



## **FSP MACHINERY SAFETY SUB-GROUP**

### **Update and Action Plan (November 2014)**

#### **1. Background**

**1.1** This is an updated/prioritised summary of the topics proposed for discussion and possible 'campaigns' by the Farm Safety Partnership (FSP) Machinery Safety sub-group (MSG). It is based on topics originally proposed at the IOSH/FSP Workshop held on 1/10/13, updated and prioritised based on comments from subsequent FSP meetings (including FSP Board, MSG and Partners meetings) and the latest AIAC paper reviewing machinery-related fatalities. **Actions are highlighted in bold/italics.**

**1.2** The IOSH-funded Workshop was attended by ~85 delegates, representing a wide range of interests from across the industry - including machinery manufacturers and dealers, researchers, colleges and trainers, insurers, consultants, unions and trade organisations as well as and many farmers and contractors. The Workshop was also used to launch the FSP's '**Safe Stop' initiative and website** <http://www.nfuonline.com/business/farm-safety/farm-safety-partnership/campaigns/>.

**1.4 Delegates concerns and priorities** - Delegates were asked to nominate their top concerns and priorities for future action and campaigns by the FSP. The following suggestions were based on delegates' gut-feeling and concerns rather than the statistical evidence which was presented at the meeting. In order of 'popularity':

1. Maintenance and clearing blockages, *[eg combines and other harvesting equipment, including older machines]*
2. Avoiding contact with overhead power lines
3. PTO safety and machinery guarding
4. Tractors and trailers on the road, *[incl weights/speed; wearing seat belts, access to/from farms and fields, choice of routes, WBV, etc]*
5. ATVs – helmets, maintenance and training *[+ new Crush Protection Devices (CPDs)]*
6. Child safety *[nb. Separate FSP sub-group established].*

**1.5** Delegates comments and ideas were collated with recommendations from previous forums, eg HSE's Agricultural Industry Advisory Committee (AIAC) working groups and other IOSH and industry-led discussions over recent years, together with comments from FSP Partners and through other channels, to produce a list of topics for the FSP MSG to discuss and progress.

**1.6** These topics have been prioritised, following subsequent discussion. This is a long-term initiative, intended to develop guidance, materials and campaigns to change the culture and improve safety in the industry over many years. The 'wish list' of recommendations below will be considered and developed into guidance and/or campaigns by topic-based '**Task & Finish**' working groups over the coming months/years. Some topics may be discussed/progressed through webinars or video-conferences, led by interested organisations.

**1.7** We are looking for individuals to lead on particular topics and help to convene and develop the ideas. If you have a particular enthusiasm and expertise on any of the topics listed, and are willing to share your experience and knowledge to support this work, please contact the FSP's Machinery sub-group Chair Alan Plom on [alan.plom@gmail.com](mailto:alan.plom@gmail.com), or via the FSP Secretariat: <http://www.nfuonline.com/business/farm-safety/farm-safety-partnership/>.

## **2. Key Topics – Actions, Priority and Progress**

### **2.1 Safe Stop [HIGHEST PRIORITY ]**

- The concept of 'Safe Stop' is enshrined in existing guidance, training and instructions but the FSP decided to develop an initiative based around a set of identifiable images to illustrate the key steps, to raise awareness and encourage safe practice.
- 'Safe Stop' stickers and associated campaign was officially launched at the Workshop (see 1.3).
- 'Safe Stop' stickers are being issued by BAGMA dealers to operators during 'Installation Training'. These have been well-received by farmers and requested by colleges, trainers, farming companies, etc.
- The stickers are only the first step - it is hoped that the 'Safe Stop' images will become a well-recognised 'brand' [like the 'Make The Promise Knot'].
- More robust/more adhesive decals are being sourced.
- An A5 'handover sheet' has been produced (with instructions and background stats), to enable them to be used more widely as part of 'training'.
- Tool Box Talks' (TBT) / 'Safety Briefings' are to be developed for employers, managers, lecturers, etc, summarising key messages + to use when issuing stickers. [nb. NAAC have produced a Safe Stop TBT [+ a useful introduction to TBTs].
- Need to look at content and alternative formats for most effective TBTs, eg we need a 'pictorial' version suitable for multi-lingual workforces.
- A list (or flow chart) suggested to identify machines/operations commonly - and (arguably) necessarily - carried out under power [eg cleaning haulm rollers] – to identify priority for guidance/campaigns. [See 2.2]
- Also suggested we should separate the 'Safe Stop' messages on 'maintain and use handbrakes' from "engine-off/avoid moving parts". Linking to 'Safe Transport' and Safe Machine' (see below) would help to embed Safe Stop. **[VIEWS NEEDED]**
- **Partners/sponsors needed** to produce and distribute 'Safe Stop' handover sheets, posters.
- **Small 'Task & Finish Group'** to review and discuss existing guidance and options [Possibly by video conference or e-mail? A number of volunteers, but **MEMBERS & LEADER NEEDED**.

### **2.2 Transport [HIGH PRIORITY - 'Safe Transport' campaign? ]**

- HSE's analysis indicates 62% of machinery-related fatalities involved 'transport', ie run over, or over-turns. [30% of total farm deaths]. NB. This does not include incidents on the road. ATV's/Quad bikes are involved in nearly as many deaths as tractors (see 2.5).
- Tractor/trailer speed/weight/brakes/testing issues are being dealt with separately by NFU and industry organisations, but this could/should be linked to a generic 'Safe Transport' initiative.
- Suggested link safe design and maintenance, lighting, etc, with turning into/from farm and field entrances on to roads [Evidence based on DfTr / RRL / Richard Gard research, etc] + selecting safe routes and maintaining surfaces (to reduce WBV) and use of seat belts (***ie a 'Belt Up' campaign?***).
- **Technical Solutions' [LOWER PRIORITY?]** - To examine and discuss possibilities of 'novel' (to agriculture) safety devices, eg airbags, seat operator presence sensors (interlocked to pto - like amenity mowers), audible alarms, radar-based obstruction sensors, auto/remote cleaning/clearing blockages, etc.
- Guarding/cleaning of haulm rollers (under power) a major concern and suggested as topic for IAgRE Student Safety Project competition.
- Small Working Group and/or Webinar proposed
- ***Task & Finish group needed to scope and develop ideas.***
- ***LEADER (AEA? Or IAgRE???) + MEMBERS NEEDED***

### 2.3 Maintenance and clearing blockages [HIGH PRIORITY - Suggested campaign title: ‘Safe Machine’? ‘Maintain Safety’? and/or ‘Safe Design, Safe Use’?]

- HSE’s analysis indicates 18% of machinery fatalities are caused by contact with machinery in use or during maintenance [9% of all deaths]. A further 12% [6% of total] are caused by being ‘struck-by’ machinery, eg during routine operations or maintenance.
- In addition, 4% of deaths occur due to falls from machinery. It is suggested that unless related to machinery maintenance, these should be considered as part of a wider ‘Working at Height’ FSP campaign group? **[VIEWS NEEDED]**
- **PTO’s** - ‘Safe Machine’ would also cover PTOs, frequently flagged up (by farmers) as the ‘priority’ issue and also links to Safe Stop and promoting pre-season/in-use checks. FSP agreed to link with FSP Ireland for their **PTO ‘Safety Week(s)’**, sharing their ‘visuals’ and messages in Sept 2014.
- A **‘PTO Exchange’** (like ‘ladder exchange’) was proposed by BAGMA, based around checks and sale of discounted guards from dealers. Several BAGMA dealers are committed. *[Q: Would this be more effective over a longer period than a week, eg 1 month?]*
- **‘PTO’ Task & Finish Group NEEDED urgently to develop this further. [Need LEADER (BAGMA?) + MEMBERS (incl machinery and PTO shaft guard m’fers).]**
- Harvesting equipment, including older/second-hand machines, are probably the highest priority.
- **Cleaning machinery/blockages** - Also need to raise awareness and improve training, to more effectively change operators behaviour, eg when cleaning haulm rollers in motion.
- Also need to provide methods to enable machines to be cleaned or cleared safely while still under power, particularly in adverse conditions? *[nb. This is ‘foreseeable behaviour’.]*
- Research, student projects or competitions suggested as a way to identify safe systems of work/devices to enable components to be cleaned (or other essential movements) to be carried out safely under power.
- Links with Standards work on operator presence sensors on tractors, guarding, control systems, etc.
- Combine Harvesters - feedback from the European Trades Union survey of operators is being fed into the CEN/ISO standards Committee (by AEA/KH). The ETUI combine survey could be used as a model for surveys on other machines.
- **‘Safe Machine’ Task & Finish group proposed – MEMBERS AND LEADER NEEDED.**

### 2.4 ATV’s/Quad Bikes [ MEDIUM priority?]

- 24 killed by ATV overturns (cf. 25 on tractors).
- Need to identify and use opportunities to continue campaigning on wearing helmets, training and maintenance.
- ROPS/CPDs (Crush Protection Devices) have been developed and now available on the UK market. They are also mandatory in certain states in Australia and USA. However, there has been international debate and research on the pros and cons of such devices which needs to be reviewed before any standard can be developed, or approach adopted.
- **LEADER & MEMBERS NEEDED for ATV Task & Finish group** *[A meeting could be hosted by IAgRE or EASI or a possible IOSH ‘webinar’ - assuming this is a suitable forum for the wide range of potentially disparate interests to debate this topic?]*

### 2.5 Overhead power lines [MEDIUM PRIORITY – “Look Out – Look Up” campaign?]

- 4% of machinery fatalities/ ~1 death/yr, but there are thousands of OHPL strikes/yr - many potentially fatal but causing substantial disruption and economic impact.
- Existing guidance and practical precautions to be reviewed/revisted, eg re-routing and use of goal posts in-field as well as technological solutions (proximity sensors/detectors, GPS-based

maps, possibly linked to control systems to prevent dangerous movement of telehandler booms. augers or other 'high-reaching' components close to OHPLs, etc).

- Machine design issues include machine height and fitting of devices.
- **Workshop** being arranged/hosted by ENA (the association of electricity distributors) in Spring 2015 – ***Venue needed.***
- **OHPL Task & Finish Group – LEADER + MEMBERS NEEDED.**

## **2.5 Guidance [MEDIUM PRIORITY – nb. This is a generic FSP issue]**

- Need to review/raise awareness of existing FSP 'Safety Focus' leaflets and other guidance produced by FSP Partners and others – incl summary of changes to HSE leaflets and publications (revised or deleted).
- Need to raise awareness/encourage use of **HSE's web-only guidance for designers, manufacturers and users of machinery** - relevant to self-built, second-hand and older machines too. [nb. **Need articles** drawing farmers' attention to this guidance.]
- Also to review/produce model risk assessments, 'audit' check lists and 'Toolbox/Tailgate Talks'
- Need more film clips of case studies and good practice. Many examples exist and need to be 'captured'.
- ***Working Group needed to scope project(s), identify what is available, relevant and most suitable. This could be collated by email – but LEADER + MEMBERS (incl AEA/M'fer & dealer + user reps) NEEDED.***

## **2.6 Training [MEDIUM PRIORITY - nb. This is a generic FSP issue]**

- Many training courses considered not entirely relevant, eg not addressing critical factors such as working in adverse conditions), or are not tailored to specific circumstances.
- Practical 'skills' training ie "professional operator" courses proposed.
- H&S VQ's developed by HSE and Lantra are being used by NFU-Mutual, but only at Level 2.
- Need to review these/other training schemes, in context of the Agri-Skills Strategy.
- Short TBTs/model presentations needed for 'self-training' - overlaps with review of guidance.
- TBTs can be effectively augmented by short instructional films or examples of accidents, with a simple causal analysis & precautions. ***[eg British Columbia's animated investigation films.]***
- It might also be possible to deliver these electronically, and via smart phones/tablets, via a **'Farm Safety App'**?
- Novel training methods [such as 'MyLearnadFriend' (MLF) on-line 360 degree virtual workplace e-learning tool (demonstrated at IOSH/FSP Workshop, and used by GTC) would be useful for farming and should be evaluated. HSL are developing something similar for training HSE inspectors. ***[nb. MLF require partners to provide locations and work activity scenarios.]***
- ***FSP Partners are invited to share examples & IOSH propose a Workshop***
- **PROJECT LEADER NEEDED (Lantra?)**

## **2.7 Statistics & Mapping Accidents [HIGH PRIORITY]**

- Incident stats and descriptions - more detailed and more widely available, more promptly.
- An on-line descriptive map to 'pin' and summarise (fatal) accidents - based on GIS, freely available and enable retrieval of information is needed, eg to prepare local or national briefings, news releases, on specific types of incidents, etc. [HSL is already developing the 'Find It' system for HSE Field Operations Division.]

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