



Agricultural Engineering & Compliance

“Thorn in the side or competitive advantage?”

Some personal observations for afternoon sessions:
*“Safe machines” - Case studies, Group discussion
and Summing up*

ALAN PLOM (MIAgrE)

Farm Safety Partnership – Machinery Safety Group Chair

IOSH Rural Industries Group (Vice Chair)

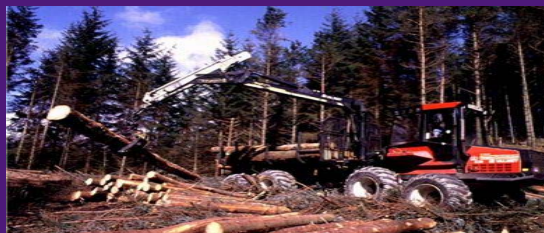
Rural Training Organiser

H&S Consultant

IOSH Rural Industries Group



- RIG provides a forum and networking opportunities for H&S professionals working in the rural sector.
- Provides regular updates/e-news, national events, local meetings.
- Works closely with key organisations (national and international) representing views and concerns of the industry.
- Active members of HSE's AIAC, AFAG & the new Farm Safety Partnership – (chair Machinery and Livestock Safety sub-groups)





Farm Safety Partnership ~ 30 member organisations



The voice of British farming





Development of the Farm Safety Partnership



Farm Safety Summit (September 2010)

- Meeting of Industry leaders and employees, chaired by HSE and NFU.
- Aim = a “professional and modern” (and safer) industry

Farm Safety Partnership formed:

- Collaboration, shared actions, peer challenge
- Industry Members to take lead (not HSE) – NFU chair

Farm Safety Charter (launched May 2011)

- Leadership, challenge & change attitudes, safety messages ‘enshrined’.

Machinery Safety sub-Group (formed Jan 2013)

- Includes ‘Safe Stop’ sub-Group (met 2012)
- To produce guidance and information
- Workshop - to be convened by IOSH (during 2013)
- Replaces HSE/AIAC’s “Transport & Machinery” Group meetings

We have come a long way....But....



Has anything really changed?



- Ag Machinery Regulations since 1950's*BUT*
- People are still being killed and injured in the same old ways
- Cultural and technological change is needed
 - *“We have to put all these guards on for idiots.”*
 - *“It was his own fault...I kept telling him.”*



Some improvements... but....



**The Ultimate
in PTO Safety
& Maintenance!**



Plenty of room for improvement...



Health hazards – also debilitating



- Respiratory – dusts, spores, gases, etc
- Chemicals – pesticides, vet medicines, oils, etc
- Diseases – zoonoses, etc
- Musculo Skeletal Disorders (MSD)
 - Repetitive Strain Injuries (RSI)
 - Manual handling
 - Seating and posture
- Noise
- Vibration
 - Hand-Arm
 - Whole-Body (related to manual handling/MSD's too)

Significant health issues



Can cause death or permanent disablement - full picture unclear due to under reporting.

- Musculo-Skeletal Disorders (MSD)
 - = 75% of 'Lost Time' injuries
 - = 80% of workers admit to suffering some form of MSD
 - = highest of all industries and ~3x all-industry rate?
- Zoonoses = 20,000 affected/yr.
- Hearing loss = 25% of workers suffer.
- Asthma = 2x national average rate.
- Dermatitis = 50% higher than all industries.
- Occupational cancers = high no. of registrations, ~90 deaths/yr.
 - Most significant is TCDD. Non-arsenical insecticides also significant?

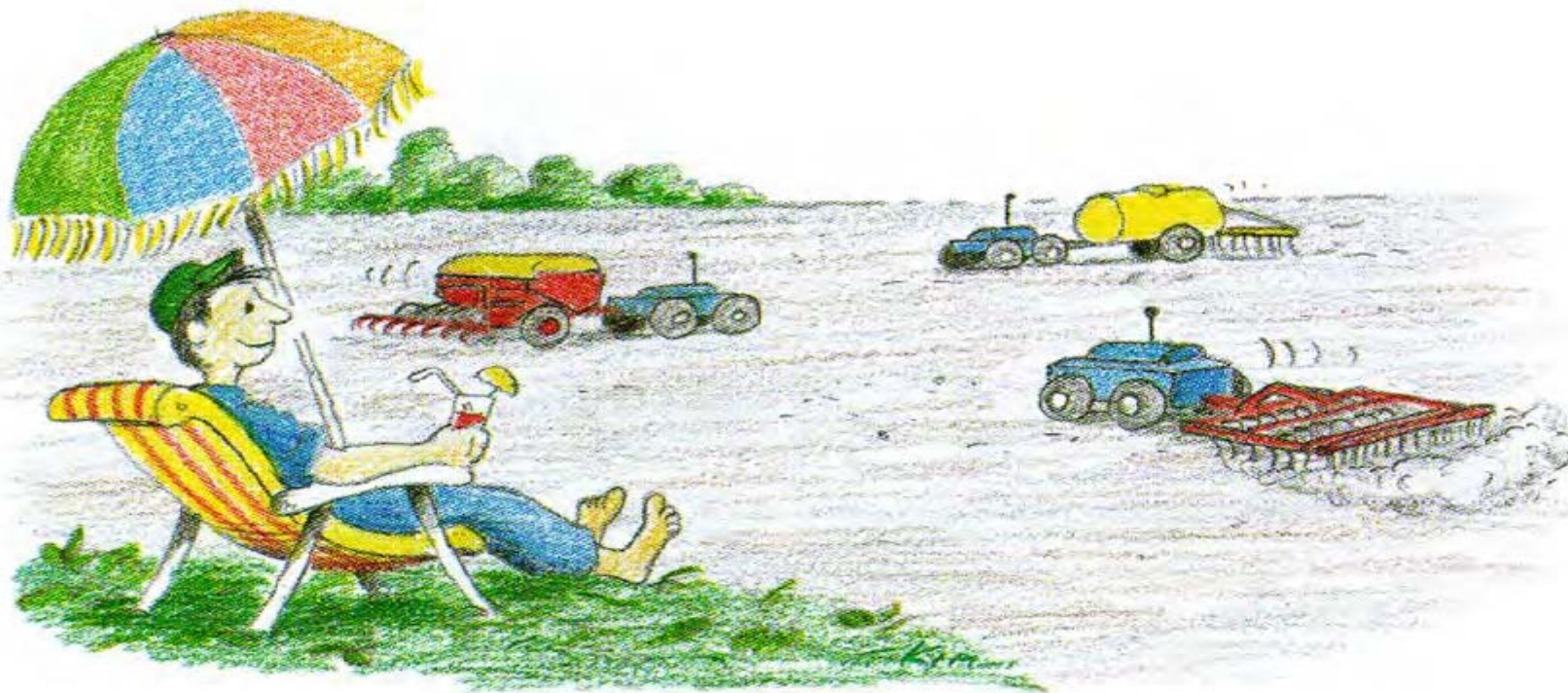
Prof Blackmore's vision of the future



Will this be the reality?



Harper Adams
University College



On a slippery slope.....



Improving safety by design



Swing-Out Centre mower



The only mainstream commercial cylinder mower on the market with swing-out accessibility of the centre cutting unit.

TST™ (Tilt Stabilisation Technology)



The only mower on the market with active stabilisation technology.

At 15deg the operator is warned of the slope angle

At 18deg the hydraulic lift, locks maintaining a lower C of G

At 22deg the mowers disengage to stop mowing

Improving safety by design: 'Buy Quiet'



- HSE's 'Buy Quiet' initiative - intended to encourage demand and production of low noise machinery. [Buy.Quiet@hse.gsi.gov.uk]
- eg Woodchipper noise reduced by 10 dB to ~95 dB at operator - by diverting cooling air, reducing engine speed, enclosure design and using disc cutters.
- Could go lower, but purchasers won't pay the extra.....





CASE STUDIES



QUESTIONS & DISCUSSION

Discussion – Groups to consider



- Main causes of death, injury *and ill health* - How can we reduce?
- Guidance – What is available? Is it sufficient?
 - EN Standards
 - HSE’s web-based guidance: “*Safe Guarding Agricultural Machinery – Advice for Designers, Manufacturers and Users*” (removed from web)
 - Other ???
- Research (eg Vehicle condition, road accidents, tractor-trailer braking)
- Influencing the industry:
 - ‘Farm Safety Partnership’ - eg ‘Safe Stop’, Machinery Safety and Livestock sub-groups (replacing HSE’s AIAC Project Groups)
 - Awards - eg ‘Safe Design’ Awards; IAgRE Student Project Award ?
 - Shows?
 - ‘Safety and Health Awareness Days’ ?

Recognising 'Safe Design'?



- Safe Machine Awards at Shows, etc
- IAgRE Safe Student Project'
- How about a 'Safe Stop' competition?
- Any other ideas?

What next?



Some ideas and options to consider.....

Influencing farmers and others



HSE's "Agriculture Revisited" initiative - Projects aimed at reducing fatalities in farming kick-started the process, eg through:

- Effective communications:
 - "Make the Promise" campaign – *mailshots, leaflets, on-line videos, etc*
 - Safety & Health Awareness Days (SHADs)
 - presence at major farming events and shows - *very limited*
- Working with machinery manufacturers/suppliers & colleges
- Improving competencies and training
- Increasing & improving stakeholder engagement.

'Farm Safety Partnership' – Industry organisations to continue process:

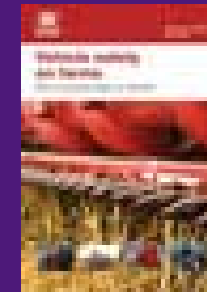
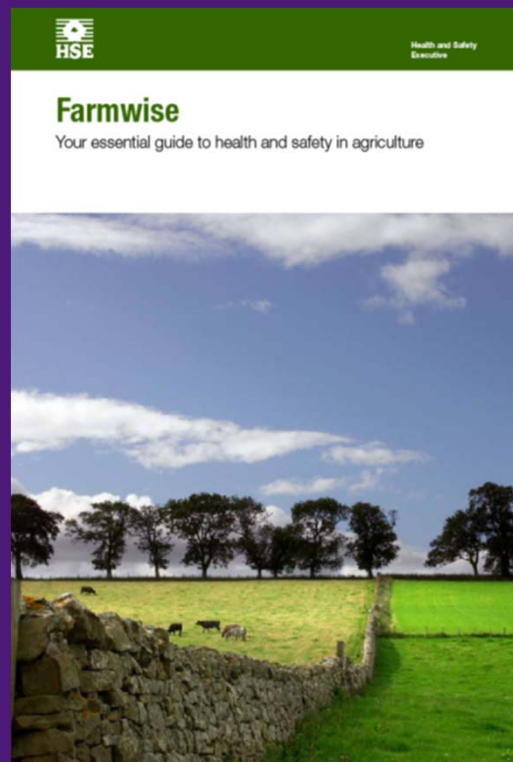
- to create a safer, modern industry
- reduce fatalities and consequently injuries
- promote cultural change
- Similar Partnership for forestry (Forestry Industry Safety Accord).



Influencing farmers “Safety & Health Awareness Days”



Guidance on use (and design) of machinery:
HSE webpage + 'Farmwise', Info Sheets, leaflets, DVDs;
+ FSP: Safety Focus sheets, etc – via websites



Farm Vehicle Health Check



Code of Practice

This guide aims to help users of farm equipment to comply with the law in a practical way, using a common set of forms. By doing this, your machinery should be better maintained and safer to use.



Safety focus on: Farm transport

This guide aims to highlight the key risks to you from accidents involving moving vehicles and provides practical advice on how you can make your farm a safer place for you, your employees and any visitors.



Make the promise. Come home safe.



Safety focus on: Farm machinery

This guide highlights the key risks to you from farm machinery and provides practical advice on how you can make your farm a safer place for you, your employees and any visitors.



Make the promise. Come home safe.



SIMA 2013 – Spotlight on Health & Safety



“Make Way for Workplace Health and Safety” feature throughout SIMA.

- Information and workshops focussed on:
 - prevention of MSDs,
 - driver’s seat vibrations,
 - pesticides,
 - agricultural vehicle traffic, etc.
- IRSTEA Conference: *“Health and safety for users of farming equipment: What research is doing for farmers”* covered:
 - Vehicle overturns - tools, methods and results for passive and active safety;
 - Machinery design and redesign - tractor-implement link, cleaning of manure spreaders
 - Effectiveness of cabs as protection for pesticides
- Practical workshops - *“Mechanisation: the importance of safety management”*.

SIMA 2013 – Safety Awards, ‘Innovation Tour’ & ‘Best Practice’ area



- Safety Innovation Awards
 - New Holland Big Baler - easy-open guards for safe access to potentially dangerous parts and improved safety without dedicated tools.
 - Claas Combine - cooling and “anti-clogging” system to prevent build-up of dust and reducing risk of fire.
 - Dario Développement - radio-controlled hybrid brush cutter for very steep slopes + electric motor reduces risk of pollution in event of rollover.
 - Dangreville Manure Spreader with automated weight transfer system to avoid loss of grip on slopes when emptying.
- “Prevention and innovation tour” - a guided tour of the major safety innovations at the exhibition.
- “Best Practices” area - featured 12 partners (professional organisations, technical and research institutions, public agencies, agro-supply federations, and others) whose mission is *“to provide information, tips and solutions on agricultural best practices, with awareness of workplace health and safety a top priority!”*

Use new communication and training methods & tools, eg on-line? Webinars?



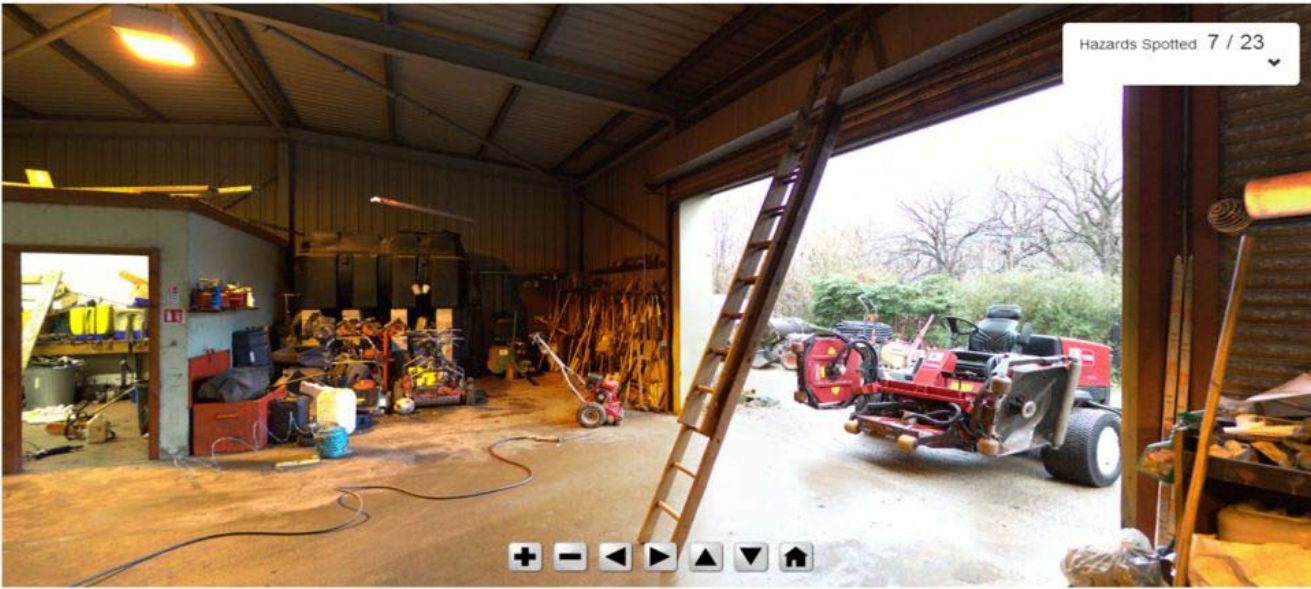
Home Dashboard

Welcome back **Tony Abbott** on 7th March 2013

MY ACCOUNT

Dashboard / The Safe Worker / Risk Assessment / Risk Quantification Activity

Risk Quantification Activity



Hazards Spotted 7 / 23

1 2 3 4 5 6 7 8 9 10 11 12 13



FEEDBACK & SUMMARY