



The economic benefit of feral pig control in **Maize**

What are the benefits?

The benefit of feral animal control, is avoiding the damage that would have otherwise occurred had the control methods not been put in place.

Minimising yield damage at an enterprise level is the primary reason for feral pig control, however

the benefits of thorough control can flow-on to other enterprises and subsequent seasons.

Additionally, control of feral pigs can avoid damage to the environment and infrastructure such as fences and dams.

How much damage occurs in maize crops ?

Ag Econ conducted a survey of land managers in 2020 that covered 422,000 ha across NW NSW. Survey respondents reported maize to receive the lowest damage from feral pigs in summer crops.

Tall maize crops (also referred to as corn) provides feral pigs both food and cover making it an attractive habitat.

Figure 1: Survey results showing estimated yield loss caused by feral pigs

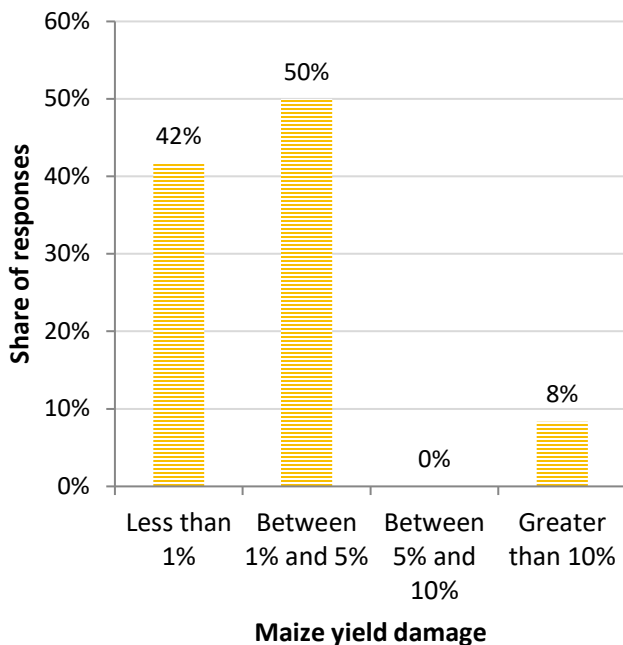


Figure 1 shows the survey results which indicate that over 90% of respondents estimated yield losses from feral pigs to be under 5%.

Estimated yield losses were converted to economic losses by multiplying tonnes lost by the commodity price. While the study used historic price data, this could simply be the anticipated average commodity price for the season.

This study considered historic regional yields and maize prices with variance also applied for yield damage experienced by feral pigs. The results estimated economic losses caused by feral pig damage to be up to \$38 / ha.

Damage caused by feral pigs in maize crops is estimated to be on average \$13 / ha.

Net economic benefit

The net economic benefit is the avoided losses (estimated economic crop loss) multiplied by the effectiveness of control, minus the control costs. 1000 simulations of the model using different data combinations (pig damage, crop yield, commodity prices and control effectiveness) showed that there could be an immediate economic net benefit of up to \$24 /ha (Figure 2) for feral pig control in maize. The length of the lines in the graph indicates the range of potential benefits. The difference in results between control methods largely came down to efficacy.

Baiting using 1080 poisoning is a low cost, highly effective control. Results indicated an average net benefit of approx \$7 / ha.

Aerial shooting, also a highly effective method at a moderate cost, resulted in an average net benefit of \$7 / ha.

Ground shooting is the least effective method with high associated labour costs. On average the net benefit was negative \$2 / ha indicating the avoided yield loss did not exceed the control cost.

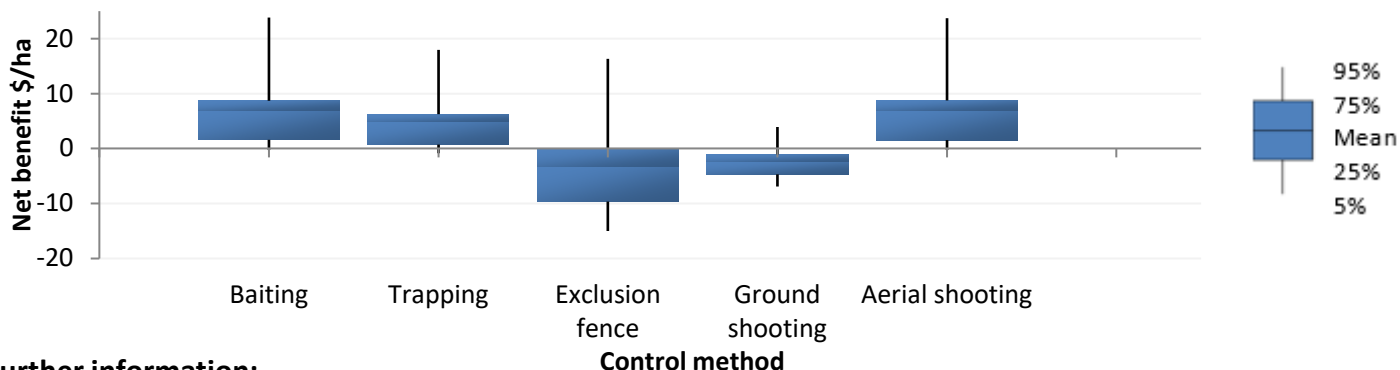
Trapping was the third most cost effective control method and resulted in average net benefit of \$5 / ha.

Exclusion fencing is a non-lethal, highly effective control method. The high upfront costs mean this method not suited to extensive broadacre cropping areas where areas may be fallow for a number of seasons. It is best used for smaller areas experiencing sustained high pig pressure or highly productive areas such as lambing paddocks. It should be noted that exclusion fencing shifts the feral pig population rather than reduce it.

Feral pig populations have the capacity to recover quickly from control methods and other setbacks such as droughts. By keeping the population suppressed with regular area wide control programs, further losses are being avoided in other enterprises and subsequent seasons. Area wide management may reduce the cost of control options resulting in higher benefits.

Regular area wide management utilising a combination of control methods is recommended for effective long-term population control.

Figure 2: Net benefit of feral pig control in maize crops



Further information:

- Findings summarised from the NW LLS funded study *Cost benefit analysis of feral pig control in North West NSW*. To read the full report visit www.lls.nsw.gov.au or www.agecon.com.au
- Contact your local LLS representative for information on current area wide management strategies ph. 1300 795 299

