

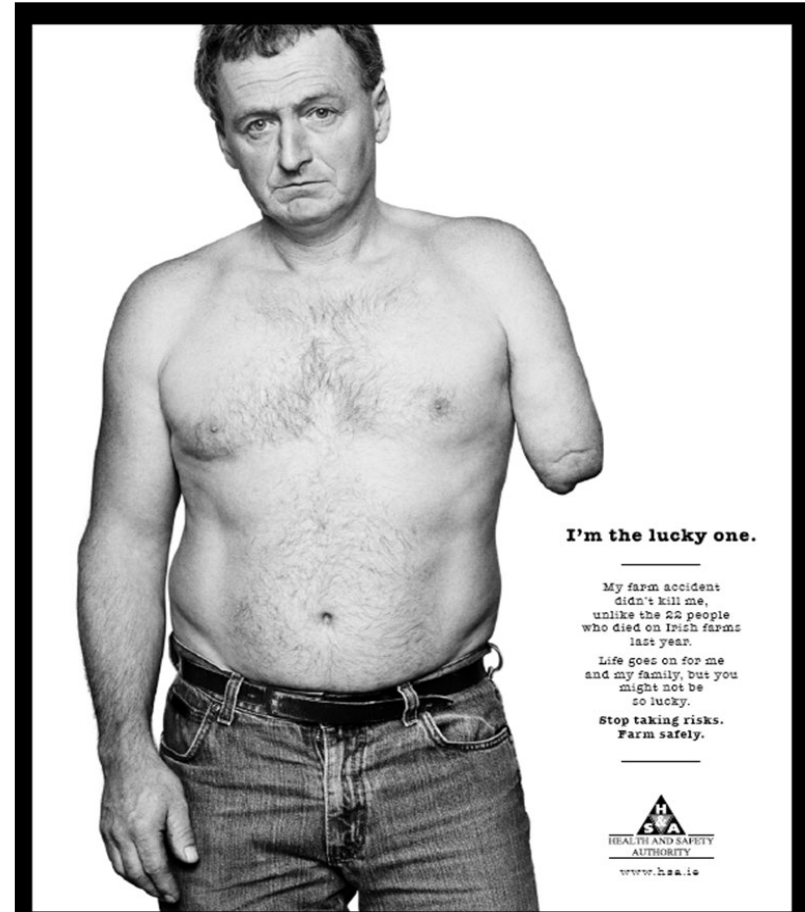
Occupational Safety and Health (OSH) for Sustainable Farming

Dr John McNamara, Senior OSH
Specialist, Teagasc

Consequences of Injury/ Ill Health

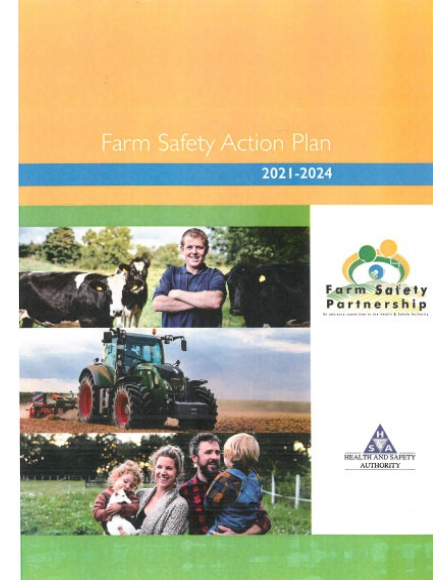
- Pain, Suffering and Tragedy
- Ill Health – an ‘accident in slow motion’.
- Disability: Reduced Income (- 22%) or cease OFE (- 20%).

(Source: *Whelan et al, 2009*)



Major Agencies

- **Health and Safety Authority**
 - Legislation and Guidance
 - Joint Agreement with Teagasc
- **Farm Safety Partnership**
 - Sectoral Consultation & Farm Safety Action Plan 2021-2024.
- **DAFM**
 - Minister of State with responsibility for Farm Safety
 - Scheme Inclusion & Support / EIP's
- **Bord Bia/ Origin Green**



Teagasc Statement of Strategy 2021 to 2024

Overarching Strategic Goal

“To make sustainability front and centre of all Teagasc activities.”

Securing Farmer Health and Safety and Wellbeing

Far too many people, young and old, are killed or seriously injured on our farms each year. Teagasc in partnership with the Health and Safety Authority and through its involvement with the Farm Safety Partnership maintains an innovative research programme and an on-farm knowledge advisory service to ameliorate the tragedy of farm casualties. Our approach to research and innovation in this area is hugely influenced by the ‘One Health’ and ‘Total Worker Health’ concepts. These concepts integrate occupational health and safety and health promotion and thus acknowledges the interconnection between farmer safety, health and well-being.

1. A key focus of the research and advisory programme will be to base all interventions on a thorough understanding of farmer behaviour in respect of risk.
2. We will continually seek to create and test a diverse set of innovative tools and approaches for communication of key health and safety messages to farmers.

Strategic Goal 1

To support improvements in farmers’ living standards and well-being

- ▶ Supporting Viable Farming
- ▶ Securing Farmer Health and Safety and Wellbeing

Deploy:
‘Total Worker Health Model’

“Teagasc Together”

Harnessing the Power of Research, Advisory and Education to Create a Sustainable Food System

Teagasc Statement of Strategy
2021 – 2024



- Intergration between KT and Research
- Work with partners. E.g. H.S.A., Engage Uni’s. .



Key Issues re. OSH in Agriculture

- 135,025 farms, circa 300.000 at Risk.
- Farmers predominantly 'self-employed' - take risks.
- Farm OSH a 'Wicked' –'solution' as many components at various levels
- Accurate Risk Communication



Farmer OHS Management



SAFETY FIRST • TEAGASC

Teagasc Advisors – ‘Farmers forget about Safety when pressure comes on’.

- UK HSE Farmer Study (2017)
 - - 45% Planners
 - - 14% Pragmatists
 - - 18% Risk Takers
 - - **23% Unclear**
- ‘Unclear’ need on-going support

Farm Safety Is Described as a ‘Wicked problem’.

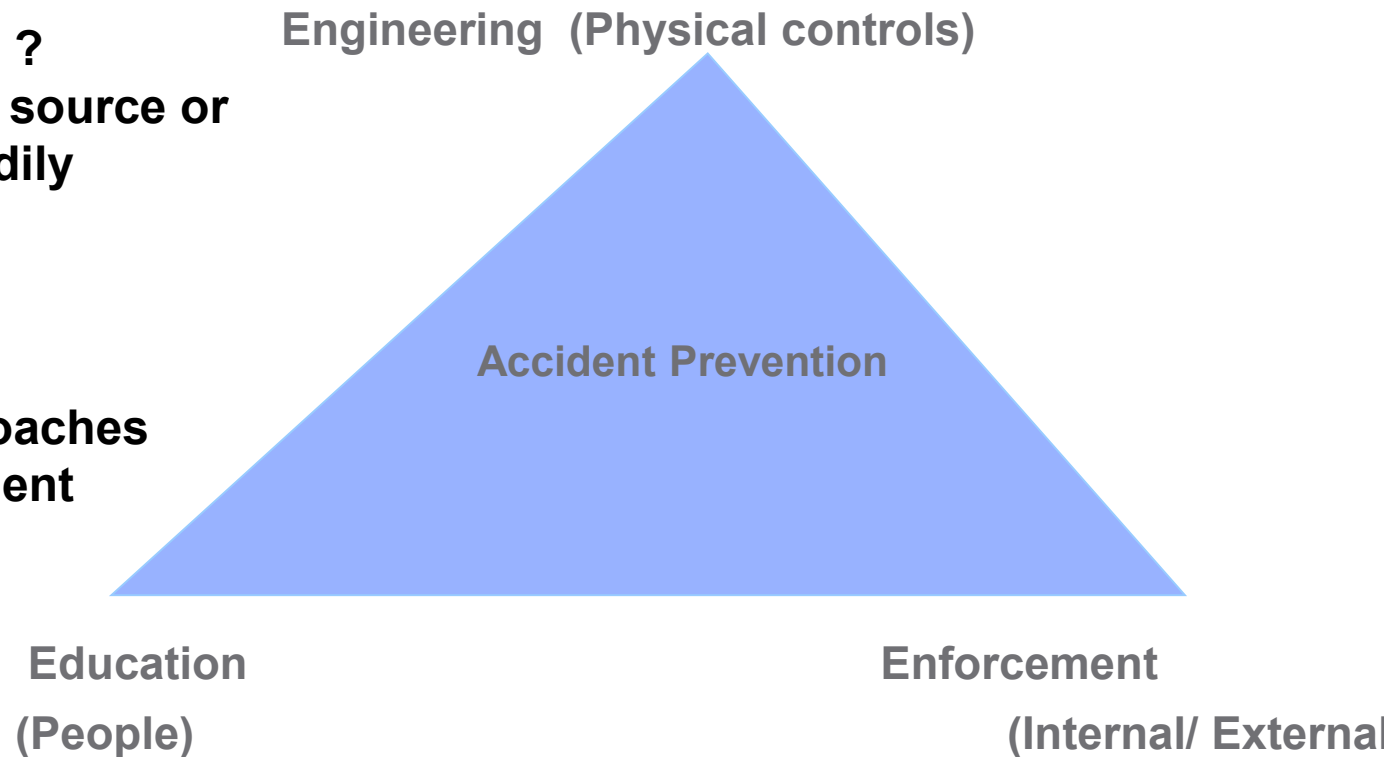
Effective Safety Management - The '3 E' Approach (Murphy J.D., 1992)

What is an Accident ?

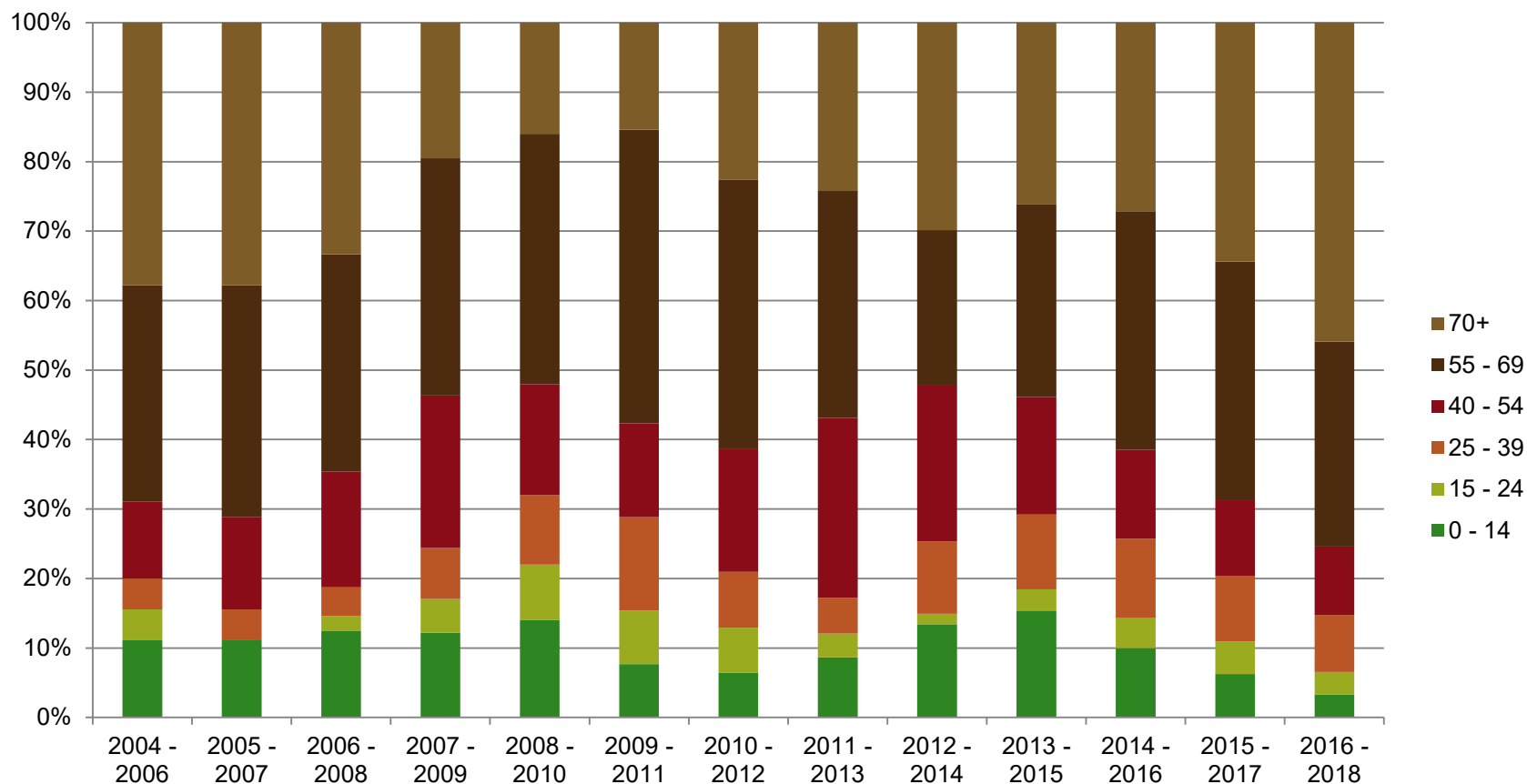
- Impact of Energy source or stopping vital bodily function

Key Controls

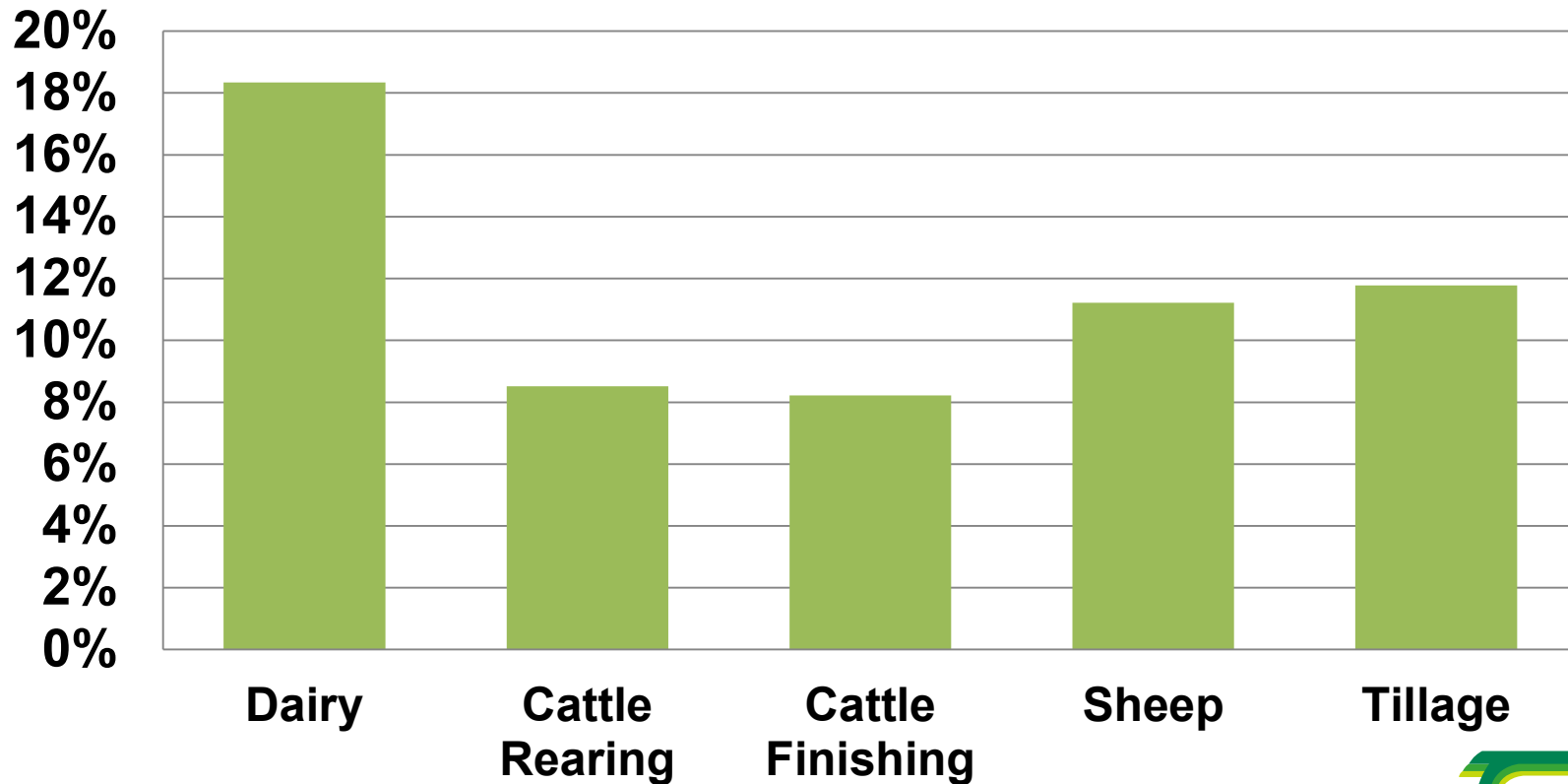
- Behavioural Approaches
- Physical Environment



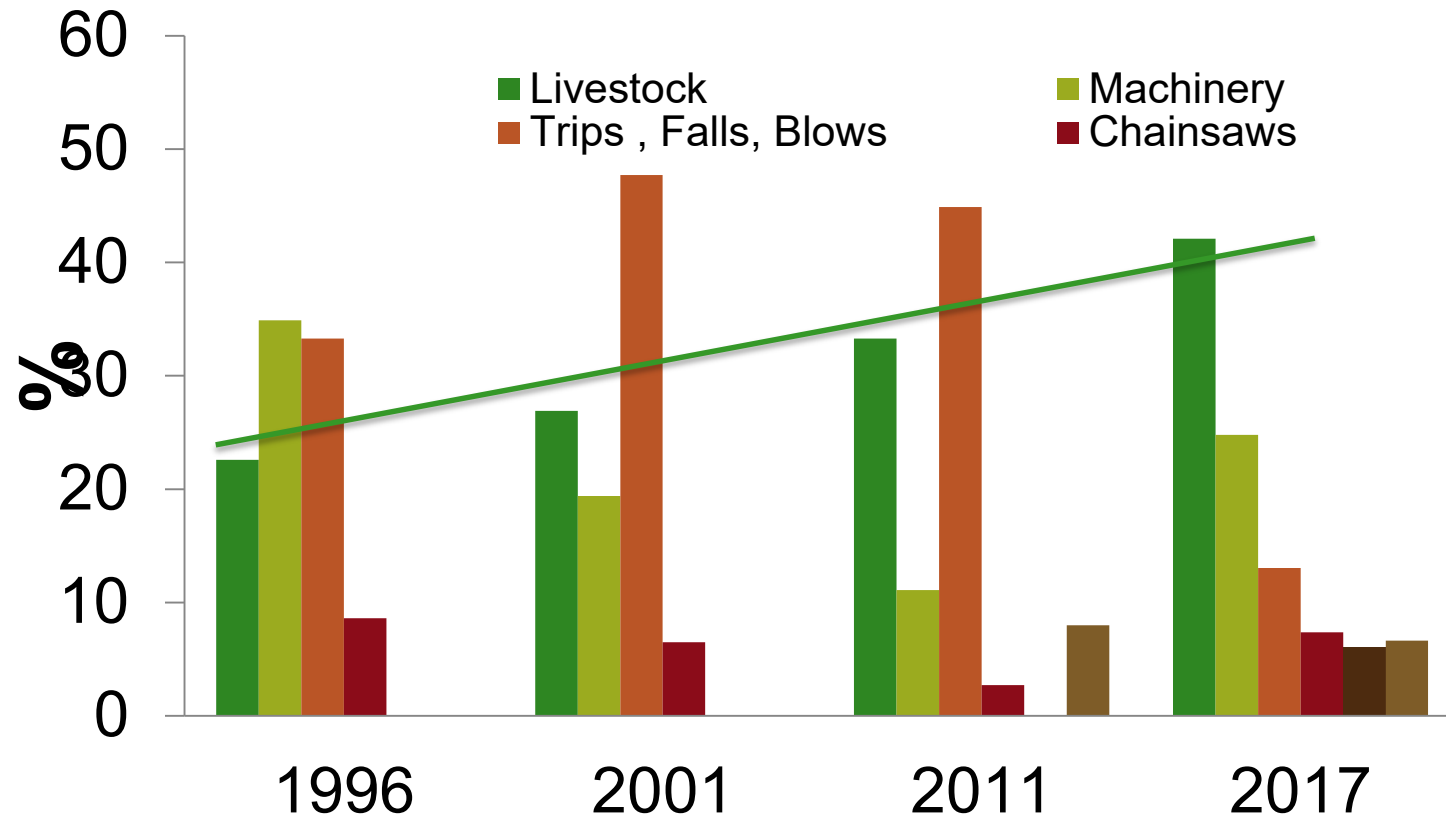
Trends in Fatal Farm Accidents 2004-2019 (3 Year Rolling average)



Accident Occurrence (%) by Farm systems (2017- 5-year recall)



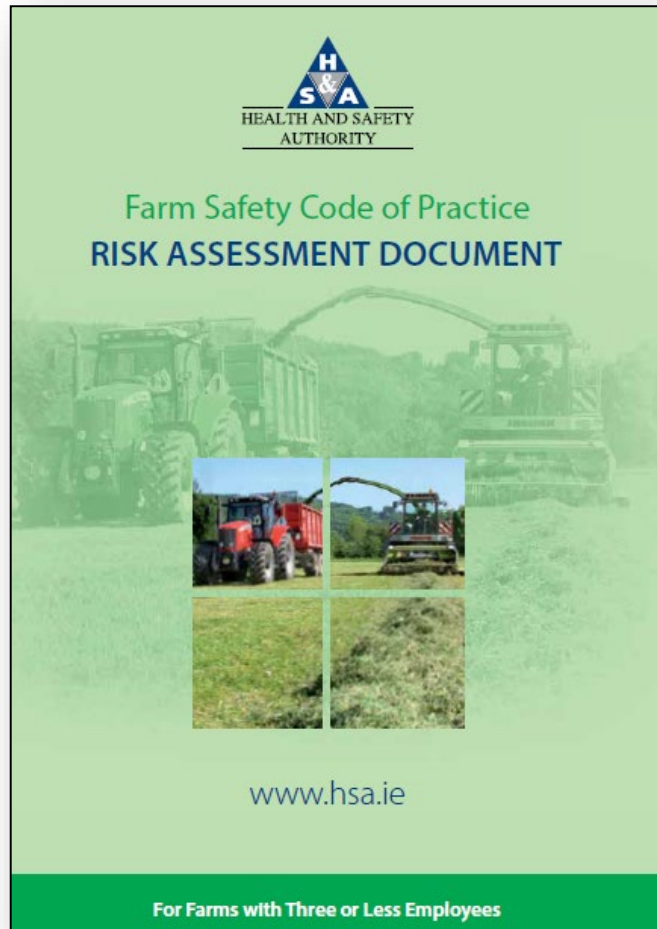
Trends in Accident Occurrence (%)



Teagasc NFS Survey 2022

- 4,500 accidents reported.
- Reported for previous 1-year period
- 46% Hospital, 18% G.P; 16% 1st Aid
- 47% 3 days + work days loss
- Livestock 52%; Trips & Falls 32%; 13% Tractors and Machinery; 3% specifically associated with building.
- Enterprise: Sheep (37%); Dairy (25%); Cattle other (14%); Cattle breeding (12%), Tillage (12%)

Risk Assessment Document



Health of Farmers

Working on the farm can affect your health. In many cases the effects on health build up over time. Of particular significance in farming is the ill health caused by manual handling, dust or spores, infections and noise. Of farmers with occupational ill health 50% experience chronic back pain. Also one exposure to some dust and spores can cause severe health effects and sensitisation.

FIGURE 8: OCCUPATIONAL ILL HEALTH AMONG FARMERS (1996 - 2006)

• Poor health poor profit • Annual health check

Health Issue	Percentage
Chronic back pain	50%
Lung problems	35%
Other	7.5%
Disease from Animals	7.5%


Eliminate manual handling

Proper lifting techniques

Manual Handling

About a third of all reported accidents are due to poor manual handling. Most manual handling accidents result in back injury. Lifting heavy loads results in arthritis of joints, particularly hip and knee joints. Damage is also caused to tendons, ligaments and muscles. Injuries can result from manual handling due to the work itself, the load, the work environment, or the individual's ability. Twisting your spine while lifting or carrying a load is particularly dangerous.

22



HEALTH AND SAFETY
AUTHORITY

Tractors, Farm Vehicles and Quads

Tractor, Vehicle and Quad Risk Assessment	List all vehicles used on the farm			
<i>I will ensure that:</i>				
The Cab/Roll bar is in good condition.				
The U guard is in place to cover the PTO stub.				
All controls are in working order and are clearly marked/ understood.				
The brakes are in good working order and adequate for the work undertaken.				
The handbrake/parking brake is fully operational.				
The mirrors, lights, indicators and wipers are all functioning, clean and visible.				
All hitching equipment is free of defects.				
All visible defects in the vehicle are identified and rectified before starting work. (List defects on control sheet)				
Safety Practices				
Pre-checks are carried out on tractors and vehicles before use.				
Regular maintenance will be carried out on all tractors and vehicles.				
The tractor/ farm vehicle is only operated by drivers who are trained and competent.				
Where the operator handbook is available it will be consulted.				
Lifting equipment (material) is examined annually.				
Lifting equipment (lifting people) is examined 6 monthly.				
The vehicle is always started and operated from the correct position.				
Passengers are only carried where the manufacturer has provided a seat and seat belt for this purpose.				
A helmet is worn by the operator when driving a quad bike.				
When starting and operating any vehicle, the driver looks out for bystanders.				
The speed of all vehicles will be suitable for the ground or road conditions.				
When a vehicle is stopped, the SAFE STOP procedure is used.				
The cab floor is kept clear to allow safe use of brakes & clutch.				
Where farmyard is close to farmhouse, traffic risks are assessed and controlled.				
Additional vehicle controls used				

Note: If a Safety Control Measure is missing indicate this on your Action List page 29.

Health and Safety Authority | FARM SAFETY CODE OF PRACTICE | RISK ASSESSMENT DOCUMENT FOR FARMS WITH THREE OR LESS EMPLOYEES

9

[illegible]

Key Findings re. RAD use

- Farmers filled RAD to Limited Extent
- Farmers identified mainly physical hazards (i.e. Machinery, buildings).
Little :Children, Older farmers, Health
- Farmers who implemented what they specified,had high OSH Standards.
- ‘Adopters’ did more than they specified on RAD.
- Message: On-going adoption needed.

Standard Mortality Ratio Farmers Vs 'White Collar' (Dr Breda Smyth et al, M.D. 2012)

Cause	Farmers (15 - 64 years)
Circulatory Disease	5 times higher
Cancer	3 times higher
Injuries (inc poisoning).	7 times higher



Diana van Doorn PhD



Communications Priorities

- Leadership – Reliable, Regular, Succinct.
- Press Releases (new knowledge)/ Teagasc Daily.
- Coverage in ‘Today’s Farm’ and Monthly Newsletters.
- Social Media coverage- Twitter, Facebook etc (coverage 40k plus).
- Teagasc Events: Major OSH Exhibits at all Events.



Education and Training

- 100 staff with Specific training.
- New Entrant students (c 3000).
- Farm Safety Module
- All Module Inclusion.
- **Farmers**
- Half-Day RAD. (c 100 courses)
- TAMS required



Advisory Priorities

- All Advisors to advise on OSH
- Specific KPI's
- Specific and 'Short'.
- Focused and Positive.
- Events & Discussion Groups.
- Work Organisation
 - Workload & Time Management



Research 'Evidence-Based' paradigm

- Teagasc operates Research-KT Model
- Open Access
- Current Major OSH Grants:
 - DAFM Research Grant 2019 -2023
 - EU H2020 'SafeHabitus' 2023-2027.



Teagasc Research in OSH

Farm Accident and Ill Health levels *.	Dr Anne Finnegan 2006
Code of Practice Implementation	Dr John McNamara 2015
Geo-demographic study	(Dr David Meredith) (on-going)
Animal Welfare and Safety	Dr Mickeal Mazurek. 2012
Impact of Disability	Dr Shane Whelan 2012
H ₂ S from Spent Mushroom Compost	Dr. Balasubramanian Velusami (c2013).
MSD's among Farmers *	Dr Aoife Osborne 2012
Rural Suicide Prevention	Dr Maria Feeney 2012
Knowledge Transfer	Ms Marion Fox MSc 2014
Social Support (Discussion Groups)*	Dr Tracey O'Connor. 2021
Farmer CVH Health Change	Dr Diana van Doorn 2022
Advisor to Farmer Safety Support	Ms Penny Gavin. M.Sc 2022
Advisor to Farmer Health Support	Mr Conor Hammersley 2018- 2023
Advising on Livestock Safety (M.Sc)*	Mr Ciaran Kinahan 2022 -2024

Summary

- OSH and important part of Sustainability.
- Considerable 'Research and KT' on OSH adoption, on-going in Ireland.
- Due to the self-employed nature of the majority in farming – OSH adoption is challenging.
- Farming population is segmented re. OSH adoption.
- Progress has been made.

References

- https://www.hsa.ie/eng/your_industry/agriculture_forestry/
- <https://www.teagasc.ie/rural-economy/farm-management/farm-health--safety/>
- <https://www.gov.ie/en/organisation/departments/departments-of-agriculture-food-and-the-marine/>

Farm Safety and Farmer Wellbeing Research

Dr David Meredith, Dr Mohammad Mohammdrezaei, Dr John McNamara

The BeSafe project is funded by the Department of Agriculture, Food and the Marine through the RSF. Grant No: 17S269

The SafeHabitat project is funded through the EU Horizon Europe programme



Farm Safety: Key messages

- Social influences are critical in shaping what many (not all!) farmers/farm workers and advisors believe and how they act when it comes to issues of farm safety.

Forthcoming paper:

‘Good farmers aren’t safe farmers’

Mohammad Mohammadrezaei, David Meredith, John McNamara

There is a need to focus on communicating clear messages that explain where farmers stand in relation to key safety behaviours. E.g. top or bottom 10% of the population.

This will communicate that not ‘everyone’ behaves unsafely.

Farm Safety: Key messages

- Social influences are critical in shaping what many (not all!) farmers/farm workers and advisors believe and how they act when it comes to issues of farm safety.



The Journal of Agricultural Education and Extension
Competence for Rural Innovation and Transformation

ISSN: (Print) (Online) Journal homepage: <https://www.tandfonline.com/loi/raee20>

Subjective norms influence advisors' reluctance to discuss farm health and safety

Mohammad Mohammadrezaei, David Meredith & John McNamara

To cite this article: Mohammad Mohammadrezaei, David Meredith & John McNamara (2022): Subjective norms influence advisors' reluctance to discuss farm health and safety, The Journal of Agricultural Education and Extension, DOI: [10.1080/1389224X.2022.2125410](https://doi.org/10.1080/1389224X.2022.2125410)

To link to this article: <https://doi.org/10.1080/1389224X.2022.2125410>

Farmers, 'leading farmers' in particular, need to lead by highlighting safety as an important issue.

Advisors take their cues from farmers and are less likely to raise these issues if they believe farmers are reluctant to discuss farm safety.

Farm Safety: Key messages

- Social influences are critical in shaping what many (not all!) farmers/farm workers and advisors believe and how they act when it comes to issues of farm safety.

Do social influences, awareness, or experience matter? Towards a better understanding of farm-related injury risk perception among agricultural science college students in Ireland.

Mohammad Mohammadrezaei, David Meredith, John McNamara, James Kinsella, & Sinéad Flannery

Frontiers in Medicine, 2023

Sharing experiences (non-judgemental) of near misses/close calls may be an important means of farmers/workers identifying solutions to common risks/practices on farms.

Farmer Wellbeing: Key messages

- Stress is a feature of all occupations, including farming.
- Roughly 10% of farmers experience poor wellbeing (Van Doorn et al., 2022).
- Farmer wellbeing declined over the course of the Covid-19 pandemic (O'Reilly et al., 2022).
 - » 'Stress' amongst farmers increased during the pandemic.
 - » This means that farmers became more similar to other rural workers.



Farmer Wellbeing: Key messages

- **Common stressors include money, weather and workload. Other stressors include policy uncertainty / change (Brennan et al., 2021).**
 - » Stress is more common amongst younger farmers compared to older farmers.
 - » Farmers who continue to experience stress in older age are more likely to experience negative impacts on their health.
 - » Individual stressors tend to be manageable for most, two or more stressors can become problematic.
- **How we talk about agriculture and food production matters – it's not 'all bad'.**
 - » More research is required to assess the impacts of media coverage and policy uncertainty on farmer wellbeing.

SafeHabitus



**Strengthening the Farm Health and Safety
Knowledge and Innovation System in Europe**

Project Leader



Work Package Leaders Leader



**Funded by the
European Union**