

DRIVER SITUATION AWARENESS CHECKLIST:

User guide

Authors:

A. Irwin, I. Tone, G. Lipan



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NON-TECHNICAL SKILLS IN AGRICULTURE

Why use a checklist?

- ✔ Checklists **improve the reliability of safety checks** by providing a series of cues or actions that can be followed every day.
- ✔ Checklists encourage **anticipation and then prevention of problems** during a task.
- ✔ If used in team briefings or safety discussions checklists can help **enhance communication** about safety.
- ✔ Using a checklist could **save you money** – early actions to rectify problems can prevent larger, more expensive, problems in the future.
- ✔ Checklists are used in a variety of industries and have been shown to improve safety and **reduce accidents** in healthcare and aviation among others.
- ✔ If you would like to see an example of checklist that has been implemented around the world you can read more about the WHO surgical checklist here: https://www.who.int/patientsafety/safesurgery/faq_introduction/en/

Why use a checklist when operating a tractor?

During 2017/18 the HSE¹ reported **33 fatalities** associated with agricultural activities in the UK. **Six of those fatalities involved a moving farm vehicle:**

2x

Run over by a reversing vehicle

1x

Crushed between tractor trailer and gatepost

3x

Crushed by unmanned vehicle moving due to poor maintenance or exiting and leaving the engine running

KEY RISKS ASSOCIATED WITH FARM TRACTOR USE INCLUDE:

- ⚠ Restricted line of sight means people, animals and obstacles may not be seen by the driver**
- ⚠ Entering and exiting the vehicle has the associated risk of slips and falls**
- ⚠ Exiting vehicle whilst the engine is running and the handbrake is off increases risk of crushing injuries**
- ⚠ Risk of rollover on steep terrain, ground conditions, ditches or due to stability issues**
- ⚠ Moving machinery parts carry the risk of entanglement and injury**
- ⚠ Contact with overhead power lines during operation**

Using a checklist, alongside recommended safety procedures and risk assessment, could help you maximise your safety, and the safety of others, on the farm.

For more detail on tractor risks, and safe operating procedures, check out the HSE guide to using tractors safely:

<http://www.hse.gov.uk/pubns/indg185.pdf>

What this checklist is (and what it is not)

THIS CHECKLIST SHOULD BE:

- ✓ Part of your usual safety process.
- ✓ Integrated into team / tool talks on tractor safety.
- ✓ Used to encourage communication on safety around the farm.
- ✓ Used as a memory prompt to support regular checks and safety actions.
- ✓ Used to enhance situation awareness around farm vehicles.

THIS CHECKLIST IS NOT:

- ✗ A procedural guide for operating tractors. **If you wish to learn more about recommended safety procedures please check out the websites of the HSE, Teagasc, IOSH and the Farm Safety Foundation**
- ✗ A replacement for training – technical knowledge remains crucial.
- ✗ A replacement for usual risk assessment procedures.



Situation awareness

Cognitive skill

Situation awareness is a cognitive or thinking skill, part of the non-technical skills considered necessary for safe and efficient work practice. It complements technical knowledge.

Situation awareness is considered to be a key skill for drivers of all vehicles.

Situation awareness is thought to have three levels²:



Perception: Noticing what is going on around you.



Comprehension: Using your training and experience to weigh-up the situation.



Anticipation: Thinking ahead to identify potential problems and act to stay safe.

Our research³

We asked farmers to fill in a survey about the key situation awareness elements for safe tractor operation.

Farmers identified several key aspects, including:

- ★ Monitoring internal cab instruments
- ★ Status of implements or trailer
- ★ Mental mapping of farm land, including locations of obstacles
- ★ The influence of stress and fatigue on situation awareness

This research was used to produce the checklist:

Informed by farmer perceptions and created for farmers.



Using the checklist

- ✓ The checklist can be modified to suit your usual safety practice
- ✓ The checklist should be visible (pinned to a wall, stuck in the tractor cab)
- ✓ The farm owner / manager should introduce the checklist during a regular safety meeting
- ✓ The points on the checklist should be considered at the start of each day or tractor operation
- ✓ All workers should be encouraged to raise and discuss any safety concerns that are noticed during checklist use
- ✓ If an activity is marked as 'no-go', workers should stop and engage in safety and risk management practices before operations can resume.

References

1. Health and Safety Executive (HSE). (2018) Fatal injuries in agriculture, forestry and fishing in Great Britain 2017/18. HSE, UK.
2. Endsley, M.R. (1995) Toward a theory of situation awareness in dynamic systems. *Human Factors*.
3. Irwin, A., Caruso, L. & Tone, I. (2019). Thinking ahead of the tractor: Driver safety and situation awareness. *Journal of Agromedicine*.



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