantages for animals, humans and the environment. Emission reduction, for which there are strict standards in the Netherlands, is tackled at the source by collecting the manure in pits

or gutters and there is no need for air scrubbers with high energy costs. The system can be installed in both existing and new-build pig accommodation.

Precision Farming 2: Improving young sow retention (United Kingdom)

This farrow-to-finish producer is measuring and managing gilt body condition more accurately in an effort to help retain more young sows in the herd and improve sow lifetime productivity, while reducing the replacement rate of gilts and associated costs. Better understanding of changes in body condition was needed to avoid animals being over-fit at farrowing and under-conditioned at weaning, for example. Weighing scales and a back fat tester are used to weigh gilts and measure their back fat at position 2 at service and on exit from the farrowing house at weaning. They are also measuring back fat as gilts enter the farrowing house and after 18 days of lactation. The feeding system has been recalibrated to help ensure gilts are fed the correct amount at the right stage and monitoring is ongoing.



Pig Welfare 1: Birth management in loose farrowing systems (Austria)

Piglet losses during lactation have been reduced from 25% to 15% on this breeding unit, which operates a loose farrowing system. The change in management strategy included: changing sow genetics, optimising feeding, and close observation and intensive care of piglets. For example, on day one, putting piglets in the creep area while feeding sows and, on days two and three, watching sows and taking care of piglets during feeding. The initial investment costs of the change in genetics and the increased workload in the first few days after birth have been outweighed by the financial gain from the increased number of weaned piglets.

Pig Welfare 2: Novelty enrichment material (Spain)

Feed conversion ratio has improved and pigs have become easier to handle, since this finisher unit owner began changing the type of environmental enrichment in each pen every day to promote the sense of novelty for the pigs. Novel enrichment is the key management factor for this unit which rears pigs with tails intact. The system involves a rotatory system of chains attached to the roof which moves hanging enrichment material from one pen to another. Enrichment materials include pieces of wood, balls, straw containers, plastic rings and hemp ropes. After a year using this system, the owner also introduced an extra pen called a 'playroom', with a combination of different materials in the same room, to which the pigs are moved once a week and another area with deep straw to root in.

Meat Quality 1: Easy weighing of pigs for slaughter (Netherlands)

This Dutch farm is saving 20 percent on the costs of starter pig feed alone by using smart technology to adjust the feed type and quantity to the weight of each pig in his new finisher building. The building

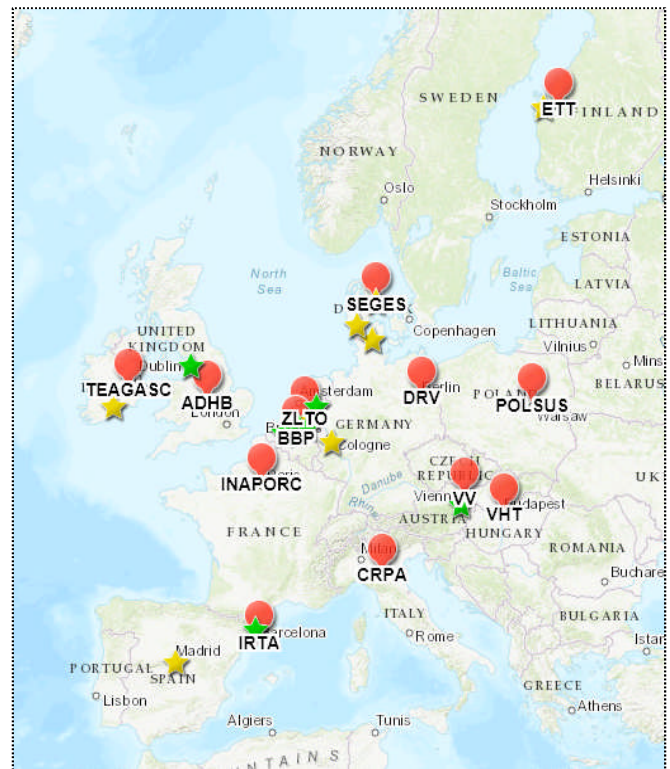
houses 3000 pigs, in groups of 375 and are managed with the NEDAP Pig Sorting system, making the management of finisher pigs in large groups more efficient and more accurate. The system's combined feed and sorting station weighs and identifies each individual pig and automatically leads it to the right feed type or to the separation area. This allows the farmer to feed his pigs optimally and deliver them to the slaughterhouse at exactly the right weight.

Meat Quality 2: Olive oil as a source of fat for pigs (Belgium)

Duroc d'Olives meat is from a light brown-red cross-bred pig that ensures delicious, tender and juicy meat; it's a combination of a white landrace sow and a Duroc boar. The producer has chosen olive oil as a source of fat in the pig feed, which further improves the meat's taste and tenderness. This decision followed a thorough study on feed composition, working with specialists from the University of Ghent. Olive oil contains few saturated fats and many beneficial mono-unsaturated fatty acids. By providing the oil in pig feed, they achieve a similar fatty acid composition in the pork fat, which is good for the health of the customer. The basis of the feed is a mix of pure grains (wheat, barley, maize) fibres and proteins.

More details, photos and videos of how the innovations work in practice will be provided shortly on the EU PiG website www.eupig.eu/best-practice/2018-grand-prix-winning-best-practices

Funded by the European Union's Horizon 2020 research and innovation programme, this project shares new knowledge and practical case studies all in one place online, helping producers across Europe find out about the ideas and systems already out there that can help improve their own farm's efficiency and sustainability.



EU PiG coordinator Ben Williams, of AHDB in the UK, said *"It's a bit like going on a study tour without having to travel. EU PiG is providing another way for producers to pick up information and experience directly from each other. It is about connecting pig producers and others across Europe to help ensure an even more efficient and competitive industry."*

Pig producers can subscribe to receive the EU PiG newsletter for updates; in the meantime, producers can contact their local Regional Pig Innovation Group (RPIG) leaders (Teagasc in Ireland) for more details on the best practices and other innovators in their region.

Cost Reduction Workshop

As you are aware the pig sector is enduring a very difficult period with a current margin-over-feed of 30 cent per kg dead weight. This marks a 43% drop in financial margins over the past 12 months, the lowest in 15 years. With this in mind Teagasc Pig Development Department are organizing a series of seminars to look at what producers can do to reduce production costs. The seminars will focus on practical ways to reduce production costs and will also look at diet specifications for lower production costs.

The seminars will take place at the following venues:

- Ballyhaise Agricultural College, Cavan on Tuesday 11th September
- Maldron Hotel, Portlaoise on Wednesday 12th September
- FBD Hall, Moorepark, Fermoy, Co. Cork On Thursday 13th September

Time for each venue: 2.00pm (SHARP). There is no fee for the seminar as it is part of the Teagasc/IFA Pig Joint Programme. To secure your place contact Niamh Allen on **025-42457** or email Niamh at niamh.allen@teagasc.ie

Pig Farmers' Conference 2018

Our annual Pig Farmers' Conference 2018 takes place on 23rd October at Cavan and 24th October at Horse & Jockey. Our guest speaker this year is Dr. Chantal Farmer, a research scientist in sow lactation biology with Agriculture and Agri-Food Canada at Sherbrooke Research & Development Centre in Quebec, Canada. Dr. Farmer will discuss milk production and mammary development in pigs. Put the dates in your diary now!

Student Success

Congrats to our Walsh Fellow Student, Jen-Yun Chou, winner of the EAAP 2018 Early Career Scientist Award, presented at the EAAP meeting in Croatia. Jen is working on the ENTAIL project, investigating the rearing of pigs with intact tails on fully slatted systems.



Congrats also to Oceane Schmitt, who has successfully finished her PhD project at the Pig Development Department. Oceane investigated management strategies, such as nurse sow, artificial rearing and energy supplementation, to optimise piglet survival in large litters. Oceane wants to thank all the farmers who helped her while conducting her project. We wish Oceane well in her future career.

Slurry Spreading Deadline

The deadline date for spreading slurry has been extended by two weeks to the 30th of October in the hope that grass growth will extend later in into the Autumn/Winter after the very dry summer conditions.



For more information

This newsletter was edited by Ciaran Carroll, Teagasc, Moorepark, Fermoy, Co. Cork. For more information on any of the newsletter content please contact Ciaran at ciaran.carroll@teagasc.ie or 025-42458.

Visit our website at www.teagasc.ie/pigs