



A whole-of-system safety scan for mobile plant



Snapshot report, May 2024

- A systematic scan of the whole safety system for specific mobile plant was able to identify opportunities for industry to improve safe use of the equipment on farm.

Aim

One of the outputs of the mobile plant research was to have a repeatable, scaleable method for examining the whole safety system for a specific type of mobile plant with a view to identifying practical opportunities to influence its safe use on farm.

Approach

A Rasmussen-inspired model recommended by Work Science was used to systematically consider what factors shape safe use of mobile plant across the whole safety system (as per diagram on page 20).

The safety system scan involved the following steps:

- Review of available injury burden data for machinery category and other contextual data to understand the risk profile.
- Lines of enquiry at different levels of the system (end users, suppliers, designers etc) to build understanding of the safety risks for the equipment and factors that influence its safe supply and use.
- Consultation with an independent subject matter expert for further information and clarification.
- Working Group discussions to identify gaps and opportunities for influencing safety on farm.

Mobile augers were used as a case study for the safety system scan (findings reported separately, see page 21).

Results and discussion

Development of the safety system scan and mobile auger case study took about 10 days work over three months. It provided a good overview of the whole safety system for mobile augers and helped fast-track to knowledge gaps and opportunities.

In this case the scan involved an RSHA Working Group interview with a subject matter expert, reflection and follow-up of some key information gaps via the SME, then group discussion and exploration of next steps.



The method would be highly repeatable and could be applied to other mobile plant types and potentially other WHS considerations more broadly.

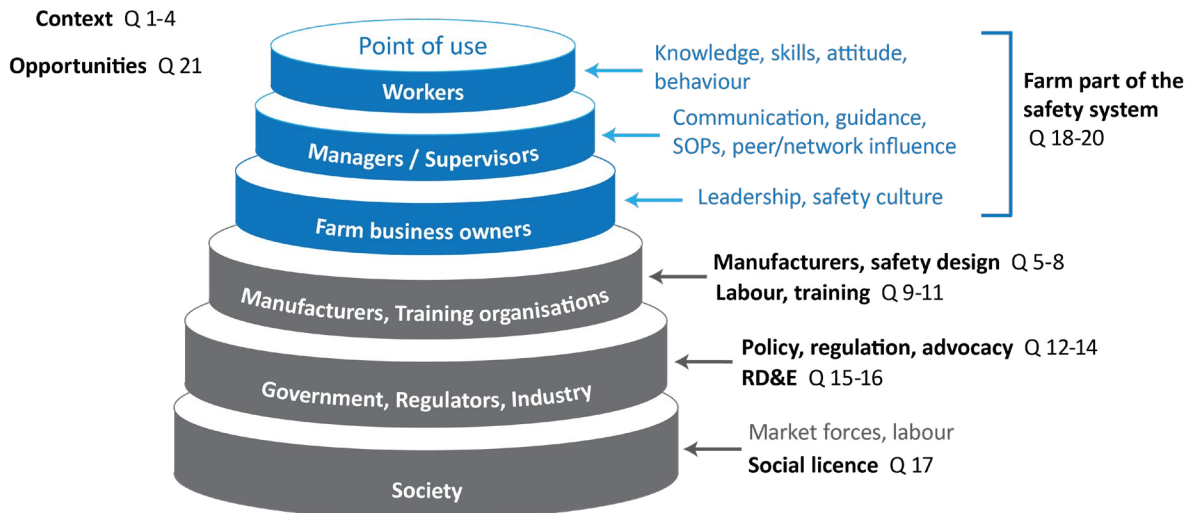
Some observations about using the scan in the case study:

- Specifying the equipment and scope of the enquiry (eg mobile and not fixed augers) proved an important first step as it very much shaped identification of the issues and their follow-up.
- Who acts as SME is important. The process was very efficient in this case as the SME had a lot of practical, farm-related experiences and was willing to explore ideas (without being locked on to an organisational position). Discussions were open, honest and exploratory.
- The Working Group members provided important depth and direction by opening the discussion to how augers are used within their industries.
- The researcher leading the enquiry needs to be both agile and thoughtful to clarify what is known, identify what isn't and deliberate on what leads to follow.

Recommendations

Consider using the Rasmussen-inspired safety system scan to fast-track factors in the whole safety system that may be influencing safety on farm (for different types of mobile plant and potentially other aspects of WHS).

Questions for a Rasmussen-inspired enquiry of the safety system



Context

1. What is the accepted definition for *plant type*? - how do we best describe the *plant type* used on farm, what is in scope / not in scope
2. How are *plant type* typically used on farm? - main types of work, what this looks like, likely to be every day or more sporadic, capture diversity – different plant types, different industries
3. Would *plant type* ever be used for a different purpose, one they were not designed to do?

Manufacturers and design

4. How many companies /businesses manufacture the *plant type*? - who, where are they located (including international), how much diversity is there in the product, are there any constraints to supply
5. What are the main hazards of *plant type*, main points about this bit of kit? - inc frequency and nature of injury
6. Where does safety design and thinking sit within their business?
7. To what extent is safety a feature? - do safety features help promote or constrain sales
8. How much do the two circles 'efficient use' and 'safe use' overlap for *plant type*? - are there examples where fixes to address hazards have been attempted on farm
9. How much do *plant type* cost (eg range)? - are they regarded as a major capital item for farm, how often are they replaced, is there a secondhand market

Labour and Training

10. Do *plant type* require a special skill set to be used on farm: such as workers who have had a formal induction, tailored training course, competency qualification or licence? - what sort of skills, is this the case for all *plant types*, all jurisdictions, all industries
11. Where do people learn how to use *plant type*? - where if external training an option, any big differences by jurisdiction or industry
12. Are there any training gaps or opportunities?

Policy, regulation, advocacy

13. What is the legislation or regulation around *plant type*? - anything specific to [plant type], to what end – what is the driver, are there differences between jurisdictions
14. Does the ag sector or specific industries have Codes of Practice relating to *plant type*? - do any jurisdictions, industry groups or manufacturers provide supporting documentation relating to this equipment
15. Is there, or has there been in recent years, advocacy relating to *plant type*? - eg around a particular point or for a particular change, if yes- who and what is the ask

RD&E

16. Has there been research on any aspect of *plant type* in the last 20 years. eg design, use, efficiency, safety etc?
17. If asked for extension resources on *plant type*, what would be your preferred resource base? - where would you signpost to

Social licence

18. Are there any expectations around use of *plant type* on farm from the general public, or people in rural communities ('social licence')?

Farm part of the safety system Thinking about a family farm eg with 3-4 workers, mix of family and employed

19. In your experience what things – the way that *plant type* are used on farm or the environment/situations they are used in- pose risks to safety?
20. Should there be constraints to who can operate the *plant*?
21. Have you seen examples on farm where plant type have been modified? - types of modifications, reasons for modifications, implications for safe use

Closing question

22. In your opinion, what is the best opportunity across the whole system to improve safe use on farm in the next 5 years? – something that is doable.