

Editor: Ciarán Carroll

## Welcome to January's Newsletter

Ciarán Carroll



Happy new year to you all! Welcome to the January edition of our monthly newsletter. After a really tough year for the pig sector we look forward with hope to a better 2019. The uncertainty of the Brexit fallout doesn't help but we

are all looking towards China in the hope that increased imports by them will bring a significant improvement in prices here. Michael McKeon's article this month gives a good overview of what is happening in China and how it is likely to impact on us here.

In the shorter term we need to look at where our business is at right now and plan for the next few months to get us to a point where we'll be able to take advantage of the price rise when it comes. The new year brings new resolutions. What ones have you made for your farm this year? Have you reviewed farm performance and prepared a Business Plan for the year ahead, with particular focus on the first six months of 2019? Analysis of accurate herd records is essential for this. Farms using the Teagasc ePM PigSys herd performance monitor perform better than those that don't. If you're not already on ePM PigSys, make this your new year's resolution. Use the information to benchmark your farm against others and prepare a

Business Plan for 2019. Contact your Specialist Pig Development Officer to arrange this for you.

The European network project, EU PIG, is in its third year and next week Edgar Garcia Manzanilla and I will attend the annual consortium meeting in the Netherlands. This network was developed to improve the pig industry and looks at health management, precision production, animal welfare and meat quality. We are currently looking for Best Practice submissions for 2019. If you would like to submit a Best Practice contact us soon as the closing date is February 28th.

Finally, I want to address Farm Safety. As we start the new year our focus for the year should be to farm safely. Ger McCutcheon's article is a good starting point, read it and carry out your risk assessment and implement your safety plan.

### In this issue:

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- News Updates

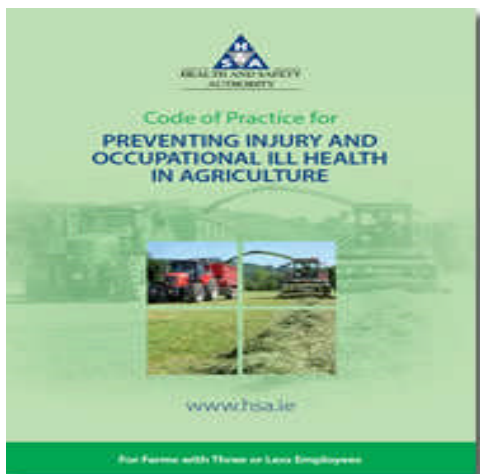
## Farm Safety

### Gerard McCutcheon

2018 was an improved year in terms of farm fatalities. There were seventeen deaths on farms last year compared to a five year average of twenty-two.

The incidence of deaths on farms is still too high, particularly when compared to other employment sectors. Also the percentage of deaths to young and old is a serious concern. Over 50% of the deaths in 2018 (10 people) were to people over 65 years of age.

Why are the young and old most vulnerable? The older person has a slower reaction time while children don't see the danger that may exist. This is why farms need to be extra vigilant when young and older people are on farms.



It is important to constantly strive to improve health and safety on all farms. It is always good to review your policies at the start of a new year.

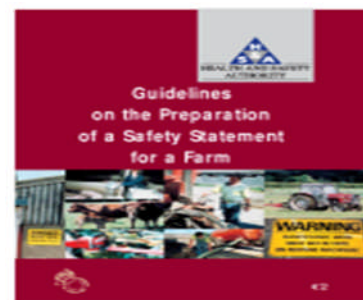
Ask yourself the following question:

- How often do we do a risk assessment on our farms?



- Are all staff prepared to identify and highlight any hazards or potential hazards to the owner and/or manager so that the risk of danger can be reduced/eliminated?
- Are all staff members aware of the safety statement and familiar with the appropriate control measures to manage all the risks on your farm?
- Is there an openness to discuss health and safety on your farm?

There is always room to improve and it is important that risk of injuries (or worse) are always eliminated or managed properly.



## Chinese Concerns

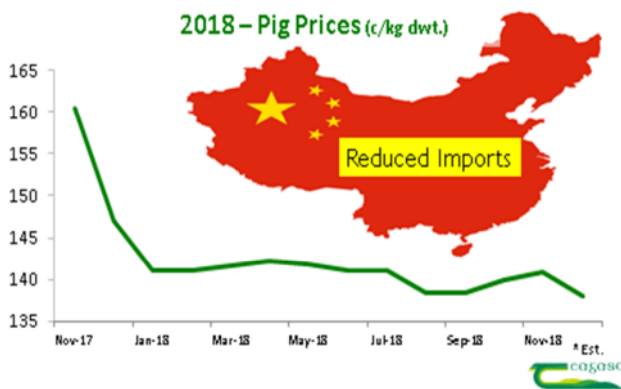
**Michael McKeon**

Over the last few months the conversation on Irish pig farms has revolved around China and specifically the spread of African Swine Fever. The interest isn't from a humanitarian perspective but rather a more mercenary ('business is business') focus on what it'll do to the current accounts of Irish pig farmers. Hopefully this article may provide an update on the Chinese 'situation'.

The Irish pig price hit the lofty highs of 1.82/kg during 2016 as a result of China importing nearly two million tonnes of pigmeat. Unfortunately the good times didn't last and our pig price reduced in intervening two years to a current price of €1.40/kg. This was due to China reducing the volume of their European imports and the European sow herd increasing slaughterings. The Irish exports to China (Jan-Sept) illustrate the trend.

2016	2017	2018
33,276	27,976	24,803
-	-16%	-11%

The downward trend in Chinese pigmeat imports was due to a relative stabilisation in the Chinese herd size and a weakening economy.



However the tide is turning on declining imports since African Swine Fever (ASF) was discovered in the Chinese pig herd in August 2018. In order to combat the disease the Chinese veterinary authorities have instigated a massive cull of pig herds. Anecdotal reports in Henan (one of the large pig producing provinces) expect a 25% decrease in pig production even though there have been only two official cases of ASF in this region. This reflects the recently released Chinese December pig census which reports a decrease of 9.6% in the sow herd during 2018. To put this into context this is a decrease of 4.5 million sows, the combined sow herd of Germany and Spain eliminated in one year. However the extent of the crisis is hidden within the annual stats. The sow herd reduced by +600,000 sows in December 2018, which equates to the total Irish & UK sow herd gone in one month.

So why are we not seeing this affecting the pig price (& overdrafts) of European and Irish pig producers? Unfortunately due to the level of culling currently underway there is a surplus of pigmeat in China which is driving the local price downwards. The current

national Chinese pig price is 14Cny/kg (€1.82/kg) but between provinces the pig price ranges from 8-20Cny/kg (€1.01-€2.61) depending on the level of culling and restrictions on pigmeat supply. The Chinese pig industry are expecting the reduction in the sow herd supply to start impacting on the Chinese market after the Chinese New year (March onwards) but they feel that due to the level of chilled/frozen pork in storage it may be the end of the 2<sup>nd</sup> quarter before there is a significant hike in prices and pigmeat imports. It's worth remembering that in 2016 the national Chinese pig price hit a record 21Cny/kg (€2.73/kg) and some market observers believe this will be achieved again within the next 12 months.

So who will they phone for these imports, Trump or Tusk? The total 2018 global pigmeat exports (Jan-Oct 18) for the US (2MT) & EU (3.2Mt) show an increase of 1.8% and 1% respectively. However, when the latest export figures to China are examined (October 2018) the EU exported 126,000 tonnes and the US

only exported 11,782 tonnes due to the China - US trade war. The bite of this trade war can be seen in the monthly decline of US pigmeat exports to China from April 2018 (65,000 tonnes) to October (11,782tonnes). If this trade war continues then the market indicates that the Chinese will have the EU's number on speed dial rather than the US.

So what is the outlook for Chinese trade? The expert opinion on the current ASF outbreak is that it will take years to control rather than months, therefore any effect on the market will be sustained. The large level of sow culling will soon begin to impact the Chinese supply of pigmeat however this will be temporarily eased by the volume of stored pork. Chinese and international observers, including the Smithfield CEO, expect a significant price rise beginning in Q2 and continuing into the last two quarters and into 2020.

In conclusion the effect of ASF in China dictates that the level of Chinese pigmeat imports will increase dramatically in 2019, the only unknown is when the starter's gun will sound!

### Keelin O'Driscoll

Last year was another busy year for research carried out in the Pig Development Department. The unit has again been used to capacity to facilitate project work, and once again, every single batch of pigs was used in research. As well as our own researchers and students, we also hosted 15 visiting students from universities around the world, several of whom carried out their own small research projects.

#### Starters and leavers

Samir Ranjitkar arrived and left during 2018, and spent most of the year working on the **PROSWINE** project, following the work done by Carmen Villodre in 2017. The next stage of this project will hopefully move the probiotic on to commercialisation stage. Daniel Piazuolo started working as a postdoc with Peadar Lawlor in October, on the **EXCLUDE-MRSA** project, which will kick off with experimental work in

the spring, and Maria Costa joined the **AMURAP** team, looking at antimicrobial use on Irish pig farms.

This year, there was a greater turnover of students than any other. This is in part due to the extra student supervision and research capacity enabled by the support of the Pig Levy; the first students that were taken on since the levy was established are now starting to complete their studies, and new students arriving to replace them. The breadth of the research carried out by the PDD is evidenced in the titles of the Theses submitted. Oliver Clear, a research technician who has worked on several projects and helped many of the students with their work also finished with us just before Christmas – we wish them all the best of luck in their future careers!

1. Alessia Diana (PhD, University College Dublin): Exploring the links between health, welfare and antibiotic usage on Irish pig farms
2. Susan Dudley (MSc, University College Dublin): Exploring net energy and amino acid balance in Irish pig diets

3. John Moriarty (MSc, University College Dublin): Develop and assess visual and digital tools for knowledge transfer in the pig industry.
4. Alberto Torres Pitarch (PhD, University College Dublin): Examination of feed enzymes as means of improving feed efficiency in pigs
5. Maria Rodrigues da Costa (PhD, University of Barcelona): Evaluation of current feeding and management practices in Irish pig production and future strategies for improvement
6. Oceane Schmitt (PhD, University of Edinburgh): Investigating management strategies of large litters in pigs
7. Dominique Grocott (MSc, University of Edinburgh): The influence of individual sow nursing behaviours and early life experiences, on the development of harmful manipulative behaviours in long-tail piglets.

Three of our students were also successful in obtaining a Walsh Fellowship Travel award, which allowed them to travel to another university for a short secondment, and to learn new skills. Phoebe Hartnett travelled to University of Edinburgh, where she learned new lab techniques and investigated biomarkers of osteochondrosis in gilts. Hazel Rooney travelled to Agroscope in Switzerland, and learned how to determine fibre number and gene expression in muscles. Maria Costa spent two months at the University of Minnesota in the US, to gain knowledge into pig disease diagnostics and to discuss the preliminary results of her work on respiratory disease in Irish pig farms (**PIGSURVPATH**).

Finally, we welcomed several new students to the team this year:

1. Joana Pasa (UCD) started her PhD last spring, and is working on optimising precision livestock farming technology, and a computerised meat inspection protocol to improve pig health, welfare, and carcass quality.

2. Martyna Lagoda (Institute of Genetics-Animal Breeding, Poland) began her PhD in the autumn and will investigate how management strategies for gestating sows affect both the sow herself, and the performance and stress levels of her offspring.
3. Orla Kinane (UCC) is carrying out her Masters research project in the Teagasc pig unit, investigating the welfare and performance of sows and their piglets in free farrowing crates.
4. Jordi Montoro (U. Barcelona) is looking at the benefits of a range of feeding programmes and ingredients for Irish finishing pigs. Jordi has started work already in the Moorepark unit, and is aiming to provide quickly transferrable data to the pig industry.
5. Juan Ortiz (U. Barcelona) is working on the issue of how to deal with the ban on ZnO, investigating the effects of ZnO on the immunity of the pigs.

### Ongoing projects

The **PIGSURVPATH** project, investigating respiratory pathology, risk factors and relationships with other pathologies, continued, with 4 papers published throughout the year. There was also a lot of progress on the **OPTIPIG** project; an experiment investigating supplementation of sows with carnitine during gestation and/or lactation finished in the spring, and a study investigating various energy levels in lactating sow diets finished in October. The last projects in the **ENTAIL** project (investigation of the amount of enrichment needed to successfully rear undocked pigs) and the **WETFEED** projects were completed. The **WATERWORKS** project also saw a lot of progress, with metering completed on 6 farms to date. Finally, the **Teagasc Pig Production Model** was completed, and the financial calculator developed from it is now almost ready to be rolled out to the advisory team.

### New projects

A number of projects have been funded during the past year, and are as yet in their infancy. The **SWAB** project consists of a large consortium of people from organisations across Ireland, investigating surveillance, welfare and biosecurity of farmed animals. Laura Boyle, Edgar Garcia Manzanilla and Ciarán Carroll are representing pig production. Edgar is also managing another project looking at use of

antimicrobials in animal health on the island of Ireland, which will investigate knowledge and attitudes of stakeholders. Finally, a new project which will develop risk assessment protocols for tail biting on commercial farms has just started this month (**PIGNODOCK**), led by Keelin O'Driscoll.

### Awards and recognition

Following on from the success of our group as a whole in the peer-review in 2017, this year several members of the PDD were individually recognised for the high calibre of their work:

1. Hazel Rooney: Winner, British Society for Animal Science Industry Association Award at their annual conference in Dublin, March 2018
2. Jen-Yun Chou: Winner of the Wageningen Academic Press award for new researchers at the European Association for Animal Production conference, August 2018
3. Phoebe Hartnett: Overall best presentation of the 2<sup>nd</sup> year PhD students, University of Limerick Department of Biological Sciences Research Day 2018.
4. John Moriarty: Poster prize winner, European Forum for Agricultural and Rural Advisory Services conference, June 2018, and winner of the 2018 Teagasc Denis Minogue Memorial Award, awarded for the most innovative project as part of their examination of Irish farming and advisory service practices.
5. Edgar Garcia Manzanilla: Interchem Animal Health Allstar award (Livestock Production)
6. Laura Boyle: Runner up, Interchem Animal Health Allstar award (Livestock Production)

As well as that two of our students, Hazel Rooney and Phoebe Hartnett, were featured in 'That's Farming', as part of a series of articles focusing on students and women in agriculture.

Finally, we would like to thank all of the farmers who have helped us during the past year by allowing us to use their facilities and pigs, without which much of our research would not be possible. Updates on all the projects listed above will be provided at the Pig Research Dissemination day. All in all, 2019 has been a busy and exciting time for pig research!

## News Updates

### Funded Biosecurity Reviews

You should have received a letter from DAFM in December notifying you of the availability of a fully funded Biosecurity Review for your farm. We are all well aware of the importance of good biosecurity in maintaining a high health status in our herds. The management practices you adopt and the infrastructure you have in place on your farm will determine the risk of infection being introduced into your herd, and of it spreading within the herd, if introduced. Good biosecurity will reduce the risks and the costs associated with diseases, such as Salmonellosis, that are already commonplace in pig herds in Ireland, as well as those, like African Swine Fever, that do not occur in Ireland, but which are highly prevalent in other countries.

Under the current Rural Development Programme (2013-2020), funding is available to pig herd owners, through a mechanism called the Targeted Advisory Service for Animal Health (TASAH), to have a comprehensive biosecurity review carried out on your farm by a trained private veterinary practitioner. This service, which is free of charge to you the farmer, involves a comprehensive and objective review of the internal and external biosecurity practices and infrastructure on your farm. Upon completion of the review, you will receive a set of recommendations aimed at



improving your farm biosecurity. Over time, as the number of herds participating in the biosecurity reviews increases, you will be able to benchmark your own herd's biosecurity status against anonymised data from other herds participating in the initiative.

The herd-level information generated in the TASAH biosecurity reviews remains private and confidential to you and your veterinary practitioner. DAFM will have access to aggregate level data in order to ensure proper governance of funding, to identify and analyse trends in the data, and to adapt and improve the programme over time.

Using the University of Ghent BioCheck scoring tool introduced to Ireland by Teagasc PDD, Animal Health Ireland (AHI) is delivering the TASAH-funded biosecurity reviews on behalf of the Department of Agriculture, Food and the Marine (DAFM). To avail of this free service, visit the TASAH section of the AHI website ([http://animalhealthireland.ie/?page\\_id=11040](http://animalhealthireland.ie/?page_id=11040)), or contact AHI by telephone (071 9671928) to access a list of trained, participating vets and their contact details. I would encourage you to make an appointment to have this review carried out as early as possible in 2019.

The 2019 EUPIG Grand Prix is now open. We have received some submissions since first mentioned in the November 2018 newsletter. The **closing date for submissions is Thursday 28 February 2019**, so there's plenty of time left if you have a best practice you'd like to submit. Contact me [ciaran.carroll@teagasc.ie](mailto:ciaran.carroll@teagasc.ie) and I will upload it to the EUPIG portal.

Accompanying this newsletter is a booklet of the 2017 Best Practice Winners. This booklet summarises each practice, describing how it was applied on the farm and the net results.

There are four theme areas (Health Management, Precision Production, Animal Welfare, Meat Quality), with two challenges per theme. Full details on the challenges can be found on the EU PIG website at <https://www.eupig.eu/grand-prix>

The 2019 challenges are:

- **Health management** - **Early warning of diseases and production errors**: novel technology, thematic systems and predictive modelling
- **Health management** - **Influence of gut health on disease and production data**: tools, systems and
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- methods of monitoring gut health. Novel approaches to ensuring appropriate gut health development.
- **Precision production** - **Reducing piglet mortality**: still births or "mortality until weaning", also in hyperprolific sows – where do you gain the best effect.
- **Precision production** - **Dashboard systems/benchmarking**: nudging / motivation systems to easily identify reduced performance & increased costs – keep the production on track.
- **Animal welfare** - **Strategies to reduce aggression between animals**: management systems, novel techniques or technologies that lead to a reduction in the aggression between production animals at any stage of production
- **Animal welfare** - **The quality of the farm atmosphere**: in connection with the health of the breeders and the animals.
- **Meat quality** - **Replacing GMO in soy in for feed production**: in some countries retailers ask explicitly not to use any feedstuffs that are derived from GMO raw material.
- **Meat quality** - **Strategies to open farms to public to improve transparency of animal production and trust in consumers**: pig farms increasingly are the object of public concern related to animal welfare, environmental sustainability and to the use of antibiotics.



**For more information**

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