

INNOVATION PROFILE



BUSINESS SNAPSHOT

PROPERTY LOCATION

Pastoral leases in South Australia

BRIEF ENTERPRISE DESCRIPTION

Pastoral wool and sheep enterprises

WHY THIS IS A PASTORAL ZONE INNOVATION

Feral goats are an issue in the pastoral zone. Trap yards allow goats to be self-mustered at watering points while reducing the labour required for effective management.



Use of Trap Yards at Watering Points

Feral goats are an issue in the pastoral zone. They have a significant impact on the environment. They affect sheep production by reducing the grazing potential of the land and are a biosecurity issue. Many pastoralists are using a 'toolbox' approach to manage goats. These management options include trapping, mustering, exclusion fencing, ground shooting and aerial shooting.

In South Australia, the legislation that goats are managed under is different to other states. The rules and regulations are restrictive in comparison to other states. It limits the options for managing feral goats that pastoral wool and sheep producers have in South Australia.

This innovation profile outlines the use of trap yards at watering points to opportunistically capture feral goats. It focuses on a set-up that only requires one person to operate and is in line with South Australian Pastoral Board regulations.

Figure 1: An example of the ramp up into a trap yard.



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WHAT WAS THE MOTIVATION TO CHANGE?

Feral goats are an issue on pastoral stations. The goat population needs to be controlled to reduce the impact on sheep enterprises. Feral goats can also lead to biosecurity issues onto a property as they are not drenched and vaccinated like other livestock. They impact the total grazing pressure of the property, reducing the amount of feed available to sheep.

The impact of goats should not be underestimated. To assess the stocking rate of goats, use this calculation - 1 goat = 0.7 DSE, or 1.3 goats = 1 sheep.

Trap yards were initially constructed on pastoral properties to self-muster sheep and cattle. They have been re-designed to target goats. They are growing in popularity across the South Australian pastoral zone as a control mechanism that is allowed under the current legislation.

The motivation to install trap yards includes:

- Mustering goats is a labour-intensive task, particularly if the densities are low.
- Mustering on motorbikes in dense scrub is not possible.
- Reduced feed and water available for stock.
- Labour availability is an increasing concern, and trap yards provide a labour and time efficient process to manage the goat population.

Many stations have invested in trap yards to control goats. It is one of many tools that can help control the goat population.

HOW DOES THE INNOVATION WORK?

The trap yards are constructed around a water trough using 1.2m high mesh fence. The yard can be accessed via gates when not in use, and they are closed when the trap is 'set'.

There are few variations that are in use. Spear gate traps have a v-shaped entrance with flexible spears. Goats squeeze through the spears into the trap yards and are unable to go out of the gate. These are popular as they are transportable, however larger animals or animals with horns may have issues going through the gate.

Ramps or jump-down traps are a wooden or dirt ramp on the outside of the fence for the goats to walk up and jump into the yard. Once they have jumped into the yard there is no way that they can get out as the fence is too high from the inside. As this trap involves a 'jump' at the end of a ramp, this may deter animals or it may result in injury to younger or older animals.

Swinging one-way gates are similar to the spear gates, where the animal is able to walk into the trap yard and is unable to get back out. This option requires more training to encourage the animal to walk through.

All of these options have pros and cons as to how they operate. The choice depends on cost for you, what works in your area, and what type of animal/s you are aiming to self-muster. The final design of the trap yards also depends on the vegetation and location, cost, materials available and size.

During trapping, water is turned off at surrounding watering points to attract the goats to the only watering point available, at the trap yards.

When set, it is suggested the trap yards are checked every 1-2 days. There should be stock yards (if necessary) and a loading ramp nearby which are used to load the goats from the trap yard into a truck.

Goats respond quickly to good conditions and numbers can rapidly increase. The ideal time to focus on reducing numbers is during dry conditions, in preparation for when the conditions improve.

KEY FEATURES

Trap yards are an effective tool in the management of goats. Another key feature that pastoral producers have noted is that the task is now a one person job, increasing efficiency across the property.

The truck can pull up, load the goats using the ramp on site, and complete the job with only one person present.

WHAT ARE THE KEY BENEFITS?

The key benefits of the innovation are:

- Reduction of labour required, creating efficiencies
- Easy way to manage goat numbers
- The control mechanism has little or no impact on the sheep
- Reduced time taken to muster goats and manage the goat population
- Increases the available feed for sheep
- More water available for sheep

KEY RESOURCES REQUIRED FOR THE INNOVATION

Key material required to implement trap yards are:

- Watering point
- Steel posts
- Weld mesh
- A way for the goats to get into the yards; for example ramps or spear gates
- Gates
- Loading ramp

The recommended size of a trap yard is approximately 50m x 50m and the shape depends on available land, location and how you manage animals.

If the trap yard is set-up around a dam, a portable set of yards is required for loading the truck. The choice of the trapping mechanism depends on your enterprise and how the trap yards are implemented.



Figure 4: An example of spear gates into a trap yard.

POTENTIAL CAUTION AND RISK

Pastoral producers assess that there is very little risk to implementing trap yards. This is if they are:

- Correctly designed and made
- Applicable to the area and the enterprise
- Part of a larger management program
- Set when you have time to check them
- Large enough to contain the number and type of animals you are aiming for
- Located near trees or other vegetation for shade, protection and to prevent heat stress

If there is a longer length of time between checking the trap yards, it is recommended that some feed is made available to animals, to ensure their health and welfare.

Other animals, such as kangaroos or wild dogs, can be caught in the traps and potentially cause damage to the infrastructure. By talking with your neighbours, you can see what design of trap yards works best in your area to trap the type of animal you are aiming for. There are also additions to the trap yards that can further control other animals entering the trap yards. Shade cloth can act as a visual barrier. Smaller openings around the trap yard fence can allow smaller animals to move in and out freely

WHAT COULD BE DONE DIFFERENTLY NEXT TIME?

Earlier trap yards were known to be made with cyclone fencing. While it works, it also takes a battering from the goats over time. Many trap yards now are constructed with more durable weld mesh.

LOOKING FORWARD

Pastoral producers have noted the improvement trap yards are making in controlling goats.

In South Australia, there are a number of properties who are changing their management options and trialing trap yards.

COST BENEFIT ANALYSIS

- An estimated cost of one trap yard is \$5,000.
- Anecdotally, the income from goats can pay for the trap yards within the first week of it being installed (check local regulations regarding the sale of goats).
- Although costly to establish, trapping is more cost effective than mustering, particularly with low goat densities.

It's advantageous for the business to put resources towards capturing and removing goats to ensure their own sheep have sufficient feed.

FURTHER RESOURCES

For those looking to implement trap yards, it is recommended to find a neighbour who has them installed. You can find out what works in your area, and what doesn't work.

- Check the legislation in your area
- Bestprac Innovation Case Study on Goat Control
<http://www.bestprac.info/pages/posts/control-strategy-gets-the-goat-542.php?searchresult=1&sstring=goats>

Further references for goat management:

- Standard Operating Procedure: Trapping of Feral Goats, NSW Department of Primary Industries (2004)
<http://www.environment.gov.au/system/files/resources/dd56dc25-6e77-4700-825b-83fbd12b5371/files/46217-operating-procedure-1.pdf>
- Connelly, P. Horrocks, D., Pahl, L., and Warman, K., Cost-effective and multipurpose self-mustering enclosures for stock, Queensland Government Department of Primary Industries and Fisheries (2005)
http://futurebeef.com.au/wp-content/uploads/self-mustering_enclosures_for_stock.pdf
- Underwood, C., Total Grazing Management Field Guide: Self-mustering systems for cattle, sheep and goats, WA Department of Agriculture (2002) http://www.agric.wa.gov.au/objtwr/imported_assets/content/aap/eng/bull4547.pdf

THE FINAL WORD

Trap yards are one tool of available to manage goat populations.

Bestprac acknowledges the contribution of David Setchell and pastoral wool and sheep producers in South Australia 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



Figure 5: Trucking from yards (F McLeod).