

# Farm Safety Action Plan

2021-2024



Our Vision:  
Healthy, safe and  
productive lives  
and enterprises



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## Foreword from Chairperson

The Agriculture Sector is essential for the production of high quality food and farming can provide a great way of life, but regrettably, it continues to have a poor occupational safety and health record with a disproportionate level of fatal and serious injury.

Each year, fatalities in the sector account for up to 50% of all Irish workplace deaths, while farms only make up between 5% and 6% of our workforce. Approximately 2,800 non-fatal incidents causing injury take place annually on Irish farms (Teagasc National Farm Survey, 2017) with livestock associated with the highest proportion (42%). Research has also shown that farm family members suffer over 90% of injuries on farms. Most injuries actually occur in the farmyard and most are predictable and indeed preventable. These statistics make for stark reading and a cause for great concern. This continuing and stubbornly high number of serious and fatal incidents present a significant challenge for the current generation of Irish farmers. As a farming community, we must refocus our efforts to change these alarming statistics. Farm injuries and ill health cause much suffering to the individual and to farm families and can lead to significant quality of life and business losses and I would like to extend my sympathy to all farm families and communities that have been affected.

The Farm Safety Partnership Advisory Committee, an advisory committee to the Board of the Health and Safety Authority, has made considerable progress in developing guidance material and raising awareness of farm safety.



There is also recognition that safety standards across the sector show some signs of improvement even during the recent

expansion in the sector.

The majority of farmers understand the most significant hazards on farms and the associated risks, but too often, they take chances when rushing, under pressure or if there is a financial cost. Therefore, developing farmers' ability to manage and plan all aspects of the business and accomplishing a positive cultural and behavioural change towards safety, health and welfare will be a key part of achieving a sustained reduction in the rate of serious and fatal injuries in the sector.

Farm safety is not just an Irish issue; it is also a European and worldwide issue. While there is some cooperation on the island of Ireland and in the Nordic region, there is little at a European level. It is imperative that gathering of essential injury and ill health data and greater sharing of information, particularly in researching and establishing best practice are facilitated. The Farm Safety Partnership is now introducing this new four-year plan. The overall objective of the plan is to reduce the level of fatalities, ill health and serious injuries in the Agriculture Sector. The Farm Safety Partnership has identified 5 critical areas for attention, to be tackled by five Working Groups with specific actions between 2021 and 2024. High-level objectives to achieve these goals are set out in this plan.

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**Ciaran Roche, Chairperson,**  
Farm Safety Partnership

### Message from Dr. Sharon McGuinness Chief Executive Officer, Health and Safety Authority

The work of the Health and Safety Authority (HSA) affects every single worker, in every single workplace, in Ireland. Our vision is for healthy, safe and productive lives and enterprises for all who work in Ireland, in all sectors, including the Agriculture Sector. This Farm Safety Action Plan 2021–2024 continues the work of the Authority and its Farm Safety Partnership Advisory Committee (FSPAC) to help improve safety and health standards across this important sector. We will continue to work with all stakeholders in the Agriculture Sector to increase knowledge and understanding around the application of risk assessment tools to help prevent deaths, injuries and illnesses. We aim to support farmers and their families to put the correct systems in place and to target specific hazards and risks on the farm, which we know result in the highest levels of injuries, ill-health and fatalities in this sector.

Major stakeholders and FSPAC member organisations have utilised the knowledge, information and guidance available from all sides in the Agriculture Sector and focused it towards making the sector a safer place to work for all. I know there is real commitment to improving safety and health in farming shown by individual farmers and by all parties involved in the FSPAC. I look forward to seeing this four year Farm Safety Action Plan being implemented. The Authority is committed to providing assistance and support to achieve the goals and objectives contained therein.



Our inspectors and wider team work incredibly hard, in conjunction with our many stakeholders, to ensure that workplaces including farms across the country are safe and healthy environments. I hope this Partnership continues to prosper and I wish it every success going forward.

Finally, I'd like to thank our partners in the Agriculture Sector, the Department of Enterprise, Trade and Employment, and the Authority's Board for their ongoing support and collaboration.

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**Dr. Sharon McGuinness,**  
**Chief Executive Officer,**  
Health and Safety Authority,  
August 2021

## I. Introduction

The Authority has a very broad mandate across the areas of occupational health and safety, chemicals regulation, market surveillance and accreditation as set out in over 200 Acts, regulations and international conventions. In effect, the Authority regulates requirements for workplaces, workers, the self-employed, employers, businesses, consumers, services and products as set out in our mandate below:

- To regulate and promote the safety, health and welfare of people at work and those affected by work activities.
- To promote improvement in the safety, health and welfare of people at work and those affected by work activities.
- To regulate and promote the safe manufacture, use, placing on the market, trade and transport of chemicals.
- To act as a surveillance authority in relation to relevant single European market legislation.
- To act as the national accreditation body for Ireland.

In delivering on its broad mandate and strategic priorities, the Authority engages stakeholders across all major economic sectors and, in particular, in the overall objective of improving occupational safety and health (OSH) standards and performance nationally, an important benchmark for society, for trade and for inward investment. It is recognised that where persons in control of places of work apply the principles of prevention, training, education and supervision, workplace standards have greatly improved and the rates of workplace death and injury have fallen sharply.

It is a matter of continued concern to the Authority that the rates of fatal and serious injury and ill health have not seen a corresponding reduction in the Agriculture Sector, which lags well behind all other significant economic sectors. Under the current HSA Strategy Statement 2019-2021, agriculture has been prioritised as a key sector for actions to reduce the disproportionately high rates of fatalities, injuries and ill health.

The previous Farm Safety Action Plan (2016–2018) developed by the Farm Safety Partnership Advisory Committee, an advisory committee to the Board of the Health and Safety Authority, set out challenging goals and actions in relation to improving occupational safety and health for those working in agriculture.

The new plan (2021–2024) focuses on safety critical areas and aims to continue actions and build on the achievements of the previous plan. The agricultural sector has undergone a significant phase of expansion, particularly in the dairy and beef sectors and continues to provide a significant contribution to the Irish economy. However, these sectors face difficult challenges in the achievement of the necessary improvements in occupational safety and health standards. Safety with tractors, farm vehicles and farm machinery and preventing incidents involving livestock along with falls from height, coupled with an aging workforce, are the areas of greatest concern and will be the central focus in this new plan.

### 2. Profile of the Agriculture Sector

- Agriculture is an important economic sector, with significant output growth over the last 10 years, rising from €4bn to over €12bn per annum.
- Most farmers are self-employed, and are often self-supervised sole traders, with farms predominately comprised of relatively small farm holdings relying on family labour (young and elderly).
- While agriculture represents approximately 5% to 6% of the working population, it frequently accounts for up to 50% of all workplace fatalities and thus represents a major challenge for the sector and the Authority.
- Over half of all farm deaths involve farm tractors, vehicles and other farm machinery and a recently published report by the Authority found that over 50% of all vehicle related fatalities at work in Ireland occur on farms.
- In the last 5 years, almost two-thirds (65%) of all farm deaths involved children under 18 and elderly farmers over 65 years old and such deaths are generally not present in other economic sectors.
- Irish agriculture is predominately “Livestock Farming” (90%) which is a significant source of fatal and non-fatal injury.
- Farmers also have a poor health profile disproportionately suffering from many forms of ill health, which can lead to a higher prevalence of occupational injury.





## 3. Review of Health and Safety in Agriculture

### Fatal injury in agriculture

In recent years, the number of fatal incidents in other economic sectors have decreased significantly, but fatal incidents in Agriculture, which reduced in the early to mid-2000's, rose in the 2010s. Following the economic crash in 2008, the expansion of the Agriculture Sector provided significant and much needed support to the Irish economy. Notably, in both 2014 and 2017, there were more fatal incidents in Agriculture than in all other economic sectors combined.

In most economic sectors, it is relatively straightforward to calculate the rate of fatal incidents expressed as fatalities per 100,000 employed. The calculation of an accurate fatal incident rate in Agriculture is difficult because many farms are worked on a part-time basis with the persons primary income derived from off-farm employment in other economic sectors. For example, a builder who has a small number of cattle, is counted as a construction worker in the Labour Force Survey. If that builder suffers a fatal incident carrying out farm work on the farm, while that builder is not counted as employed in the Agriculture Sector,

the fatality will influence the fatality rate in the Agriculture Sector:

Agriculture also frequently includes family workers, not included in CSO figures, who are involved in some informal labour on the farm (circa 92% of farms). This makes it difficult to identify an exact denominator to create representative and useful rates of fatal and non-fatal injury.

An alternative to the Labour Force Survey is the CSO's Census of Agriculture, carried out in 1991, 2000, 2010 and 2020, although the 2020 results are not yet available. The difference between the numbers estimated to work in Agriculture by the Labour Force Survey and the Census of Agriculture is considerable (Table 1.1). A total of 272,016 people were recorded as being involved in providing some labour on farms in the 2010 Census of Agriculture, this included spouses and other family members on the farm. Excluding family workers, the Census of Agriculture listed 155,935 employed in the sector. This compares with an annualised labour units estimate at just 102,050 people employed in Agriculture in 2010 according to the Labour Force Survey.





These disparities in estimates of numbers employed are important because they determine the rate of fatal incidents per 100,000 people employed. Table 1 also shows rates of fatal incident for every 100,000 people employed in 2010, based on these three

estimates of the working population; these rates show considerable variation. Depending on which denominator used, the fatality rate in the Agriculture Sector varies from 7.7 per 100,000 to 17.7 fatalities per 100,000 which is a significant variation.

**Table 1: Number of people employed in Agriculture in 2010 according to LFS or Census of Agriculture, and resulting rate of fatal incidents per 100,000 employed.**

	Numbers employed	Worker fatalities in 2010	Rate of fatal incidents per 100,000 employed
Labour Force Survey	102,050	18	17.7
Census of Agriculture (total)	272,016	18	7.7
Census of Agriculture (excluding spouses and other family workers)	155,935	18	11.5

None of the three calculated rates in Table 1 above are directly comparable with other major economic sectors as the prevalence of family labour, including the very young and very old, is not included to any significant extent in other sectors. That said, the denominator derived from the census of agriculture, giving a fatality rate of 11.5 would be the most comparable rate to compare with other major economic sectors.

The results of the 2020 Census of Agriculture will provide more accurate figures on numbers currently employed in the sector and will be considered when available.

## Fatalities in the agriculture sector in the last five years

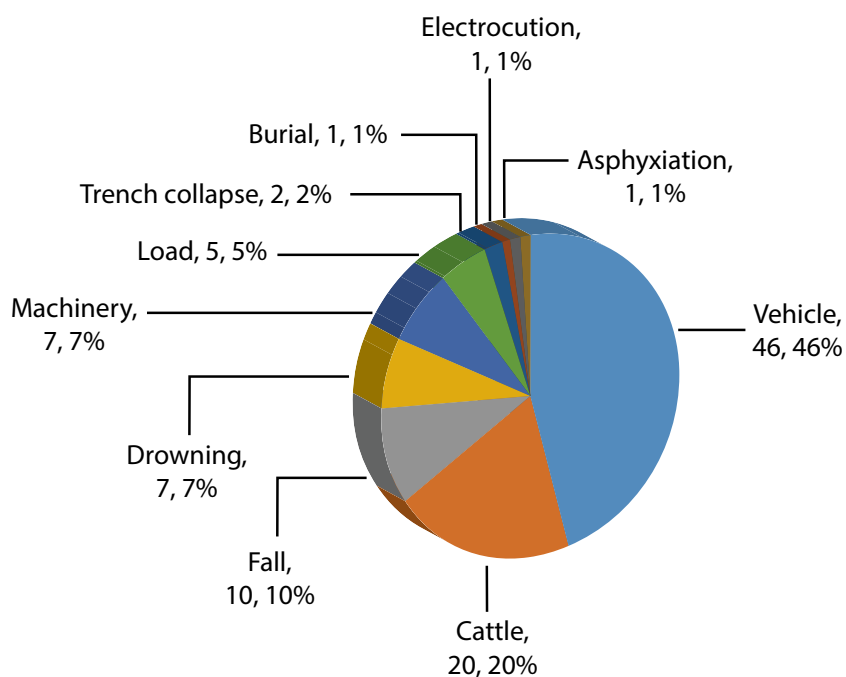
The most recent figures available show that the fatality rate for workers across all sectors of our economy is 1.8 per 100,000. The fatality rate for agriculture ranges between 17.7 and 7.7 per 100,000 depending on the denominator used. The average rate of farm fatalities in the EU is estimated to be 12.0 per 100,000; however, this is based on limited data, significant variations in reporting and the under-reporting of farm workplace deaths. For example in many member states, deaths to a self-employed farmer, family members or to persons not having a contract of employment are generally not reported. Therefore, comparing fatal injury statistics and rates within Europe and indeed internationally is very difficult.

**Table 2: The number of farm fatalities 2016-2020**

Year	2016	2017	2018	2019	2020
Number	21	25	15	19	20

The major causes of farm deaths have remained consistent for many years.

**Figure 1: Major causes of farm deaths in the last 5-year period (2016 – 2020), 100 deaths**



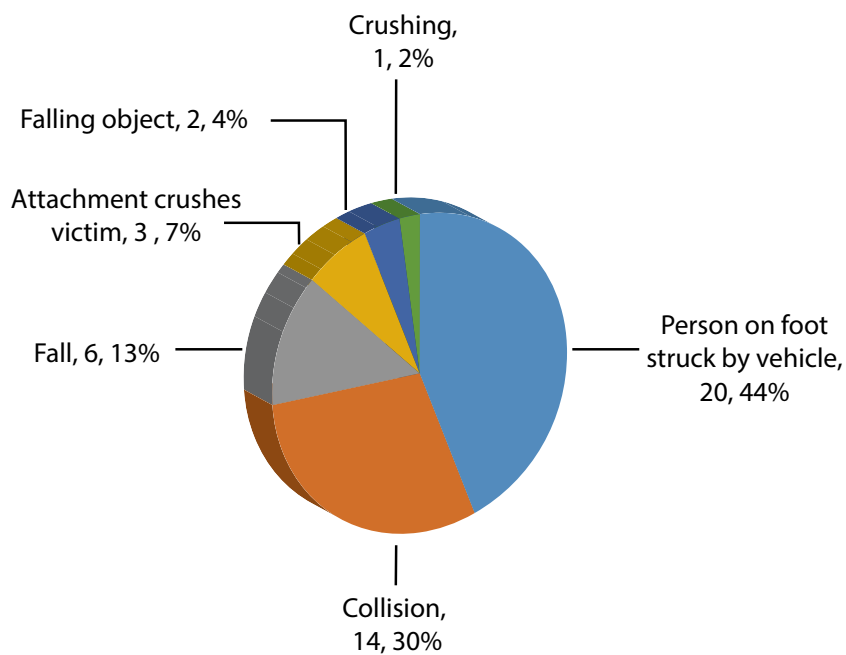
The vast majority of fatalities are associated with tractors and other farm vehicles such as quad bikes and loaders (46%) 46 followed by Livestock (20%) 20, Falls from Height at (10%) 10, with Machinery and Drowning both at (7%) 7. A significant issue is understanding the causation of fatal injury on farms. Further analysis of the fatalities involving tractors,

quads and other vehicle use indicates that 44% (20) of these deaths resulted from persons being struck by a moving vehicle. A further 30% (14) died as a result of a collision. Another significant issue is falling from vehicles 13% resulting in 6 deaths during this period.

Looking at the type of vehicle involved shows that tractors accounted for 57% (26) of vehicle related deaths while quad bikes made up 18% (8) deaths followed by loaders/telehandlers 13% (6) deaths. Many of these fatalities

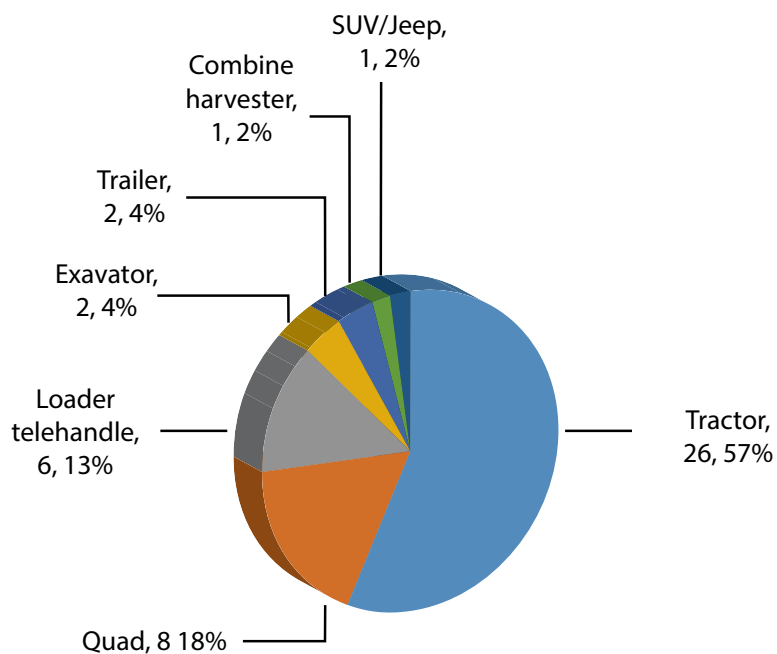
indicate operator error, lack of training, poor maintenance of vehicles and poor layout of farmyards and work areas were significant contributing factors, see figure 2 and 3 below.

**Figure 2: Number of deaths in Agriculture caused by vehicles, by precise cause, 2016-2020**





**Figure 3: Number of deaths in Agriculture involving vehicles, by type of vehicle, 2016-2020**

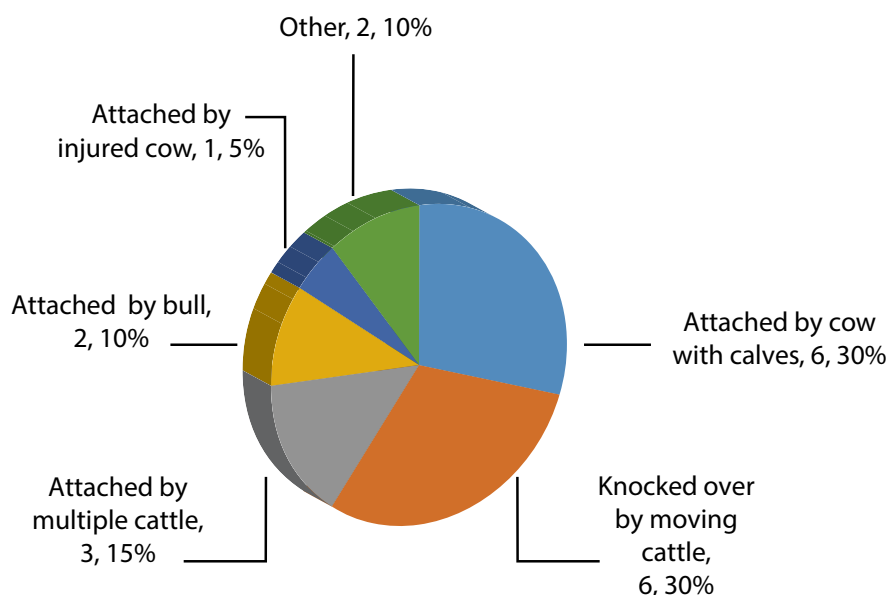


The second most prevalent category of farm fatality involves work with livestock, which led to 20% of farm fatalities in the last 5-year period (2016-2020). Notably, being knocked over or attacked by cattle combined accounted for

45% of fatalities by livestock, being attacked by a freshly calved cow accounted for 30%, while attacks by bulls accounted for 10% of fatalities, see figure 4 below.



**Figure 4: Number of deaths in Agriculture involving cattle, 2016-2020, 20 deaths**



Deaths in agriculture, unlike many other sectors, generally involve the farmer, family members including children and elderly persons living on the farm or fatalities to the farmer's friends and neighbors. Notably, many of the deaths across all categories disproportionately affects or involves older farmers.

### **Age profile of farm fatalities**

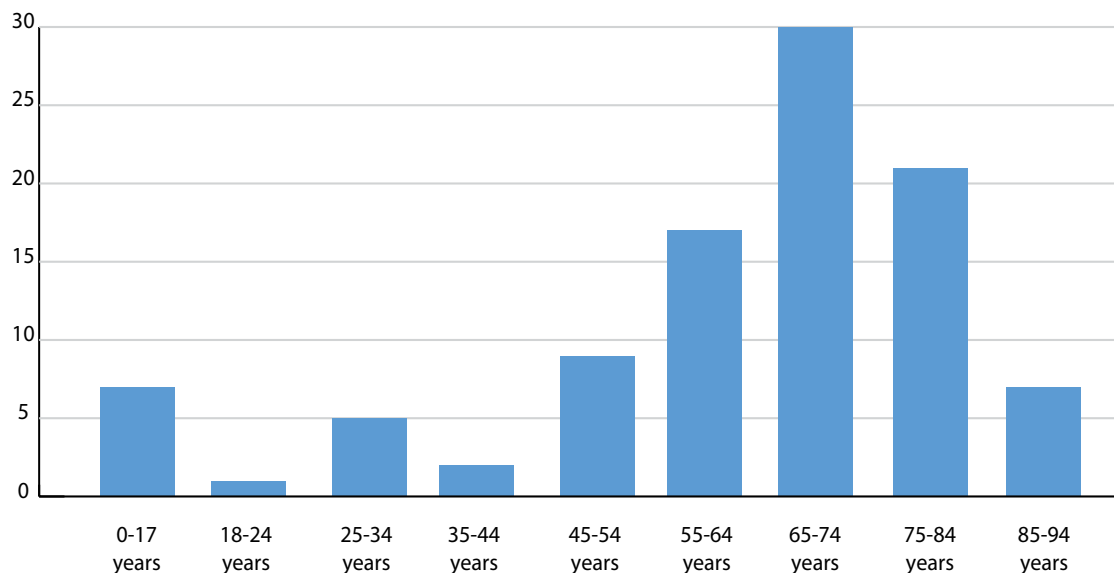
Figures show that fatal incidents on farms since 2016 were strongly concentrated among the older age groups.

- Of the 100 fatal incidents occurring, (58%) 58 occurred to people aged 65 years or more.
- Fatal incidents occurred to very elderly people aged 75 years or more (28%) 28.

- Older people make up most victims in the main categories of fatal incidents, particularly incidents involving working with tractors, quad bikes and other farm vehicles, work with cattle and incidents involving falls.

This is a very distinctive finding and raises the question as to why fatal incidents are so concentrated among older persons. Older farmers often suffer from sensory, mobility and dexterity issues making them incapable of reacting fast enough to sudden risk of injury from livestock and machinery. Older farmers often do not survive an injury that a younger person would recover from. Figure 5 below clearly indicates the age cohort requiring most attention from this action plan.

**Figure 5: Number of deaths in Agriculture by age group, 2016-2020**



It is notable that fatal incidents in other economic sectors do not exhibit the fatality age profile seen in Agriculture, where most fatalities happen to older farmers. In other sectors, workers of 65 years or older were involved in 10% of fatal incidents, compared with 44% in Agriculture in the period 2009 - 2018. This is probably affected by the high proportion of older people who continue to work in Agriculture, compared with other sectors. In 2018, 23% of workers in the Agriculture, Forestry and Fishing sector were aged 65 years or over<sup>1</sup> a much greater proportion than the 3% in the general Irish workforce.

### **Non-fatal injury and illness in agriculture**

Statistics relating to injury and illness are difficult to compile. This is due to the gross under-reporting of farm injuries by farmers and farm workers, despite the legal obligation to do so. Results from the most recent Teagasc National Farm Survey (NFS) undertaken in 2017 indicated that on farm incidents causing injury occurred on 11% of farms.

In the 2017 NFS it was found that injury prevalence was highest on dairy and cattle farms. This is unsurprising given that the survey found that 42% of all injuries involved livestock. Incidents involving farm vehicles or machinery accounted for a further 25% of injuries. The vast majority of farm injuries (92%) involved a family member with just under 80% of incidents occurring in the farmyard or in farm buildings.

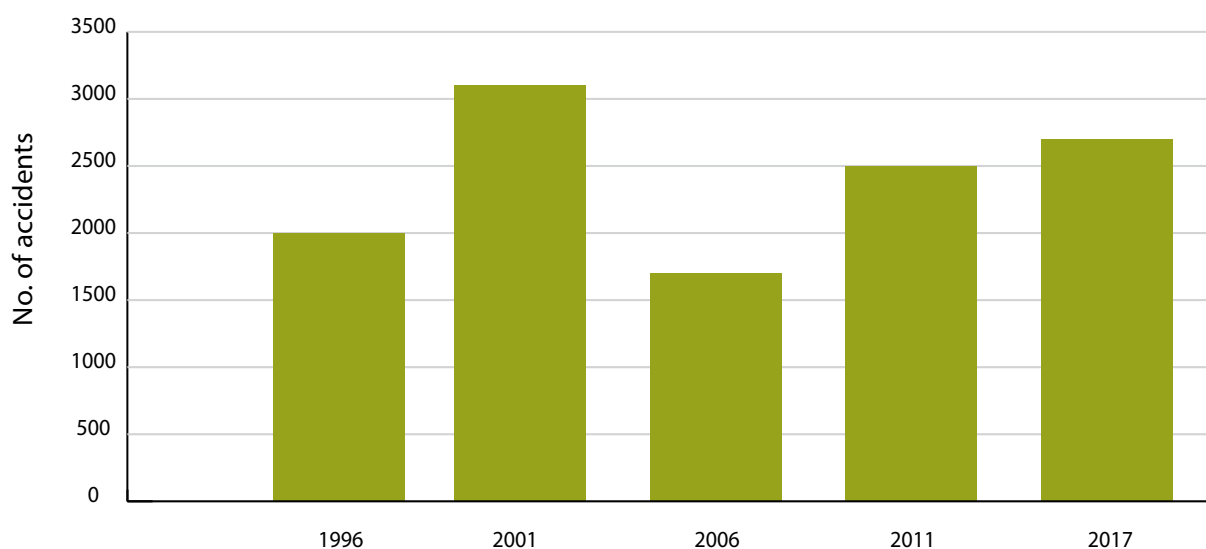
<sup>1</sup> Labour Force Survey, available: [www.appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsq\\_egan2&lang=en](http://www.appsso.eurostat.ec.europa.eu/nui/show.do?dataset=lfsq_egan2&lang=en).



The Teagasc National Farm Survey (NFS) in 2017, involved recall of injuries over the previous five-year period. This was the fifth such NFS study undertaken since 1991. As well as reporting the overall level of injuries over the period 2012-2017, the aim of the survey was to ascertain further the causes or contributory factors associated with farm injury as well as identifying those most at risk with a view to assisting with future policy design and farm safety promotion. Data on the prevalence of farm injuries (and specific type) by farm system and age category are reported in addition to information on the category of persons injured, the medical treatment required and the length of work absence as a result.

According to the Teagasc National Farm Survey 11% of respondents experienced an incident causing injury on their farm over the five-year period 2012-2017. The data indicates that there were 2,814 farm injuries in 2017, a 13% increase on the 2011 figure. Figure 6 below illustrates the steady rise in farm injuries since 2006 in particular, and reflects a 41% increase in the number of farm injuries in 2017 compared to two decades previous.

**Figure 6: Farm accidents 1996-2017**



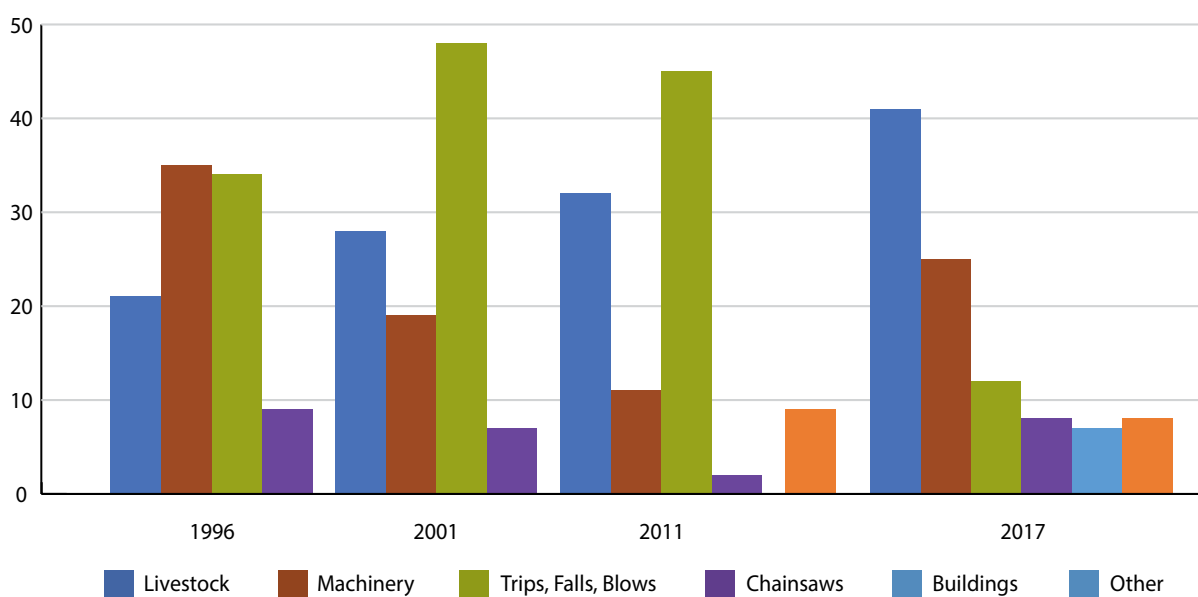
Source: Teagasc National Farm Survey

## Farm injury categorisation

Figure 7 reflects the types of farm injury occurring over the period 1996 to 2017. Each survey point relates to the occurrence of incidents in the five years previous, i.e. the 2017 figures relate to the period 2012-2017).

Over this period, the data indicates that 42% of injuries involved livestock with farm vehicles or machinery cited in a further 25% of accidents.

**Figure 7: Farm accident categories 1996-2017**



Source: Teagasc National Farm Survey

Trips or falls resulted in a further 13% of farm injuries over the period with chainsaws accounting for 7% and a further 6% involving farm buildings. The increasing proportion of incidents involving livestock over time is significant with a 20% point increase from 1996 to 2017. Similarly, the proportion of incidents involving machinery more than doubled from 2011 to 2017, (perhaps reflecting expansion of the national herd). On the other hand, a marked decline in the proportion of injuries due to trips and falls is evident over the same period, however it should be noted that some incidents

previously categorised as such were attributed to buildings in the 2017 survey.

## Person injured

Data from the survey indicates that the vast majority of on-farm injury (92%) involved family members. According to respondents 80% of the incidents occurring over the period 2012-2017 involved the farmer with 12% involving the spouse or other family member. The remaining proportion of incidents over the period involved workers (5%) and others (3%).

## Location of injury

According to the survey almost two-thirds of farm incidents occurred in the farmyard (64%) and a further 15% in farm buildings. Almost one-fifth of injuries (19%) were in fields with only 2% on farm roadways or lanes.

## Medical treatment required

Almost all of the reported farm injuries (97%) required medical treatment according to the survey with 73% of victims attending hospital, a further 19% attending a doctor and 4% requiring first aid.

## Recovery time

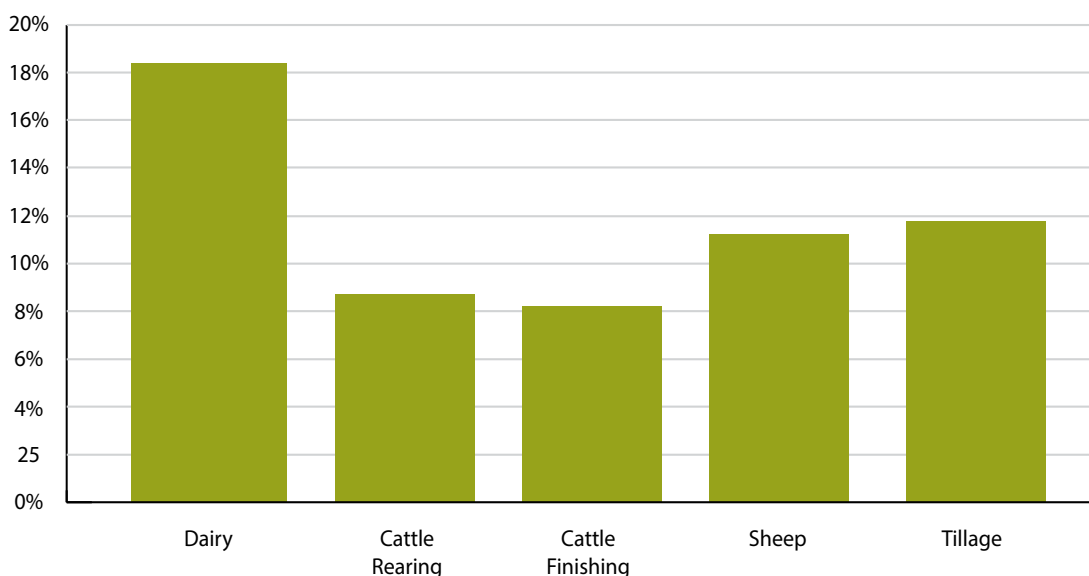
In terms of the impact of injuries, almost one-third (30%) resulted in the victim being out of

work for more than a month with 21% reporting an absence of more than two months. On the other hand, almost one-fifth (17%) reported that the incident did not result in them taking time off. A similar proportion (18%) reported a work absence of 1-3 days with 22% reporting a slightly longer recovery period of 4-10 days and 13% of those involved in farm incident out of work for between 11 and 30 days.

## Injury by farm system

Figure 6 indicates that incidents are most prevalent on dairy farms with 18% of them reporting an injury over the period 2012-2017. However, taken together the cattle systems reported a figure close to this (17%). Injury occurred on 12% of tillage farms over the period with the figure marginally lower on sheep farms at 11%.

**Figure 8: Accident occurrence (%) within farm systems 2012-2017**



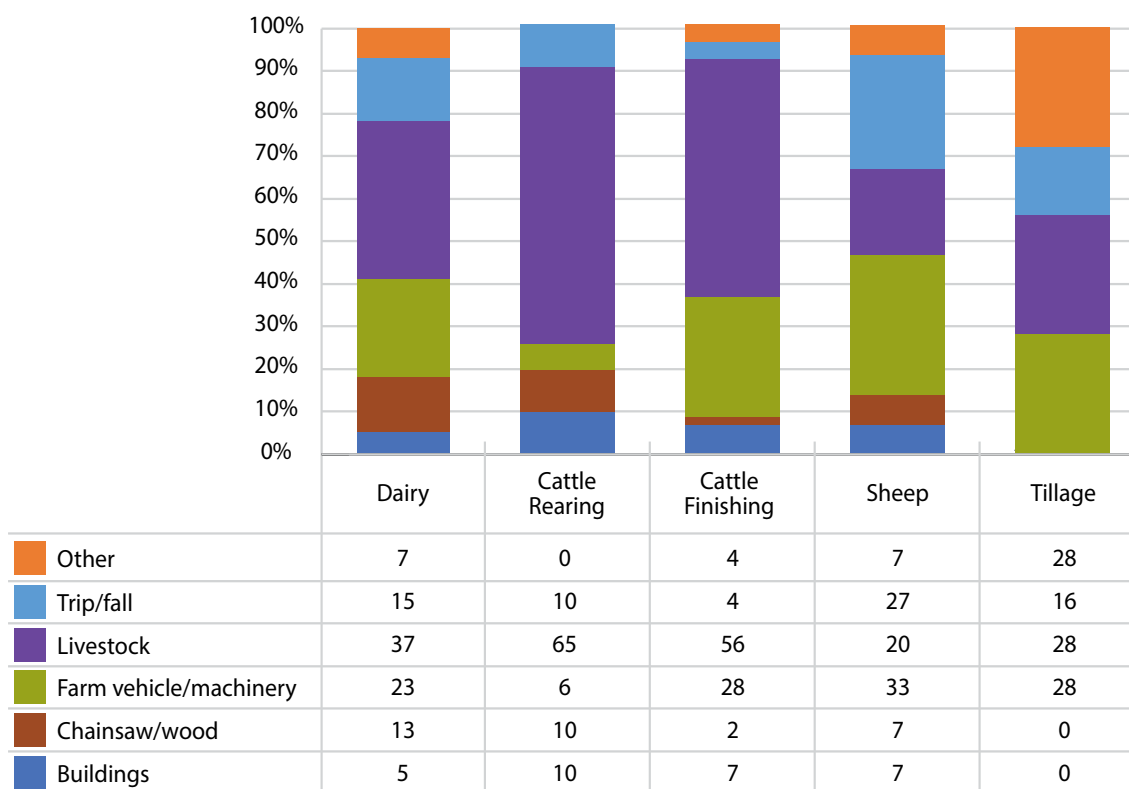
Source: Teagasc National Farm Survey



In attempting to assess the causal factors, it is striking to note that almost two-thirds (65%) of injuries on cattle rearing farms involved livestock with the proportionate figure on cattle finishing farms also very high at 56%. Livestock related injuries still accounted for the largest proportion of incidents on dairy farms over the period 2012-2017, although the figure was substantially lower at 37%. Almost a quarter of

all injuries on dairy farms involved farm vehicles or machinery with the corresponding figure on sheep farms one-third. 28% of incidents on both cattle finishing and tillage farms were accounted for by machinery. More than one-quarter of injuries on sheep farms were due to trips/falls, a figure not generally reported across the other systems, see figure 9 below.

**Figure 9: Accident type (%) by farm system**



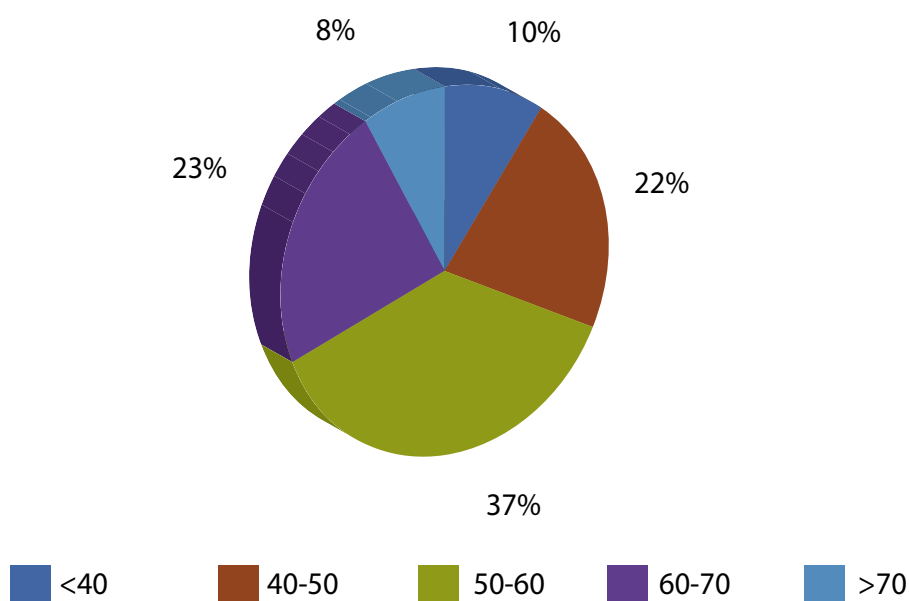
Source: Teagasc National Farm Survey

### Farm accident by age category

Figure 10 illustrates the age profile of farmers within the 2017 Teagasc NFS and reflects the fact that almost one-third (31%) are aged over 60. 87% of farmers surveyed were over 50, the

largest proportion of farmers (37%) were aged between 50 and 60 with just 22% in the 40 to 50, age category and only 10% of farmers aged 40 or less.

Figure 10: Farmer age profile

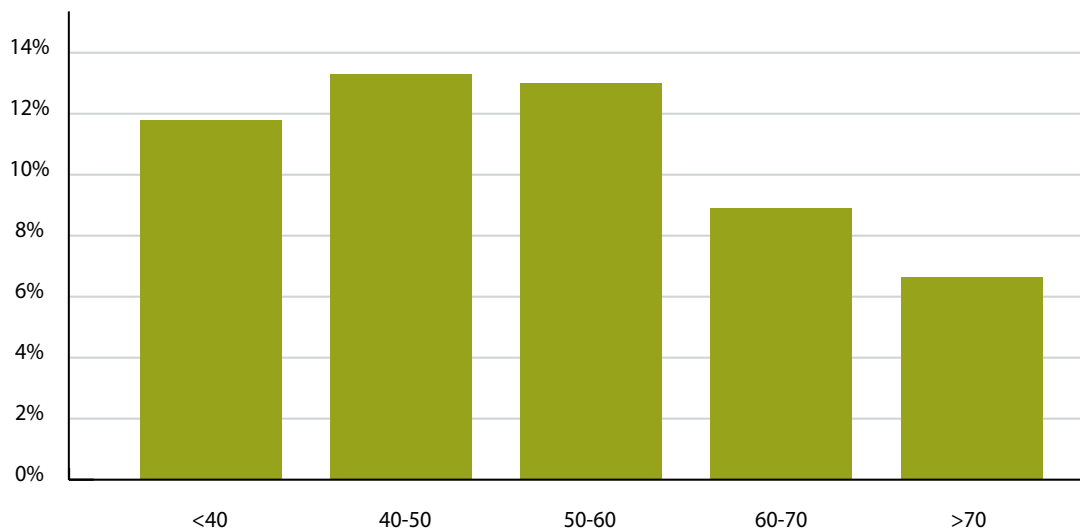


Source: Teagasc National Farm Survey

The 2017 data indicates that younger farmers are more likely to have farm injury, whereas HSA data indicates that fatalities are more likely among older farmers in the plus 60 age group. This is in accordance with international trends, which indicates that older farmers have the highest proportion of fatal farm incidents while younger farmers have the highest level of non-fatal farm injuries.

The 2017 data (Figure 9) which indicates that only 7% of farmers aged over 70 were involved in an incident over the period 2012 to 2017. Similarly, only 9% of farmers aged 60-70 were reportedly involved in an incident over the timeframe. This compares to a relatively higher frequency of injuries within the younger age categories with 13% of farmers in the 40-50 and 50-60 age brackets involved in an incident and 12% of those aged below 40. It would be interesting to examine labour input and intensity on these farms to explore this issue further.

**Figure 11: Accident occurrence (%) within age categories 2012-2017**



Source: Teagasc National Farm Survey

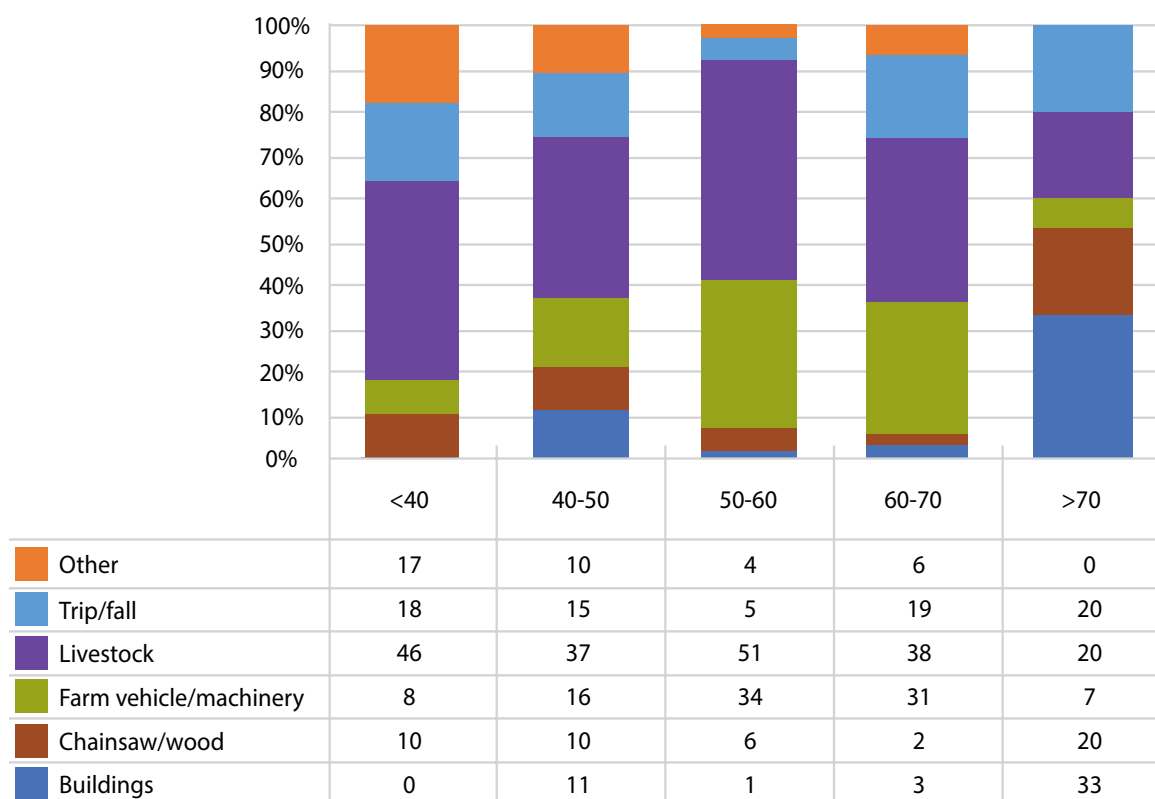
Taking account of the types of farm injury by age group Figure 12 below indicates that incidents

involving livestock was the most common cause across all age categories except where the victim was aged over 70, in which case incidents were more likely to involve farm buildings. Livestock related injuries accounted for over half (51%) of all incidents involving those aged 50-60 and almost half (46%) in the less than 40 age category. Incidents involving livestock

were also common in the 40-50 and 60-70 age categories accounting for 37% and 38% of all injuries respectively. Incidents involving farm vehicle and machinery were most common for those farmers aged between 50 and 70 years.



**Figure 12: Accident type (%) by age category**



Source: Teagasc National Farm Survey

## Occupational ill health

There are many risks to health in farming. Occupational ill health arises from any work related activity, which leads to bodily impairment and is often described as 'Injury in slow motion'. In international studies, occupational ill health is estimated as causing about 10 times the loss as farm injuries.

The *Total Health Model* where both injury prevention and health promotion are both promoted in harmony has been shown to be international best practice. Workplace training has been shown to be a good way to promote worker health.

The principal Occupational ill health conditions which may arise in agriculture include: cardiovascular disease (CVD) leading to stroke and heart attack, occupationally sourced cancers possibly from chemical or excessive sun exposure, MSDs generally causing upper body or lower back pain, respiratory illness affecting the lungs and respiratory tract, zoonotic diseases (diseases spread from animals to humans) and noise induced hearing loss.

Farming as an occupation predisposes people to health problems. Ill health can arise from occupational conditions and work activity can contribute to illness and can increase a person's vulnerability to injury. A national study of mortality in the occupational age category,



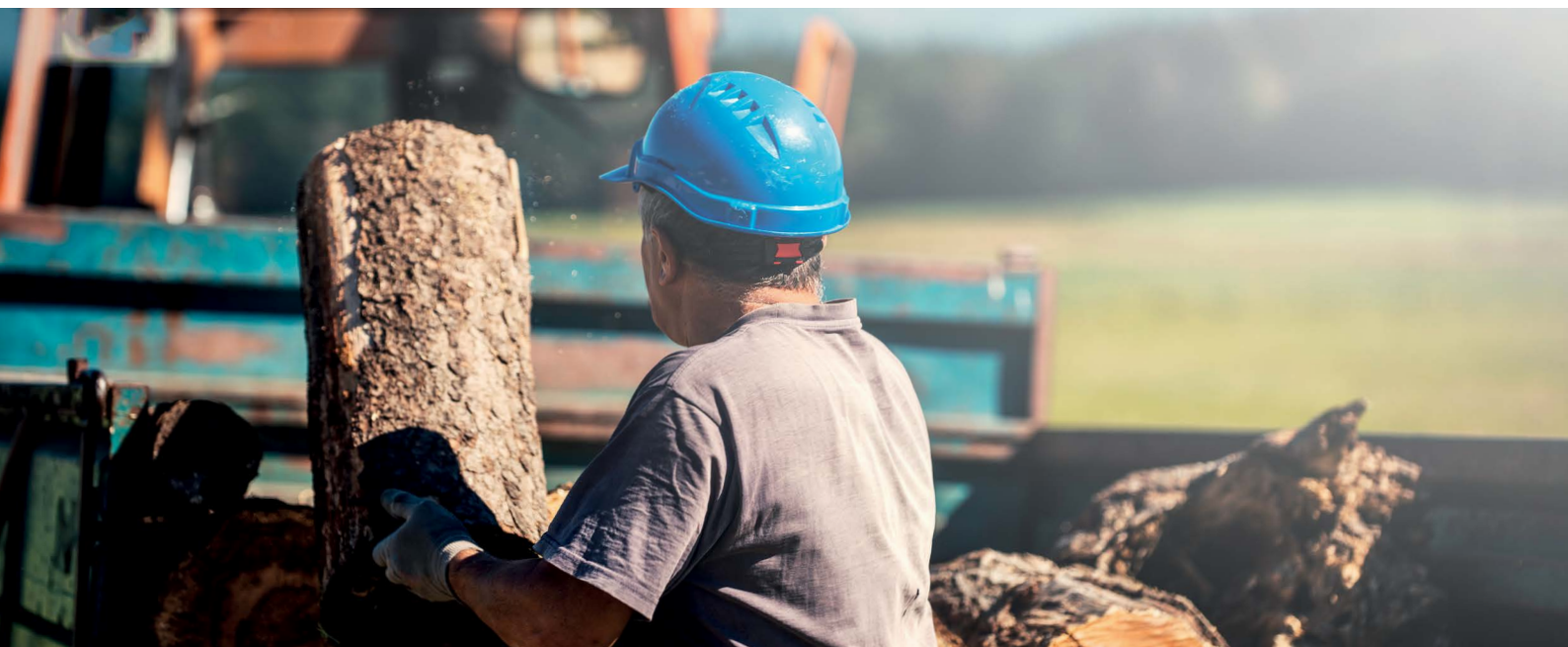
aged 17 to 65 years shows that farmers have 5 times higher incidence of (CVD), 3 times higher cancers, and 7 times accidental deaths and poisoning when compared to 'white collar' workers.

Lifestyle diseases such as cardiovascular disease, type 2 diabetes and hypertension are common in today's society. Recent Irish research found that lifestyle diseases disproportionately affect farmers. The National Centre for Men's Health at the Institute of Technology Carlow and the Irish Heart Foundation funded a Master's research assessing the effectiveness of a health promotion initiative targeted at Irish farmers.

This study completed in 2020 found that 74% of farmers have four or more risk factors for cardiovascular disease (CVD), which increases the chances of having a stroke or heart attack, threefold, compared to those with fewer risk factors. The findings of the research also point to a need for an increased focus on local follow-up supports, which prompt farmers to make more effective use of health services and enable them to make changes to lifestyle and health behaviours.

Regarding occupational cancers, these can arise due to such areas as, excessive exposures to sun light causing skin cancers or contact with chemicals and inhaling hardwood dust and asbestos fibres. Physicians can distinguish between sources of cancer by its nature. With CVD and cancers, seeking medical treatment at an early stage is crucial.

A study has shown that 56% of Irish farmers suffer an MSD annually, with the body parts affected being the back (37%), hips and lower limbs (26%), neck and shoulder (25%) and arms, wrists and hands (10%). Respiratory illness, zoonotic diseases and noise induced hearing loss, are other significant occupational illnesses suffered by farmers. Information on their prevention can be found in the Farm Safety Code of Practice, the Risk Assessment document and in a booklet dedicated to farmer's health called "Fit for Farming". All of which are available on [www.HSA.ie](http://www.HSA.ie)



## 4. Review of Farm Safety Action Plan 2016 – 2018

The Farm Safety Partnership met 11 times over a four year period since 2016, including meetings in 2019/2020 during its review and re-establishment. The Farm Safety Action Plan 2016–2018 set out six major goals undertaken by six Working Groups under which a total of 97 actions were listed.

The six goals for the Farm Safety Action Plan 2016-2018 were as follows:

1. To achieve cultural behavioural change in health and safety of persons working in the agricultural sector through research, education and training.
2. To develop programmes that will foster innovative approaches and deliver engineering solutions to reduce the risks to persons working in agriculture.
3. To reduce the level of death and injury arising from tractor and machinery use.
4. To establish initiatives to reduce the level of death and injuries arising from working with livestock.
5. To ensure high standards of health and safety are adopted in forestry and work with timber on farms.
6. To implement programmes for the protection of health and wellbeing of persons, including vulnerable groups working in agriculture.

Six Working Groups, each chaired by a FSPAC member, were set up to achieve implementation of the 97 listed actions, all but five of which were fully or partially completed.

Some of the key actions of the last Action Plan completed include:

- Identified, initiated, and supported research such as Masters or PhD studies in critical areas of farm safety, health and welfare.
  - A significant number of Masters and PhD studies undertaken and completed during the period of the action plan.
  - The ESRI carried out and published further research using the HSA funded GL Noble Denton report on Determining Underlying Psycho-social Factors Influencing Farmers' Risk-related Behaviors (Both Positively and Negatively) in the Republic of Ireland.
  - Farm safety and health questions were included as an important element in the National Farm Survey 2017 (Teagasc).
- A comprehensive review, update and republishing of the Farm Safety Code of Practice, was carried out, including the online version. This was coupled with continued promotion of the half-day Code of Practice training on how best to use the farm safety risk assessment approach to farm safety.
- A farm safety lecturer funded by FBD was appointed to University College Dublin to assist in the promotion of farm safety at third level.
- Farmer led safety was encouraged and promoted, such as farmer engagement with discussion groups, knowledge-transfer groups and farmer to farmer mentoring/support systems.

## Review of Farm Safety Action Plan 2016-2018

- The inclusion of health and safety as a component of the Leaving Certificate Agricultural Science syllabus was established and the 'Champions for Change' farm safety seminars were delivered at all agricultural colleges annually before student work experience placements.
- Further online courses on farm safety were developed and promoted on the HSA's e-learning portal [www.hslearning.ie](http://www.hslearning.ie) for use in primary and post-primary education and for inclusion in national farm safety training programmes.
- Good farm safety behaviours, particularly around tractors and machinery, livestock, slurry, and working at height were promoted and encouraged through farm safety inspection campaigns, supported by media campaigns on national and local media.
- Major annual events were run to focus farmers on key safety messages around safety critical issues such as tractors and machinery, livestock and working at height. Events included the National Farm Safety Conference, farm safety conferences run by Teagasc, the Institution of Occupational Safety and Health (IOSH) events, Machinery Show, Tullamore Show, National Ploughing Championships and several enterprise specific Teagasc Open Days.
- Practical safety demonstrations of best practices were included as part of all the major agricultural shows and events, including safe operation of tractors, loaders, quads, mobile elevated work platforms and in some instances livestock handling safety.
- Farmers were encouraged to avail of the many farm safety schemes such as the TAMS schemes, Bord Bia quality assurance schemes and others such as GLAS, all of which have elements to ensure improved occupational health and safety standards.
- The extensive suite of information sheets and guidance documents available from the Authority were expanded and promoted, providing safety guidance on safety critical areas in agriculture, particularly on the safe use of tractors and machinery, safety working with large animals, safe slurry handling, safety with bales and other areas of risk on farms.
- Considerable focus was placed on the implementation of requirements of the Child Safety Code of Practice, particularly with regard to the prohibition on carrying children under 7 years of age on tractors and other farm machinery.
- A suite of guidance on livestock safety including a DVD was developed setting out, safe handling of livestock, reading the danger





signals of livestock, safe systems of work and safe handling facilities for bulls and cows at calving and the essential use of livestock warning signs.

- The application of state-of-the-art livestock handling facilities at marts and lairages was encouraged and focus was also placed on the need for adequate livestock-handling facilities at out-farms, including rented lands.
- An extensive suite of guidance leaflets for forestry safety was developed and published focusing on the obligations of the owners of forestry and forestry works manager in regard to arrangements for the selection and monitoring of good health and safety standards of forestry contractors.
- The development of an Arboriculture Apprenticeships Training Program was encouraged and actively assisted along with the uptake of existing recognised training in safe use of chainsaws by City and Guilds, Lantra and to QQI standards was encouraged.

- Farmer health seminars were held and the publication “Fit for Farming”, a health booklet for Irish farmers was reprinted several times for distribution at these seminars and other major events.
- Significant focus was placed on child safety particularly in rural schools with letters issued to all primary schools each year encouraging the use of [www.hslearning.ie](http://www.hslearning.ie) tool and the Agri-Aware ‘Dig In’ pack.
- Teenagers were encouraged to undertake the tractor skills training for young person’s run by the Farm Relief Service (FRS).

Sector stakeholders and member organisations undertook several additional initiatives and campaigns during the period of the last action plan, many without the involvement of the Health and Safety Authority, which showed continued commitment from the sector generally.





## 5. Farm Safety Action Plan 2021–2024

This Farm Safety Action Plan aligns with the core principals within the current published overall HSA Strategy 2019 - 2021.

As with the overall HSA Strategy Statement, the “HSA Farm Safety Action Plan” was developed around established themes:

- Influence
- Promote
- Regulate

The HSA identified four priority areas for attention and developed actions and desired outcomes for the next Action Plan with four “Internal HSA Working Groups” set up and active during 2019.

1. Culture, Behaviour and Education
2. Tractors and Quad Bikes
3. Livestock
4. Work at Height

Each Working Group considered the status quo ‘**As Is**’ and the future desired state ‘**To Be**’ across seven strands of Authority activity. The ‘To Be’ was refined into key performance indicators as outcomes for the lifetime of the strategy.

The seven strands of activity are:

1. Engagement and influencing
2. Regulation
3. Enforcement and compliance
4. Education, training and upskilling

5. Guidance and intervention tools
6. Information and intelligence
7. Awareness-raising

High-level objectives were set out across each area. Actions were identified under each objective across a four-year period to be specified in published annual programmes of work. All strands of the overall Action Plan will be actioned by the Farm Safety Partnership other than regulation, enforcement and compliance, which will be led by the Authority.

### **Building a safety culture within agriculture**

- Building a safety culture within agriculture is seen as the foundation for sustainable change in all critical OSH areas requiring improvement.
- Culture within the sector or at each farm is *‘the way we do things around here.’* Culture is slow to change and establishing a new culture requires long-term sustained and sector supported action.
- Farming is a unique workplace amongst work sectors: involving a family home and workplace with complex profiles: land ownership, family structure, legacy, work v way of life, generational issues, long hours, lone working, pressure to expand, environmental challenges and ever increasing challenges to make a living.
- Reputation amongst farmer peer groups is important to farmers – they want to be perceived and recognized within their community as a *‘good farmer’*.

- Family members and farmer peer group are key influencers on farmer behaviour; in particular: spouses, partners, grandparents and children (upward influence) also, farmer friends, vets, advisors can all influence safer behaviour.
- Recognition of the huge diversity within the farming population in terms of farm size, enterprise type, full/part-time work, family structure, educational levels, socio-economic background and age profiles.
- Cultural variations between cohorts of farmers, with different approaches required in different farmer cohorts towards changing safety behavior; e.g. compliant v risk takers.
- Key HSA activities that influence culture include communications, messaging and language used, education, policy, awareness raising and promotion, information and guidance, legislation, inspection/enforcement and stakeholder engagement.
- Psychology is key to understanding and improving farmers' OSH mindset and behaviours: converting information and awareness to decision-making: attitudes (how I feel about OSH rules), beliefs (what I believe to be true) and values (core values in life) – are all key internal influencers on how we convert information and knowledge to decisions.
- Using the formal education system to embed safety mindset in farming family particularly with children and teenagers for their own future and to exert upward influence.
- Using 'loss' and 'gain' as motivators in terms of what approaches to use:
  - Loss arguments: e.g. loss of health and bodily function, loss of livelihood, loss of farm (family legacy gone), vulnerable family without breadwinner.
  - Gain arguments: peer recognition, a well-run farm is a safe farm, a safe farm is a profitable farm, farmers are concerned for others' health and safety so will act to protect them (if not themselves); a well-run farm can be handed on to the next generation.
- A singular approach does not fit all. The HSA and FSP must vary its messages and approach to different cohorts within farming, and to the key influencers of farmers.
- A variety of media is used including national television and radio advertising, local press, print media, social media and other media channels are all relevant and should be mixed depending on cohort and message.
- The extent to which health and safety learning outcomes and content are covered in formal agricultural education programmes is unknown and needs to be fully assessed (Agriculture Colleges, Undergraduate level in Higher Education).
- Role of training is key – many farmers are not in the habit of attending formal training or upskilling.

### **Guiding principles for influencing farmers approach to farm safety**

- Peer-perception can be used as a strong motivator towards good behaviour and safety norms amongst farmers.
- Involving all members of 'the farming family' as key influencers (upward, downward and lateral).

### 6. Farm Safety Action Plan 2021-2024 Working Groups

#### Overall objectives:

1. To establish farming as a recognized and valued professional occupation.
2. To use research and existing knowledge of the key safety and health issues in farming, including NFS and Ag Census data to inform interventions and improvements to sustainably improve farm health and safety.
3. To ensure that straightforward, appropriate information and guidance on key safety issues is available, easily accessible and influences all in the farming community.
4. To ensure that safety critical and timely information is provided on the key risks in farming to every person involved in any way with farms and farming and that they know their role in removing/reducing these risks.
5. To promote life-long learning for farmers, including health and safety training and the inclusion of relevant health and safety components within broader education and training, for people living or working on farms.
6. Maintain the progress made in relation to PTO safety, child safety, farmer health and general safety awareness through the inclusion of OSH in knowledge transfer groups, peer-to-peer initiatives, farm walks, seminars, conferences, major events and online resources.
7. To focus on the next generation of farmers and support generational renewal in farming by providing education and training on all aspects of farm safety and health at all levels of education.
8. Place particular focus on the provision of practical skills training to all age cohorts in farming to prevent serious and fatal injury.
9. To ensure that poor practice is identified, discouraged and where appropriate penalised, such as poor maintenance of tractors and machinery, poor tractor and machinery operation, poor livestock handling practice, working at height without fall protection, etc.
10. To highlight key areas of occupational health (including mental health) and provide information on health risks and how to manage them.



## Goals for the Farm Safety Action Plan 2021-2024

The following are the 5 goals for the Farm Safety Action Plan 2021-2024:

1. To achieve a culture change in health and safety of persons working in agricultural through research, education and training.
2. To implement initiatives for the protection of health and wellbeing of vulnerable persons working in Agriculture, particularly the elderly, children and migrant workers.
3. To reduce the level of death and injury arising from tractor, vehicle and machinery use in Agriculture.
4. To establish initiatives to reduce the level of death and injuries arising from working with livestock.
5. To undertake initiatives to prevent death and serious injury from falls from height and improve the standards of construction activity in Agriculture.

Under this 2021-2024 Action Plan, five Working Groups have been established and have set out their high-level objectives as follows:

1. Behaviour, Education and Training Working Group
2. Health and Vulnerable Persons Working Group
3. Tractor, High Risk Machinery Working group
4. Livestock Handling Working Group
5. Buildings, Work at Height Working Group

## I. Behaviour, Education and Training Working Group - High Level Objectives

- a) Develop a three-year adequately funded communication plan, using targeted media channels and specific language to influence farmer attitudes and behaviours towards farm OSH.
- b) Identify opportunities to communicate with key family members to equip them to support and encourage safe working practices by influencing those who work on the farm.
- c) Influence farmer attitudes towards their uptake of life-long learning, including life-long learning in OSH to establish farming as a professional occupation.
- d) Review, develop and establish appropriate OSH in agriculture content at all levels of education, from primary through to third level and close out any OSH skills gaps identified.
- e) Review existing agricultural education and training courses and ensure that appropriate health and safety information is included in the syllabus / course content.
- f) Ensure OSH training is a central element of all farm or farmer development schemes.
- g) Establish and promote practical skills training in all safety critical areas in agriculture.
- h) Promote the migration to new technologies such as; increased use of online tools and training resources, simulator training and virtual reality training.



## 2. Health and Vulnerable Persons Working Group - High Level Objectives

- a) Produce a summary and synthesis of existing research particularly the Teagasc BeSafe and Health and Wellbeing findings and formulate evidence-based recommendations to impact agricultural Health and Safety policy.
- b) Develop a range of targeted farmers' health, safety and wellbeing promotion activities including farmers' health leaflets and video clips.
- c) Establish older farmer's approach and perceptions on retirement, safety practices and their wellbeing through research or focus groups.
- d) Promote child safety, health and wellbeing on the family farm.

## 3. Tractor and High Risk Machinery Working Group - High Level Objectives

- a) Develop a specific action plan to improve the maintenance and safe operation of tractors, quads, farm vehicles and other farm machinery to prevent death and serious injury.
- b) Conduct comparison between how safety of construction work vehicles and agriculture work vehicles is managed.
- c) Initiate discussion and agree changes in attitudes towards high-risk vehicles /machinery use, specifically the requirements in relation to tractor/vehicles licensing requirements in agriculture.
- d) Investigate innovative ways of establishing incremental Training and Assessment for tractor, teleporter and quad operation in education systems for young farmers.
- e) Develop a detailed tractor and machinery skills video with relevant stakeholders.
- f) Increase awareness amongst forestry employers and workers of the management of risks through; establishment of exclusion zones, appropriate operator training, certification of machinery, use of safety checklists and a focus on safe loading and unloading of product.



### 4. Livestock Handling Working Group - High Level Objectives

- a) Using research and existing knowledge develop a specific action plan to protect farmers from serious and fatal injury from livestock handling, including livestock attacks.
- b) Develop and establish practical skills training in the safe handling of livestock delivered at appropriate locations to farmers.
- c) Carry out and focus on practical skills gaps in livestock handling safety in agricultural colleges ensuring livestock risks are adequately covered in education at all levels.
- d) Promote the dissemination and use of existing guidance on livestock safety including use of the info sheets, short video clips and virtual reality on livestock safety, particularly for new entrants and older farmers who are most at risk.
- e) Develop an information sheet specific to the risks of working with cows at calving.
- f) Promote and provide training in the man-animal relationship (MAR) as it relates to safe working with animals.

### 5. Buildings, Work at Height Working Group - High Level Objectives

- a) Identify and implement specific actions to improve farmer and worker safety knowledge about construction, building maintenance and demolition work on the farm.
- b) Propose research to identify gaps in farmer knowledge on work at height, building maintenance work and construction work safety in Agriculture.
- c) Prepare, communicate, and disseminate information to bridge knowledge gaps.
- d) Support training initiatives to be given to farm advisors, farm building contractors and farmers in relation to on farm construction safety and working at heights.





## APPENDIX I

### Terms of Reference of Farm Safety Partnership

1. To act as a consultative and advisory forum on the HSA's priorities and work programme for the Agriculture Sector.
2. To develop and agree a national action plan, coordinating the actions of working groups and representative organisations.
3. To identify, prioritise and progress the key actions related to improving safety and health standards in the Agriculture Sector.
4. To identify and agree the critical areas for action and establish working groups to assist in the achievement of the agreed actions.
5. To coordinate the work of working groups to achieve agreed targets, including a reduction in injury and ill health and an improvement in compliance with occupational safety and health within the sector.
6. To promote, influence and monitor the national action plan.
7. To identify, support and promote appropriate research and liaise with the relevant working group and agricultural organisations in the practical implementation of research findings.
8. To report regularly and formally, at least annually, to the HSA Board and provide a final report with proposed future actions following its four year term.



#### **Chairperson**

Mr Ciaran Roche  
HSA Board Member

#### **Vice Chairperson**

Dr Robert Leonard  
Department of Agriculture, Food and the Marine

- *Mr Jim Dockery* – Farm Relief Service (FRS)
- *Mr Ray Doyle* – Irish Co-operative Organisation Society (ICOS)
- *Ms Caroline Farrell* – Irish Farmers Association (IFA)
- *Mr Stewart Gavin* – FBD Insurance plc (FBD)
- *Mr Lorcan McCabe* – Irish Creamery Milk Suppliers Association (ICMSA)
- *Dr John McNamara* – Teagasc
- *Mr Tom Murphy* – Professional Agricultural Contractors Ireland (PAC Ireland)
- *Mr Patrick Nolan* – Association of Farm and Forestry Contractors in Ireland (FCI)
- *Mr Terry Bryan* – Services, Industrial, Professional and Technical Union (SIPTU)
- *Awaiting Replacement* – Macra Na Feirme

#### **HSA Staff**

*Mr Pat Griffin* – Senior Inspector

*Ms Martina Gormley* – Inspector

*Ms Orla Cahalan* – FSPAC Secretary





## APPENDIX 3

### Membership of Working Groups

#### Behaviour, Education and Training Working Group

**Chairperson:** *Dr. John McNamara* - Teagasc

*Mr Ciaran Roche* – HSA Board

*Ms Joanne Harmon* - HSA

*Ms Lorraine Delahunty* – Teagasc

*Ms Rosita Neilan* – DAFM

*Mr Peter Slattery* – FRS Training

*Mr John Kennedy* – IOSH

*Dr Denis O'Hora* – NUIG

*Prof Jim Kinsella* – UCD – SAFS

*Awaiting replacement* – Macra na Feirme

#### Livestock Handling Working Group

**Chairperson:** *Mr. Ray Doyle* - ICOS

*Dr Robert Leonard* – DAFM

*Mr Francis Bligh* – Teagasc

*Mr Lorcan McCabe* – ICMSA

*Mr Jim Dockery* – FRS

*Mr Stewart Gavin* – FBD

*Mr Brendan Golden* – IFA

*Mr Danial Lynam* – ICMSA

#### Health and Vulnerable Persons Working Group

**Chairperson:** *Mr Pat Griffin* – HSA

*Ms Caroline Farrell* – IFA

*Ms Diana van Doorn* – Men's Health, IT Carlow

*Ms Eilis Greene* – Agri-Aware

*Mr James Claffey* – Irish Rural Link

*Dr Robert Leonard* – DAFM

*Mr Enda Geoghegan* – Teagasc

*Mr Terry Bryan* – Irish Heart Foundation

#### Buildings, Work at Height Working Group

**Chairperson:** *Dr Robert Leonard* - Department of Agriculture, Food and the Marine

*Ms Martina Gormley* - HSA

*Mr Tom Fallon* - Teagasc

*Mr Stewart Gavin* - FBD Insurance

*Mr Michael Murray* - ESB Network

*Mr Peter McDonald* - McDonald Engineering

#### Tractor and High Risk Machinery Working Group

**Chairperson:** *Mr Jim Dockery* – FRS

*Mr Tom Murphy* – PAC Ireland

*Mr Patrick Nolan* – FCI

*Mr Jim Casserly* – Coillte

*Mr Michael McHugh* – DAFM

*Mr Francis Quigley* – Teagasc

*Ms Martina Gormley* – HSA

*Awaiting Replacement* – FTMTA



### Further Information and Guidance:

Visit our website at [www.hsa.ie](http://www.hsa.ie), telephone our contact centre on **1890 289 389** or email [wcu@hsa.ie](mailto:wcu@hsa.ie)

Use Farmsafely.com, our free online farm risk assessment tool, or use BeSMART, our free online risk assessment tool at [www.besmart.ie](http://www.besmart.ie)

Check out our range of free online courses at [www.hsalearning.ie](http://www.hsalearning.ie)





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**Tel. 1890 289 389**

International  
Callers  
00353 1 6147000

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