# Weed Warriors – Gippsland host site

## Producer case study: Ken and Paula Stuart

### What's happening?

We are assessing and demonstrating a range of weed control and follow-up management options to improve the persistence and productivity of a permanent pasture in a fire affected area.

This site is in the hill country north of Bairnsdale. Around 90% of the farm was burnt, including the demonstration site paddocks. The paddock has no prior fertiliser history.

The paddock has been divided to run as a 'paired paddock' comparison using two side-by-side paddocks of uniform soil type and pasture composition.


**Figure 1: Site map showing the paired paddock comparison.**

### Paddock goal

The specific focus of the site is to control Chilean Needle Grass (CNG) in an existing native/introduced grass pasture that has never been sown down.

The focus for this paddock is to control the CNG, which has increased since the fires, and improve the productivity of the pasture.

The **control** area will follow the normal farm practice (NFP) of rotational grazing but will not follow any specific grazing pasture regime. The producer has applied '3 in 1' at 150 kg/ha and lime at 1t/ha, which is consistent with what other permanent pasture paddocks are receiving.

### Normal farm practice '+'

The additional treatment (NFP+) will be soil tested using the random sampling method and have fertiliser and lime applied, based on the soil test, to address the macro nutrients deficiencies and low pH identified.

The treatment area will also be mulched and an initial application of Taskforce (Flupropanate) used to target CNG.

The paddock will be rotationally grazed to approximately 1,600kg DM/ha, removing the excess feed and allowing the native and preferred grasses to dominate the paddock.

### Pasture composition

A pasture assessment was completed prior to the paddock being divided in July 2022 (Table 2).

This showed a high proportion of weeds, with only 10% introduced pasture species and 18% native grasses.

**Table 1: Pasture composition across the site prior to splitting the paddock and treatment**

| Plant | % |
|---|---|
| Winter Grass weeds | 19 |
| Broadleaf weeds | 17 |
| Native grasses | 18 |
| Paspalum | 19 |
| Couch grass | 13 |
| Chilean needle grass | 4 |
| Pasture grasses | 10 |

## Early results

A soil test was taken prior to dividing the paddock, in April 2022 (Table 2).

**Table 2: Soil results from site prior to splitting the paddock**

| | Units | Result |
|---|---|---|
| Soil texture | | Sandy Loam |
| pH (CaCl2) | | 4.6 |
| Organic Carbon (W&B) | % | 3.39 |
| Nitrate N | mg/kg | 1.5 |
| Phosphorus (Olsen) | mg/kg | 4.7 |
| PBI | | 170 |
| Potassium (Colwell) | mg/kg | 230 |

This indicated very low phosphorus and low pH. To start addressing the limited nutrients, an initial fertiliser application of '3 in 1' was applied at a rate of 300kg/ha with 3t/ha of lime.

## Where to from here?

The fertiliser program that we are establishing for the treatment area will continue to address the nutrient deficit.

The improved fertility, grazing regime and tactical spray program adopted for the NFP+ area is expected to improve the pasture composition and production, and reduce the weed burden, which includes Chilean Needle Grass.

There will be regular monitoring of pasture quality and composition.

Producers are welcome to come along and inspect the site and are also encouraged to participate in assessments of herbage mass, feed quality and pasture composition.

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