

INNOVATION PROFILE



BUSINESS SNAPSHOT

OWNERS

Daniel, Jeff, Lincoln and Chris Evans

PROPERTY NAME

Evandown

PROPERTY LOCATION

Wunkar, SA

SIZE OF PROPERTY

8,000 hectares

BRIEF ENTERPRISE DESCRIPTION

Merino sheep and cropping

NUMBER OF PEOPLE WORKING IN THE BUSINESS

3 full time equivalents plus casuals

AVERAGE ANNUAL RAINFALL

250mm

WHY THIS IS A PASTORAL ZONE INNOVATION

Working at height on a loading ramp or at the race can result in accidents, especially if the surface is wet. This innovation demonstrates an easy way to improve worker safety with a perforated metal walkway.



Expanded Metal Walkway on a Loading Ramp

The Evans family has a mixed enterprise business near Wunkar, in South Australia's Mallee region. They focus on safety as much as possible when at work on the property. They have a keen eye for areas in which improvements can be made and the means to make it happen through their own ingenuity.

This innovation looks at how the Evans family has used perforated metal to create an expanded, all-weather walkway on their stock loading ramp. This innovative idea improves safety when loading livestock on to transport and working at heights. It also increases the speed and efficiency at which they can load livestock without slipping.

WHAT WAS THE MOTIVATION TO CHANGE?

Many livestock races and loading ramps are raised above the ground to enable stock to be loaded or unloaded from trucks and trailers. The height increases depending on the type of transport vehicle being used, meaning at times workers can be operating two metres or more above the ground.

Whilst new loading ramp and race designs include improved footing, there are many older designs that consist of narrow wooden walkways. These can degrade and become rotten and/or become extremely slippery when damp. This makes the loading process difficult as stock handlers struggle to keep their footing and cannot move as quickly when needed. There is also the risk that stock handlers can fall from the race, resulting in injury.

The Evans' observed these risks and wanted to take all reasonable steps to safeguard the welfare of those working within their business, including truck drivers. They have established a way to use perforated metal and construct a much safer, more efficient and cheaper walkway on the loading ramp.

Figure 1: The side view of the expanded metal walkway on the loading ramp.



BESTPRAC

HOW DOES THE INNOVATION WORK?

The expanded metal walkway has been constructed by first attaching a metal frame to the side of the race. This is welded and bolted to the side of the loading ramp making it sturdy and secure. Some metal railings have also been attached to provide a hand rail as well as an edge guard.

Once the frame is attached, the perforated stainless steel lengths are laid, allowing grooves underneath to sit on the frame and then welded, preventing them from moving.

The perforated metal adds extra grip and stability and allows water to drain easily away instead of pooling on the surface. It is also much longer wearing than wood, as temperature, sunlight and moisture have less of an effect on metal.

WHAT ARE THE KEY BENEFITS?

The key benefits of this innovation are:

- Improved safety when working at height and if damp.
- Longer wearing material.
- Water can drain easily.
- The loading of livestock is made easier and more efficient.
- The walkway is self-cleaning due to the perforations.

KEY FEATURES

The key features of the expanded metal walkway are:

- Sturdy metal frame.
- Hand rail and side guard.
- Perforated metal walkway.

KEY RESOURCES REQUIRED FOR THE INNOVATION

The key materials needed for this innovation are:

- Perforated galvanised steel.
- Lengths of steel for the frame.
- A steel rail.
- Welding equipment.
- An angle grinder.
- Metal cutting equipment.

POTENTIAL CAUTION AND RISK

The main risk is associated with the strength of the frame that is attached to the loading ramp. It needs to be strong enough to support at least a couple of operators and be durable enough to cope with constant movement.

Make sure you do a strength test when using the walkway for the first time.

WHAT COULD BE DONE DIFFERENTLY NEXT TIME?

This innovation has worked well and Daniel Evans has been happy with the material in use and the increase in safety when using the ramp.

If it were to be built again, he may consider putting in another rail half way down the hand rail to reduce the risk of someone falling though.

COST BENEFIT ANALYSIS

The cost to Daniel was minimal. He managed to salvage the two lengths of perforated steel and the other items needed to construct the frame were available on farm.

He used two, six metre lengths but it will depend on the length of your loading ramp as to how much you will require. If the perforated steel was bought new, it may cost from \$50 per metre.

Figure 2: The front view of the expanded metal walkway on the loading ramp.



THE FINAL WORD

“The metal walkway creates much better grip and its makes working on the ramp so much easier and safer, especially in the wet”, said Daniel.

Bestprac acknowledges the contribution of Daniel Evans in the development of this innovation profile.

To view more innovation profiles, business cases and videos of innovations in the pastoral zone, visit the Bestprac website www.bestprac.info