

Edited by Amy Quinn



Welcome to the July edition of our monthly newsletter.

This month we welcomed the good news that the Farm Apprenticeship scheme has received official approval from QQI. It is expected that the programmes will be officially launched any day now. If you are interested in registering to be a host farm for an apprentice or if you know of a person or staff member interested in applying to be an apprentice please register your interest for either the Farm Technician (Higher Certificate Level 6) or Farm Manager (Ordinary Degree Level 7) as soon as possible. Further details are contained later in this newsletter.

In other good news, the Teagasc PDD found out that they were part of two successful submissions to two recent Horizon Europe Framework Programme (HORIZON) calls and a further successful submission to an EU4Health Programme Call. All three submissions were developed as part of a European network involving a number of organisations and institutions, with

Teagasc receiving funding and contributing to many tasks within all three projects. These projects will be ongoing for a number of years and no doubt many future updates will be included in this newsletter over the coming years to keep you up to date as they progress. Further details on these projects are included at the end of this newsletter.

Farm Safety Week took place this month from July 17th to July 21st. To mark it Louise Clarke has put together an article for this month's newsletter and this month's Pig Edge podcast episode is with Michael McKeon, who speaks about farm health and safety, discusses the main issues and best practices from what he sees on the ground out at farms and the main supports available to farmers. This episode can be found [here](#).

In this issue:

- Farm Safety Week 2023
- Investment Options for Existing Buildings Under TAMS 3
- Ten years of research on tail biting
- Green light for farm apprenticeship

Farm Safety Week 2023

Louise Clarke

Last week, July 17th to July 21st marked farm safety week 2023. The main objectives of the week were to:

- Raise awareness
- Share positive stories/technology to improve safety, and to
- Challenge farm safety attitudes and encourage all farmers to look after their physical and mental health

Unfortunately, the fatality rate in agriculture is far higher than any other economic sector, even though a small proportion of the workforce is employed in farming. Last year's Teagasc National Farm Survey found that over 4,500 accidents take place every year on Irish farms, with around 46 percent of them requiring hospitalisation. As a farmer you are responsible for the health, safety and welfare of yourself, employees and others that may be affected by what you do. This includes contractors, casual or part time workers, trainees, neighbours, and family members.

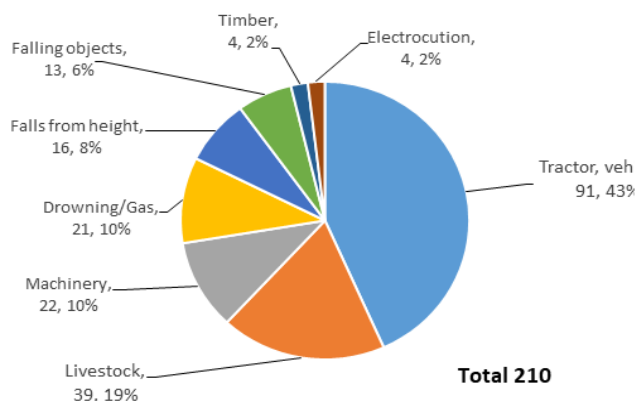


Figure 1: Main cause of farm deaths in Agriculture and Forestry in the last 10 years (2011-2020)

On this month's Pig Edge podcast Michael McKeon spoke about farm health and safety and discussed the main issues and best practices from what he sees on the ground out at farms, plus the main supports available to farmers. Michael outlined a number of tips that farmers can implement on farm to make the unit a safer environment for both themselves and your families or employers. He also highlights some of the funding that is available in the area of farm health and safety and also the different support systems that farmers can avail of in relation to their mental health.

Looking after your physical & mental health

One of the areas Michael focused on was farmer's health. As a farmer, we all care deeply for our animals, crops and lands. Your 'gut instinct' about the health of your animals and the condition of your land is what keeps your farm productive. However, one of the most important elements of good farming that a farmer may overlook is their own health and wellbeing. Farming is rarely ever a 'nine-to-five' job. It is often unpredictable, demanding and hazardous. Unsurprisingly, research on the health of Irish farmers shows that farmers are at high risk of:

- Heart disease, stroke, overweight/obesity, back pain, stress, mental health issues, lung issues, hearing loss, skin problems and cancers.

These health issues can also increase your risk of a farming injury. By recognising health problems early and getting treatment, you may prevent them from getting worse. The Health and Safety

Authority has published guidelines on “Farmers’ Health and Wellbeing” that are very useful and you should familiarise yourself with this document. The guide is about looking after yourself so you can continue to enjoy life and farming for a long time to come. It gives you simple tips to stay healthy and well such as being more physically active, eating a healthy diet, and minding your mental health. Small tips and changes are highlighted in the document that you can take now that will make a big difference in the long term. This document can be found at the following link:

https://www.hsa.ie/eng/publications_and_forms/publications/agriculture_and_forestry/farmers-health-and-wellbeing.pdf

Tips

- Taking time out if you feel overwhelmed;
- Staying connected with others but disconnecting from your source of stress
- Practicing good self-care by healthy eating, being active, getting a good night’s sleep and minimising your alcohol intake
- Talking to someone and sharing the burden to find ways to deal with the stress, both in the short term and longer term
- Watch out for poor sleep, angry outbursts or being short-tempered which can isolate you from much needed supports
- Try to plan and prioritise your work. Review how you organise your time. Rank tasks in order of importance, make lists and reward yourself for completing them
- Take time to relax or do something you enjoy such as meeting a friend or neighbouring farmer, going to a match or taking exercise.
- Practice relaxation techniques such as breathing exercises

Pig Staff Induction Module

The Teagasc PDD in conjunction with the Health and Safety Authority and FBD insurance developed and launched a health and safety online training course for Irish pig producers and staff. This course has been prepared to raise awareness of health and safety on pig units and to help protect workers from injury or illness. The course introduces the main health and safety hazards experienced on pig units along with the controls and procedures to minimise risk. Animal welfare is also an important area of focus and some key techniques are outlined to make handling pigs safer by keeping the animal relaxed. By the end of this training you will be able to define the general procedures while working in a pig unit, describe biosecurity best practice, outline the associated health and safety hazards, apply the principles of safe animal handling and identify the appropriate method for moving pigs. The module is freely available for all pig producers and their staff on the Teagasc Pig Webpage at the following link:

<https://tlearn.teagasc.ie/pigshealthandsafety/story.html>

Reducing the number of farm accidents and deaths will require a nationwide and continuous effort to ensure Irish farmers are equipped with the right knowledge. Farm safety is constantly evolving and new regulations are regularly updated. We encourage all pig farmers to continue to improve the management of health and safety on their farms and encourage all staff to engage in striving to make pig farms safer places to work.

Investment Options for Existing Buildings under TAMS 3

Emer McCrum

Given the prolonged period of losses sustained by the sector from late 2022 onwards, it is unsurprising that non-essential capital investment was deferred on many units until trading conditions improved. While the welcome return to profitability has eased pressure, it will take many months before the dust settles and a plan for any capital expenditure can be assessed. When that time comes, it is worth considering the grant funding available under TAMS 3 that may be of assistance. While the availability of new build pig housing under the current scheme made headlines when first announced, there are a number of eligible investments for existing housing.

The Pig and Poultry investment scheme (PPIS) opened for applications in April this year. Under the scheme, grant aid is available at 40% up to the increased investment ceiling of €500,000 for eligible applicants. With the scheme in place for the next five years, it is worth exploring the options available if upgrade work maybe required on existing housing in the future.

Building Fabric

Grant funding is available for new roof and wall insulation, insulated doors and ventilation systems for farrowing, weaner and finisher housing. This will improve the energy efficiency of retrofitted buildings in addition to providing comfortable conditions to support pig health, welfare and performance.

Electrical Installations

Under the energy efficiency umbrella, grant funding is available for the installation of LED lights across farrowing, weaner and finisher housing, in addition to electrical and water heat pads for farrowing and weaner housing. The energy efficiency credentials of such investments will help to reduce running costs of housing.

Feed System

Funding is available for components of a new wet feed system including controller, tanks and pumps to allow feed to ferment. Alternatively, if a new system is not required, new tanks and pumps are available to upgrade existing feed systems. Frequency controllers for feed pumps and feed mixer motors are also eligible in addition to wet feed troughs for dry sows, weaners and finishers.

Heating

The provision of heating in farrowing and first stage housing is one of the most energy expensive activities on a pig unit. Any upgrade work to heating systems therefore has significant potential to generate savings on energy or fuel costs. Heat recovery units, air source heat pumps, indirect heating systems and biomass boilers are eligible for grant aid under the current TAMS. It is important to note that upgrades to the building envelope may be required in the case of heat recovery or heat pump systems in order to maximise efficiency. If it is not currently feasible to change the heating system, insulated creep boxes for farrowing houses and creep covers for weaner housing are eligible investment options under the

current scheme. The creation of a microclimate by such means can allow you to reduce the overall room temperature while ensuring pigs have access to a warm and comfortable nest, thereby reducing the heating requirement for these buildings.

Health & Biosecurity

Individual pen fixed medicine dispenser units for both in feed and in water delivery of veterinary medicines are eligible for grant funding. In addition, medicated feed mix tanks, computerised feed control systems for individual pen feeding and targeted individual pen medicated feed delivery systems are available to allow for more targeted treatment of animals. A new addition to the PPIS under the current TAMS is the availability of grant funding to improve site biosecurity. Measures including security cameras, automated wheel wash systems and hot power washers are available to reduce the risk of disease entry.

Pig Welfare

Replacement slats are available for existing housing to provide a comfortable lying area for pigs. It is important to note that a minimum of 66% of the floor area in each pen must be fully solid if pigs cannot feed simultaneously. In cases where pigs can feed simultaneously, the solid area requirement may be reduced to 50% of the floor area. In addition, manipulable material delivery systems and free farrowing penning are available for existing houses.

Other

- Water meters are available which will allow for an accurate calculation of water footprint on units.
- Another new addition to the current scheme is the availability of batch weighting scales.

Accurate weights at weaning and transfer to finishing is extremely important in calculating solid performance data relating to average daily gain and feed conversion efficiency.

- For home millers, liquid treatment applicators for grain are available.

Both the Solar Capital Investment Scheme (SCIS) and the Low Emissions Slurry Spreading Scheme (LESS) are standalone and as such, any funding drawn down under these schemes will not impact the €500,000 investment ceiling of PPIS. Use of this investment ceiling however will reduce the €90,000 ceiling available for all other TAMS 3 schemes which is an important consideration in cases where farmers have other enterprises. A higher rate of 60% grant funding is available on the entire range of PPIS investments for applicants eligible under the Young Farmer Capital Investment Scheme (YFCIS) and the Women Farmer Capital Investment Scheme (WFCIS). There has yet to be an announcement on the current tranche closing date but this will likely be before the end of September. Updates on tranche closing dates will be available on the DAFM website.

The full terms and conditions detailing all eligible investments are available on the DAFM website at the following links:

- PPIS: <https://www.gov.ie/en/publication/989d0-pig-and-poultry-investment-scheme/>
- SCIS: <https://www.gov.ie/en/service/6ab0f-solar-capital-investment-scheme/>
- LESS: <https://www.gov.ie/en/service/7342f-low-emission-slurry-spreading-scheme/>
- YFCIS: <https://www.gov.ie/en/service/9b5da-young-farmer-capital-investment-scheme/>
- WFCIS: <https://www.gov.ie/en/service/14a7b-women-farmer-capital-investment-scheme/>

Ten years of research on tail biting – Part 1: Tail lesions in the slaughter-house

Laura Boyle, Roberta D’Alessio & Keelin O’Driscoll

The biggest risk factor for tail biting in pigs is the presence of an undocked tail. This quickly becomes obvious when producers try to transition from rearing docked, to undocked pigs; leaving pigs with long tails. If no adjustments to management or housing are made there are often many more tail-biting outbreaks than are manageable with many pigs suffering shortening of their tail length. As over 99% of Irish pigs have their tails docked soon after birth, we remove the single biggest risk factor for tail biting from our farms. The proportion of docked pigs in Ireland has not changed meaningfully since we carried out our first research in 2010. This is in spite of significant research, advisory and regulatory focus on tail docking and tail biting in the intervening years.

In the past 13 years we’ve conducted numerous experimental trials with docked and undocked pigs in the Teagasc Pig Research Facility as well as a range of factory based studies looking at tail lesions. This allows us to track changes in tail lesion score prevalence and severity over time. In this article we will compare our most recent factory survey of tail lesions with prevalence and severity data from 2010 (the first Irish factory survey of tail lesion prevalence), 2012, 2014, and 2015. In all these studies we categorised tail lesions from mild to severe, i.e. those which are caused undisputedly by tail biting. We refined the scoring system over the years to improve the accuracy of our measurements, by increasing the amount of detail in our definitions for each level of damage on the system, and separating out

bruising from teeth marks. However all the data from our previous studies can be condensed in the following way:

1. No visible damage
2. **Mild lesions:** minor skin damage, including bruises, up to evidence of teeth marks with breakage to the skin; however no swelling or inflammation present
3. **Severe lesions:** Breakage to the skin with swelling and signs of infection, fresh partial or complete tail loss accompanied with pus or necrotic tissue. We also included severe tail loss with evidence of scar tissue where the tail would have been (as this is indicative of extreme biting when the pig was younger)

Details of the surveys

The study in 2010 was carried out by Dr. Dayane Teixeira and is our largest and most comprehensive to date, involving scoring of 21,272 carcasses from three Irish slaughterhouses. It provided the first detailed snapshot of tail condition in Ireland, and serves as a baseline against which we can evaluate progress over the years. This is because it was carried out prior to the emphasis that the EU started placing on funding research into tail biting and compliance with legislation, about 10 years ago. The next survey was carried out in 2012, in a single slaughterhouse over 1 week, yielding 3,422 tail scores. Following this, former Walsh Scholar Dr. Nienke van Staaveren carried out a series of slaughterhouse studies. In 2014 she collected data from two abattoirs, and gathered data from 61 farms, yielding 13,133 tail records. In 2015 she visited 31

Irish pig farms to assess tail lesions and damaging behaviours for the DAFM funded PigWelFind project, and followed up each farm visit with assessments of carcass tail lesions in the factory. This involved travelling to four Irish slaughterhouses where she obtained data from 6,327 carcasses. Finally, between 2020 and 2022 current Walsh Scholar, Roberta D'Alessio conducted a similar exercise with batches of slaughter pigs from 22 farms as part of the PigNoDock project, yielding data from 5,499 carcasses, and 3 slaughterhouses.

Results

The pattern of tail lesion prevalence and severity recorded during each of the five experiments is in Figure 1. The pattern of lesion prevalence over time can be understood by observing the green columns, which represent the proportion of tails with no visible evidence of biting. This was approximately 40% of carcasses in 2010, it reduced below 30% between 2012 and 2015, but rose again to just over 40% in 2020-2022.

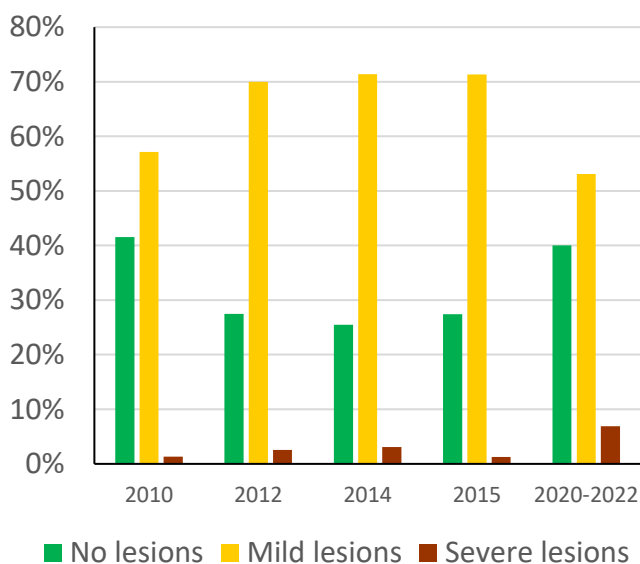


Figure 1. Prevalence of lesion severity on carcass tails observed during slaughterhouse inspections between 2010 and 2022

However, when it comes lesion severity, the story is not as positive. Although the proportion of undamaged tails was similar in 2010 and 2020-2022, the proportion of tails that had severe damage was much higher – 6.9% in the recent survey, compared with only 1.3% in 2010. Indeed the proportion of tails with severe lesions was significantly lower in all other surveys, with the next highest proportion being 3.1% in 2015.

The pattern of lesion prevalence in our most recent survey indicates that although in general terms producers appear to be able to rear more pigs without incurring damage to the tail, when the damage does occur, it is severe. We think there could be a number of reasons why this has happened. First, the recent improvement in the proportion of pigs with no damage could be due to increasing awareness by producers of the risk factors when it comes to tail biting. Animal Health Ireland commenced their Pig Tail inspection programme in 2019, and since then all farms in the country were inspected by a trained vet, most on at least 2 occasions, and provided with a personalised report highlighting some of the specific risk factors present on that farm. The risks associated with thermal comfort, animal health, competition for resources and pen design all decreased between the first and second inspections that were carried out. Reduction in risks that could cause chronic stress are likely to reduce the performance of low level biting.

Nevertheless, the increase in severe lesions, or scarring, indicates that a relatively higher proportion of pigs were more than likely exposed to tail biting 'outbreaks', which are difficult to control and involve severe tissue damage. It is quite likely that the impact of the Covid-19

pandemic could have contributed to this, as pigs backed up on farms due to slaughterhouse staffing issues, and high stocking densities are one of the most significant risk factors for outbreaks.

There is however, currently significant variation across farms when it comes to level and severity of tail damage. In the most recent survey, the proportion of pigs with perfect tails varied from 12.9% to 79.1%. Likewise, the proportion of pigs with severe tail damage ranged from 0% to 24%. This indicates that some producers are able to highly successfully manage their pigs to minimise biting; the two farms that had no pigs with severe lesions, also had the highest proportion of pigs with no damage at all on their tails. This suggests that at least when it comes to pigs with docked tails, there are solutions that are feasible in typical Irish pig production systems when it comes to minimising the performance of tail biting.

How does this impact you?

In an era of ever-increasing cost and price volatility and tightening profit margins, it is worth reviewing the scale of the economic losses incurred because of tail biting. Carcasses with severe tail lesions are on-average 12kg lighter than unaffected carcasses; even carcasses with mild to moderate tail lesion scores are 1 – 3.6kg lighter than unaffected carcasses. In the slaughterhouse based work carried out in 2014, losses associated with entire and partial condemnations, trimming of the carcass and lower sale weight associated with lesions caused by tail biting on-farm contributed to a 43% erosion of the profit margin per pig.

More recently, we used the Teagasc Pig Production Model to determine the on-farm economic implications of severe tail lesions. We

established that farms with over 0.86% of pigs affected with severe tail lesions in the finisher stage incur significantly higher financial losses compared to farms with $\leq 0.86\%$ pigs affected with severe tail lesions. This was due to a 4.8% decrease in ADG in farms with the higher proportion of bitten tails, translating into 7 days more to reach the target slaughter weight. This resulted in 3.6% more weaner and 1.4% more finisher feed per year, increasing feed costs by 1.5% overall. To put this into perspective, 12 out of the 22 farms in our most recent survey had more than 0.86% of pigs with these severe lesions, and so likely experienced up to a 15% reduction in mean annual profit compared with farms that had a level of tail biting below the threshold of 0.86%.

Interestingly, recent work in collaboration with researchers from Chile revealed that carcasses from pigs affected by tail lesions have a lower muscle pH than carcasses with no other health/welfare problems. The stress associated with being tail bitten could explain this finding. Finnish researchers report that tail-bitten pigs are more prone to stress just before slaughter, reflected in higher blood lactate concentration at slaughter in tail bitten pigs, and ultimately associated with lower initial muscle pH value.

What next?

Tail biting is multifactorial which makes it unpredictable and difficult to control. The only way to manage it is to identify the risk factors on your farm. As the main risk factor – the pigs tail – is not present, the next most important risk factors will always be associated with management and housing practices. Although they vary from farm to farm, it is generally accepted that they are associated with anything that causes increased

stress in the pig pen. We recently commenced a study trialling a detailed risk assessment protocol, that we hope will help producers to identify the main risks present on their farm. Farm visits have started, but we are looking for more volunteers, so please get in contact with Roberta D'Alessio if you would like to take part. In tandem, we are also

inspecting the condition of pig's ears on each farm that we visit, as we aim to also elucidate the factors that influence development of ear necrosis. In the next newsletter, we will provide an overview of the main risk factors for tail biting, and what to do in the case of an outbreak.

Green light for farm apprenticeship courses

Amy Quinn

Five new Land-based Apprenticeship Programmes developed by Teagasc have received official approval from Quality & Qualifications Ireland (QQI) this month. The two specifically relating to pig production are the Farm Technician (Higher Certificate Level 6) programme and Farm Manager (Ordinary Degree Level 7) programme which are both expected to commence in late September/October this year.

The Teagasc Curriculum Development and Standards Unit are currently finalising the final few details and the full details of the programmes and the application process are expected in the coming days on the Teagasc website (<https://www.teagasc.ie/education/apprenticeships/>) and apprenticeship.ie. Registration is not currently open but will be once these details are made available.

If you have a member of staff that is interested in either programme you will need to register to be a host farm and the staff member will have to apply to be an apprentice. If you do not have a member of staff interested but are interested in hosting an apprentice then you can apply to be a host farm

and you will be able to advertise an apprentice position whereby you may receive a farm apprentice to work on your farm as part of their apprenticeship programme. This provides an education route for those already involved in the industry but also those who would like to be.

These courses are much anticipated, are open to all sectors and the numbers will be capped at 80 students (40 in 2 locations) for the Farm Technician (Higher Certificate Level 6) programme and capped at 40 (in one location) for the Farm Manager (Ordinary Degree Level 7) programme. It is possible that the first course will have a very high demand. Therefore we would strongly encourage people and farms who are interested you to express your interest as soon as possible, so that you will be kept up to date with the registration process. You can do this by emailing Marcella.Phelan@teagasc.ie or your Specialised Pig Advisor as soon as possible. The Teagasc PDD will also disseminate all relevant information relating to both the programmes once we receive it and we look forward to teaching the pig students on both these courses in the coming months.

AHI Survey

Animal Health Ireland (AHI) invite you to take part in an online survey on pig health and welfare management, designed for pig producers, pig farmers, managers, and integrators. In the frame of the research project DECIDE, funded by the European Union under the Horizon 2020 programme, AHI are carrying out a scientific study on different topics related to the monitoring of animal diseases and decision support for improved control of those diseases. It aims to better understand your views on the data utilisation for pig health and welfare, as well as your attitudes towards pig keeping. The duration of this survey is around 10-15mins. There are no wrong answers as they are interested in your personal opinion. The information obtained from this survey will remain confidential and anonymous. If you would like to take part in this survey, please click on the link or scan the QR code (we recommend using landscape mode if you prefer to fill out the survey using your mobile):



<https://ww2.unipark.de/uc/decidepigfarm/>. If you have any questions contact Carla Gomes (cgomes@animalhealthireland.ie).

Triple success!

This month the PDD was informed that they were part of two successful submissions to two recent Horizon Europe Framework Programme (HORIZON) calls and an additional successful submission to an EU4Health Programme Call. All were developed as part of a European network involving a number of organisations and institutions, with Teagasc receiving funding and contributing to many tasks within all projects.

The first successful HORIZON project is EU Farmers' Pig Welfare Innovation Network (WelFarmers). This project will set up eight national innovation networks and four Europe-wide networks of pig farmers, advisors, veterinarians and researchers to address the challenges of the upcoming change in the European pig welfare legislation. WelFarmers will address four main topics: cage ban; keeping pigs with uncovered tails; avoiding pain during castration and space and flooring. The most urgent innovation needs and challenges will be identified in a bottom-up way and the network will collect and evaluate good practices that meet these needs. The selected best practices will be disseminated through a series of communication and dissemination activities to reach pig farmers in the eight participating countries and in Europe.

The second HORIZON project is a "European Partnership in Animal health and Welfare (EUP AH&W)". It will bring together scientists, funders and authorities from 24 EU and non-EU European countries active in the sectors of animal health, animal welfare, public health, food safety, economic sustainability, and the environment to strengthen the cooperation between public research and innovation entities. It will cover a large area of activities, such as farm management; animal-based (welfare) measures; livestock resilience; zoonoses; vector-borne, food-borne pathogens, and emerging diseases at primary production.

Joint Action Antimicrobial Resistance and Healthcare-Associated Infections 2 (EU-JAMRAI 2) was the successful submission to the EU4Health Programme Call. It will support Member States/Associated Countries (MS/AC) in their efforts to develop and update their National Action Plan (NAP) on AMR.



For more information:

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

For any further information on newsletter content please contact the editor, Amy Quinn at: amy.quinn@teagasc.ie or +353 87 3779015