Editor: Amy Quinn

Welcome to March's Newsletter

Amy Quinn



March has been an unprecedented month as we are currently in the midst of a global and national emergency. The COVID-19 pandemic is currently having a significant influence nationally and globally and will continue to do so for

some time yet.

The number of infected persons is rising daily here and it is expected that those numbers will rise to 15,000 by the end of this month. This is certainly very concerning as we worry for our families, staff and our own health. It is of course only natural to have concerns about the potential implications on the operation of farms as this has the potential to significantly disrupt the day to day running of units. There is no time to waste and now is the time to sit down a see what precautions must be in place and what preparations can be done in order to best protect health, animal welfare and the farm businesses, if not already done so. The first article in this newsletter contains detailed information and thinking points on how to best prepare. Please ensure you read it carefully, including the links within the article. The COVID-19 Pandemic is evolving rapidly so we all have a responsibility to keep ourselves up to date with updated information, guidelines and employer and employee responsibilities.

Please know that the Teagasc Pig Development Department is very much still operational and the Teagasc advisors are available to discuss any queries or concerns by phone or email (further details later in the newsletter). As a result of the Pandemic the PDD have had to postpone or cancel all public events, discussion groups and courses until further notice. We endeavor to take this time to develop new dissemination material and will distribute it though our website, twitter account and emailing list.

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COVID-19 – Pig producer considerations

Amy Quinn

Coronavirus disease 19 (COVID-19), caused by the virus SARS-CoV-2 (severe acute respiratory syndrome coronavirus 2), is currently causing drastic consequences in Ireland and across the globe and is now classified as a pandemic. Coronaviruses are a family of viruses that are associated with different types of illnesses and this is a new strain. Pig producers, not surprisingly, have a number of concerns relating to the protection of health, animal welfare and implications of the current COVID-19 pandemic on the daily operation of their unit.

The <u>main symptoms</u> include; a cough of any kind but generally dry, shortness of breath or breathing difficulties, a high temperature (38 °C or above) or chills, and general muscle aches and fatigue. The HSE guidelines state that if you develop symptoms you should self-isolate and phone your GP (Do not go to a GP surgery, pharmacy or hospital). You will be assessed by a GP over the phone and a test for COVID-19 will be arranged if necessary.

The HSE highlight a number of "Do's and Don'ts" when it comes to controlling the spread of COVID-19, which includes good personal hygiene and the principle of "social distancing". This virus is passed on directly, through contact with an infected person's body fluids (e.g. from coughing or sneezing) or indirectly through contaminated surfaces (e.g. surfaces a person has coughed or sneezed on). The information currently available suggests that the virus can survive from a few

hours to a few days on certain surfaces but it can be easily killed with disinfectants.

Staff management

All producers should ensure that their employees are aware of their employee rights and responsibilities. The <u>HSA</u> outline the key duties of employers and employees under the Safety, Health and Welfare at Work Act. The key duties of employers include:

- Managing and conducting all work activities to ensure, as far as reasonably practicable, the safety, health and welfare of employees
- Providing safe systems of work that are planned, organised, and maintained
- Assessing risks and implementing appropriate control measures
- Providing safe equipment including personal protective equipment, where necessary
- Providing information, instruction, training and supervision regarding safety and health to employees
- Having plans in place for emergencies

Employee's duties include:

- Cooperate with their employer and follow their instructions
- Protect themselves and others from harm during the course of their work
- Report any injury arising from work activity to their employer immediately
- Follow procedures that have been put in place by their employee



All producers should ensure staff are fully aware of the virus threat and the national and farm specific procedures that are to be followed as a result. The HSE have developed informative posters relating to COVID-19 and these should be reviewed with staff and positioned throughout the farm in clearly visible locations. Staff should be informed that they should not come to work if they are feeling unwell and should follow HSE guidelines. All farm owners, managers and staff should stay up to date with updates from the relevant authorities and their responsibilities as employers. Some useful resources are included throughout and at the end of this article. Citizens information has detailed information on the policies and procedures for employers and employees who are affected by COVID-19.

It is also important as an employee to be considerate to the personal circumstances of staff in relation to COVID-19. These may include adapting to the closure of childcare facilities and schools or staff may have dependents who are, or they themselves may be, in the <u>at risk group</u> (60 years of age and over, a long-term medical condition or have a weak immune system).

Staff facilities

As the virus can survive from a few hours to a few days on certain surfaces all bathrooms and canteens should have soap and/or disinfectant products available at all times. Staff changing rooms, toilets and canteen areas should be thoroughly disinfected at least daily.

Staffing plans

Farmers need to plan for the potential of a reduced work force as a result of the COVID-19 pandemic.

Depending on unit size and preference there are three options available. The main aim of these methods it's to prevent farm personnel from becoming infected with the virus and in the case of infected farm personnel to prevent the spread as much as possible between staff and reduce the operation effects.

- Entirely alternating teams of staff: This option involves dividing the entire staff into two or more teams that work opposite days/shifts to the others, whereby no two teams are onsite at any one time.
- 2. Multiple zoned teams of staff: This scenario may work best on large units. Staff members can be grouped based on pig section or farm building. The different groups must arrive, take breaks, use farm facilities and depart the unit at scheduled different times. If pigs are being transferred from one section to another staff should ensure that they do not come within at least 2 meters of each other but ideally much further. Shared facilities should be thoroughly disinfected after use by each group or if possible set up separate facilities (e.g. a separate canteen for each team with their own kettle, toaster etc.)
- 3. Separation of all staff: This method may suit small units with limited numbers of staff. All staff must arrive, take breaks, use farm facilities and depart the unit at scheduled different times. Shared facilities should be thoroughly disinfected after each user. The same principles in relation to transfer of pigs above apply.

All three scenarios ensure that there is no physical contact between the groups or in the third case between any staff members. If staff



between groups need to communicate this should preferably be done by phone. While these scenarios may seem strict they will ensure that if a staff member becomes infected the other teams or in the third case other staff members may continue working without disruptions and will not be required to self-quarantine. This is vital for the smooth operation of farms during this prolonged difficult period. It also might be worth ensuring that many staff are cross trained, so that they have the skills and familiarity with farm processes to operate sections of the unit outside of their usual areas. The preparation and use of Standard Operating Procedures (SOPs) will help staff to familiarise themselves with processes they're not used to on a daily basis.

Emergency staffing plan: If it is an option, there may be people available with knowledge of your farm (e.g. ex staff with no recent contact with other pigs, retired staff or family members etc.) who may be able to provide some assistance on farm in the case that you were reduced to insufficient numbers of farm staff. If you think this might be an option it is best to make contact now and have them identified and up to speed with current farm procedures in advance.

Visitors

Only essential visitors should be permitted on site (e.g. vets or essential maintenance personnel). On arrival to the unit all visitors should fill in a <u>visitor declaration form</u> to assess the risk, including if they are exhibiting any signs of the virus and details of recent travel. If they are deemed to be a high risk they should not be permitted. If not high risk they should informed of your virus control policies prior to entry.

Including how it is essential that all visitors permitted remain at least 2 meters away from all farm personnel at all times. Visitors should also follow the strict farm biosecurity procedures including the use of personal protective equipment (provided by the unit) prior to entry. In relation to deliveries, all farm personnel should not approach any drivers. Delivery dockets should be left in an agreed location and not handed to staff. Provision of hand sanitisers at the location where dockets are handled will provide added biosecurity.

Other concerns

Aside from concerns relating to virus occurrence and spread prevention which are addressed above, pig producers have a number of other operational concerns.

Reduction in slaughterhouse and export capacity:

This is a serious pig welfare concern for farmers as farms could start to have problems with overstocking within a week if slaughtering capacity is reduced. Speak to your processor and try to operate a 'Christmas schedule' whereby one to two weeks of pigs are forward sold now in advance of any possible slaughtering difficulty. In the event that the number of slaughterings are reduced, it is best to know already the maximum carrying capacity of the farm. In some few instances units may have access to other housing facilities off site. If so it is worth investigating at this stage.

<u>Disruption to supplies</u>: Many producers are concerned about national disruptions to feed, feed ingredients and veterinary supplies. There is



also potential risk of delays in international supplies especially for protein (soya) and minerals and vitamins. Mills, feedstuffs suppliers and vaccine and antibiotic suppliers will all be implementing their own protective measures to reduce spread of COVID-19 as best as possible. In order to best mitigate these issues on your farm it is wise to order all required supplies in ample time, e.g. don't let bins run low or empty and order vaccines and antibiotics well in advance of requirement.

<u>Effect of a national lock down on staffing and services</u>. It is hoped that admission to do essential farm tasks on animal welfare grounds would be permissible. However no certainties can be provided in this area currently.

Teagasc Pig Development Department

Please note that the Teagasc Pig Development Department (PDD) is still operational and the Teagasc advisors are available to discuss any concerns. However the way we operate has had to change in light of the current situation in order to comply with national and organisational virus prevention and control measures. We encourage all producers to engage with us by phone or email. Farm visits will only be undertaken for urgent issues. Teagasc advisors will strictly adhere to social distancing and hygiene protocols and any further farm specific protocols in the event of a unit visit.

It is necessary to defer or cancel all public events, discussion groups and courses until further notice. As a result the Teagasc PDD will be developing material to disseminate to producers and will investigate new methods of communication in order to best assist producers

in the weeks ahead. Contact details for all PDD staff are available at;

https://teagasc.ie/animals/pigs/staff/. Frequent updates will be available on the PDD twitter account (@teagascpig) and Teagasc Pig website (https://teagasc.ie/animals/pigs).

Teagasc Pig Research Facility, Moorepark

Similarly to all pig units the Teagasc Pig Research Facility in Moorepark is treating the virus threat seriously and has implemented a number of protection measures.

- A two team rota system has been set up for the day to day functioning of the research facility currently. If any member of any individual "team" becomes symptomatic then the remaining members of that team will have to self-isolate/quarantine.
- A member of each team will thoroughly clean and disinfect common areas at the end of their working day.
- A team of contingency staff have been identified that would be able to work in the unit in the event of one team requiring selfisolation/quarantine in order to maintain all farm functions as much as possible.
- Staff are asked to work alone as much as possible but when tasks involve close proximity working that a minimum social distance of 2 meters is adhered to.
- Staff are asked not to cross into other people's sections or avoid unnecessary visits to common work areas, this reduces the risk to staff of infection form door handles, driving boards computer equipment etc.
- Assigned 1 member of staff to certain tasks, for example updating all feed computers and inputting any changes necessary for all sections, not just their own. This will greatly



reduce the chance of infection transfer from objects and also reduce the chance of multiple staff members in an office area or confined space at the same time.

Useful information sources

- https://www2.hse.ie/conditions/coronavirus/ coronavirus.html
- https://www.who.int/emergencies/diseases/ novel-coronavirus-2019
- https://www.gov.ie/en/news/7e0924-latestupdates-on-covid-19-coronavirus/
- https://www.gov.ie/en/publication/a02c5awhat-is-happening/

EUPIG Best Practices 2019 – Health management & meat quality

Ciarán Carroll



EU PIG is a Europe-wide network developed to improve the connection between pig producers and the latest science, husbandry techniques and technologies and is made up of a consortium of 19 organisations from 13 member states in Europe. The network which has been in operation since 2017 aims to coordinate, collaborate and share findings from existing pre-farm gate research, share best practice on technical production and exchange approaches knowledge transfer with pig producers and associated advisors. A key part of the project is run as a competition with a "Grand Prix" designed to identify industry best practice each year in four areas: 1. Health management; 2. Meat Quality; 3. Animal Welfare and, 4. Precision Production. A summary of some of the winning best practices for 2019 are provided below. We are delighted to have a winning best practice from Ireland again this year.

Pig temperature app for early disease detection

Ambassador: Pep Peraire, Spain

Theme: Health management

Challenge: <u>Early warning of diseases and</u>

production errors

An app that monitors pig temperature is helping with early detection of hyperthermia, enabling this Spanish farm to manage disease outbreaks, provide treatments more effectively, reduce mortality and improve pig welfare. It also has potential to reduce vaccination failure rate as pigs with hyperthermia can have a compromised immune status.

The farmer, Pep Peraire, bought a Flir One infrared thermographic camera, connected to a compatible smart phone, and downloaded the Degree2act app which monitors temperature patterns. Using Degree2act on a daily basis can



help farmers reduce antibiotic treatment costs by up to 50% through early detection of disease and individual care.

Benefits

- This may result in a 25-30% reduction in the cost of antibiotics
- Mortality rates may be reduced by 20-25%
- Average daily gain (ADG) may increase by 10-15%
- This would then result in a 1.7% reduction in the production costs per kg of meat

Costs

- Costs of the camera vary from €250-€500
- The price of a compatible smart phone will start at around €300 (currently validating CATS61 and Blackview PRO 9600 smartphones, equipped with Flir Lepton IR sensor, as well as Flir Ex-series camera. Please check website for compatibility information.
- The app offers a one month free trial. After this period there is a cost of €49.99/€99.99 per year of subscription (2020 prices, subject to update)

Innovation in practice

- Rectal thermometers are the most commonly used tool for the detection of body temperature. However, this process involves the restraint of an animal which can often be stressful and result in a temperature increase.
- The app has a traffic light detection system: a green light indicates that the detected temperature is within physiological range; an orange light indicates a slight increase in temperature; and a red light gives out a warning message which indicates that the detected temperature is high and comparable to that of a fever.

 Early detection of hyperthermia allows the farmer to promptly manage disease outbreaks which is important with the ever growing demand for a reduction in antibiotic usage.

Fermenting liquid feed, an alternative to zinc oxide

Ambassador: Marco van Asten, Netherlands

Theme: Health management

Challenge: Influence of gut health on disease and

production

A fermented liquid feed system is providing an alternative to zinc for integrated Dutch producer, the van Asten group. The fermented feed works as a probiotic and lowers the pH to reduce the risk of bacteria. It helps stabilise the environment in the weaned piglet's intestines and improve growth rates. They are working towards rearing pigs without antibiotics.

Benefits

- Sow mortality was reduced by 33%, preweaning mortality by 15%, rearing mortality by 24% and finishing pig mortality by 17%
- Reduction in production costs of pig meat by 3.3%
- A 5% reduction in the average cost of feed
- A 30-50% decline in veterinary and medicine costs
- Production costs are reduced by up to €2.70 per pig space
- Up to 80% antibiotic reduction
- 25% reduction in phosphorus and nitrogen in the diet
- Sows wean half a piglet more per litter
- Litter weight at 24 days are 0.5 kg heavier
- Feed is more palatable and consistent in quality



Costs

- The energy costs for heating and delivering the feed will increase by 3% for sows and 5% for finishing pigs
- Investment costs are approximately €16 per pig space

Innovation in practice

The Van Asten group in the Netherlands set out to improve the gut health of sows, piglets and fattening pigs and reduce antibiotic and zinc oxide use. Across a period of three years they introduced fermented liquid feeding and initially saw a reduction in antibiotic use of 50%.

Equipment and feed lines are cleaned with 70°C water for sterilization. Feed raw material is also mixed in 70°C water to kill all bacteria present. After mixing, cooler water and liquid active bacteria are added to reduce the temperature and secure fast growth. Temperature and cleanliness are important to obtain good lactic acid values and low acetic acid levels. The lactic acid metabolizes anti-nutritional factors (ANF) and difficult digestible starch; this acts as a probiotic and lowers the pH to reduce the risk of bacteria. Fermented liquid feed helps to stabilise the environment in the pig's intestines and improves growth rates. For maximum effect, it is fed together with a wheat barley mixture and plant-based proteins.

Locally grown protein can replace soy in pig feed

Ambassador: Terhi Harjunmaa-Levonen

Theme: Meat quality

Challenge: Replacing GMO in soy for feed

production

The quantity of locally grown broad beans in finisher pig feed has been increased by 200%,

with a positive impact on pig performance for Finnish pig producer Terhi Harjunmaa-Levonen. Tehri from Harjunmaa Farm in Finland aimed to increase the usage of locally grown protein in pig feed. They found that Faba beans (broad beans) may be an alternative protein source to soybean and so began cultivating faba bean crop approximately eight years ago.

Benefits:

- Feed conversion ratio (FCR) improved from 2.7 to 2.6
- Average daily gain (ADG) increased by 9% from 960 to 1050 g/day
- Feed costs reduced by 2.4%, this meant a €1.10 saving per pig
- The rate of self-sufficiency for protein feedstuffs has increased by 7%, if calculated based on energy content.

Costs:

The farmer had to invest in a new mineral dispenser and conveyors

Innovation in practice

To increase the usage of faba beans in pig feed, they developed a tailored premix together with a local feed company (Rehux) and HKScan. The faba bean inclusion level was approximately 10-12% of the dry matter of the liquid feed. This feed was then given to all the finisher pigs (30-120 kg liveweight). The locally grown protein included barley, wheat, oatmeal, broad bean, liquid barley protein (a by-product of a local distillery). There were two separate diets fed, both based on local proteins, during the finishing stage.

As well as being used as an alternative source of protein, faba bean cultivation can be beneficial to the crop in the next rotation. Faba beans bind



nitrogen and so, can improve the growth of grain crops. Because of this, the farm has increased the area in which they grow faba bean crop (by 150%). The production costs of pig meat produced with this alternative protein feed can be compared with the standard soybean meal which can be calculated using an Interpig model.

Community manager for pig farming

Ambassador: Shane McAuliffe, Ireland

Theme: Meat quality

Challenge: Opening farms to engage with public

Irish producer Shane McAuliffe has opened his farms to the public, with a passion to better inform consumers about sustainable pig production. They have very strict biosecurity so, to take account of this, they have a viewing room where large groups can look in on the pigs and watch CCTV footage on a big TV screen from all over the farm. They have also made many TV appearances and have a strong social media presence.

The main benefits are to the pig farming sector as a whole, as it gives them a reasoned voice in an era of much negative press towards farming and sometimes pig farming in particular. The consumer also benefits from hearing from the farmer perspective, something not always very evident or accessible. This approach has evolved over time and, while costs are minimal, it takes a lot of time, which Shane is willing to devote as he is committed to giving a farmer perspective on sustainable pig production.

Benefits:

Provides positive publicity for the pig farming industry

- The general public and consumers can benefit from hearing the farmers perspective, something that is not always evident or accessible
- There is an increased reach to consumers through an online presence
- The engagement with consumers is increased

Costs:

- The viewing platform was paid for by the farmer and was incorporated into the original design of the farm.
- The only other cost is that of the farmer's time, estimated at one day per month.
- Visitors don't have to pay a fee for this service

Innovation in practice

McAuliffe Pig Farms welcome international groups and students to gain an insight into the sustainable pig farming practices in Ireland. Taking into account the strict biosecurity measures, large groups can be taken to the viewing room where they can look at the pigs and can view CCTV footage from across the farm.

Shane dedicates much of his time to giving guest lectures at third level institutions, using videos to give the students an interactive tour of the farm. He also hosts student placements.

McAuliffe Pig Farms have appeared on national TV programmes, inclusing a live broadcast from the farm on 'Big Week on the Farm' which was watched by 1.5 million viewers. As well as this, Shane has a large presence on social media with almost 10,000 followers across multiple platforms.



Management of male & female finisher pigs

Peadar Lawlor

Since the 1970s we have not routinely castrated male pigs in Ireland. Castration ceased with good reason as entire male pigs are faster growing, less fat and more efficient than castrates. Also at that time, our slaughter weights were low in comparison with other continental European countries, so that leaving our male pigs entire was not expected to increase the incidence of boar taint.

Now with the impending ban on castration without anaesthesia, other European countries are scrambling to optimise the management of entire male pigs. One such initiative looking at this is IPEMA, Innovative Approaches for Pork Production with Entire Males. This is a COST action (CA 15215 http://www.ca-ipema.eu/) supported by the European Union in which I am involved. In Ireland, we may think that we have it all solved since we have been rearing entire males for nearly 50 years now. This is not the case and there are lessons we can still learn.

Let us start by looking at how entire male pigs are managed in Ireland. In the majority of cases entire males and females are not grouped separately and the same diet is fed to both sexes. In many cases there is still only one diet fed between 30 kg and up to 120 kg. Where farms do group male and female pigs separately they generally still feed the same diet to both groups. For this reason the only advantage in separating the sexes is that male pens can be emptied earlier as they reach their target slaughter weight earlier than the females.

Now let us look at the growth, feed efficiency and carcass data of males *vs* females in Ireland. Below in Table 1, is data from a recent liquid feeding trial conducted in Moorepark and feed and pigmeat prices from the February 2020 Teagasc price monitor.

Table 1. Growth performance, carcass quality and differential in margin over feed for entire male pigs and females.

una jemaies.	Sex		P ¹	Diff. ²
_	Female	Male		
Weight Day 0 (kg)	37.3	37.6	NS	0.3
Weight Day 64 (kg)	109.7	117.7	***	8.0
Carcass weight (kg)	84.2	88.0	***	3.80
Lean meat yield (%)	58.8	57.8	***	-1.00
FCE	2.64	2.28	***	-0.36
Pigmeat price (€/kg)	1.97	1.97		
Feed price (€/kg)	0.276	0.276		
Margin over feed (€) ³				
Carcass value (€)	165.87	173.36		7.49
Feed cost (€)	52.75	50.41		<u>2.35</u>
Total (€/pig)				<u>9.83</u>
Lean meat % (€)	1.68			1.68

¹ NS: not statistically significant difference; ***, very highly significant difference

As can be seen at the same slaughter age male pigs have a 3.8kg heavier carcass which is worth €7.49 per pig. Additionally, feed efficiency in males was 0.36 of an FCE unit more efficient than females which is worth €2.35 / pig. As pigs in



² Diff: difference between males and females for the particular measurement

³ Margin over feed due to increased carcass weight and improved FCE

Ireland are generally now paid for on a flat weight basis, in February a male pig had a margin over feed that was €9.83 higher than that of a female pig. An interesting finding from this exercise is that lean meat % is a full 1% lower for male pigs than females (this has to be an issue for some time - more later). Therefore, if paid for on carcass and lean meat % basis, as is the case in most other EU countries, the benefit for males above would be reduced by €1.68 to €8.15 per pig.

So what can we learn from recent work on entire male pigs? Well in the first instance, male and female pigs should be penned separately. This is the case for a number of different reasons:

In Germany there is evidence that a proportion of females from mixed sex pen groups are pregnant at the time of slaughter. They see this as a welfare/ethical concern that could cause negative publicity for their pig industry. None of us need negative publicity. For this reason entire male and female pigs are always penned separately there.

The differential in growth and feed efficiency between males and females means that female pigs can be fed diets that are lower in energy by ~4% and lower in SID amino acids by ~7%. If implemented this has potential to reduce feed cost by ~2.4c / kg dead weight or €2.02/gilt pig.

Penning males and females separately allows pens to be emptied over fewer weeks. It also allows males to be brought to a higher sale weight compared to females at a given slaughter age or alternatively if males and females are produced to the same target slaughter weight it allows male pens to be emptied earlier.

In continental Europe as entire males and females are penned separately they can be marketed separately. In some countries this will be important as meat from male pigs is leaner, less tender and there is a higher risk of boar taint with entire males. Separating the sexes allows male and females to be targeted towards the most suitable products for them.

In Ireland we have good reason to start penning male and female pigs separately, especially during the finishing period as it is only then when the sexes start to really grow differently. However, if we do this we need to look at capitalising on this by feeding different diets to males and females to reduce feed cost. Is this something that you should be looking at now to future proof your business?

If we go back to the issue of the 1% higher lean meat % in females than males in Table 1 above. We see this consistently in trials. This should not be the case, in fact the lean meat % of males should be higher than that of females. It is evident that there is an issue with carcass grading and potentially the formulas used to calculate lean meat % need to be revised. This is something that certainly needs to be done before returning to a situation where lean meat % is once again built into a payment system for pigs as is the case in most countries.



EUPIG

The last meeting of the EU network for innovation in the pig sector (EUPIG) took place on the 3rd and 4th of March in Córdoba, Spain. Ciarán Carroll and Edgar Garcia from the Teagasc PDD attended the meeting. The group discussed the continuation of the network to improve dissemination of best good and practice examples to farmers all over Europe. The group also visited COVAP, the biggest cooperative producing Iberian pig, a good example of excellence sustainability, product quality and services.

The latest EUPIG newsletter is available at: https://www.eupig.eu/news/newsletters/eupig-newsletter-march-2020.



Agri Aware Farm Walk and Talk 2020

On the 3rd of March 2020, Teagasc Moorepark participated in AgriAware's Farm Walk and Talk. The event was attended by 400 students from 15 schools across the Munster and Leinster region. This event was part of a series of events that took place from March 2nd to 12th focusing on the sustainability of Irish agriculture. The PDD was represented by the Walsh Scholars Roberta Maria D'Alessio, Jordi Camp Montoro, Juan Manuel Ortiz Sanjuan, Shilpi Misra, and Darren Sherlock. The visiting students were informed about the Pig Production Cycle and the Current Projects ongoing in the department.

The following projects were presented to the students:

- 1. Reducing stress & damaging behaviours (PigNoDock and SowWeanWel);
- 2. Water footprint of Irish pig Industry (WaterWorks);
- 3. Precision Livestock Farming (PLFPigCarc),
- 4. Strategies to phase out Zinc oxide (ZincO),
- 5. Feeding programs & facilities for Irish pigs (PigFeed).

The Walsh Scholars focused on the link between the Current Projects and the sustainability of Irish agriculture.



ISAE regional meeting

The International Society for Applied Ethology (ISAE) UK/Ireland regional meeting took place in Nottingham, UK on March 4th. This event was part organised by Amy Quinn. PDD researcher Keelin O'Driscoll presented "Does behaviour of sows and their piglets differ in 'free-lactation' crates than in standard" and PhD student Martyna Lagoda presented "An investigation into the relationship between skin lesions and behaviour of gilts and their offspring".





For more information:

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

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