



# Case studies

Tony, Sally and Robert Woods, 'Limebon', Tullooona NSW



## PROPERTY DETAILS

Location: Tullooona, 70 kilometres north of Moree, north-west New South Wales

Catchment: Whalan Creek and Croppa Creek, Macintyre River catchment

Property area: 4,865 hectares

Main enterprises: Beef cattle and grain production

Where Lippia is a problem: Floodplain grazing country, creek riparian zones



Tony Woods checking lippia growth in a native pasture paddock

(Photo by P. Crawford)

## General information and lippia infestation

'Limebon' is predominantly floodplain and, in large floods such as those that occurred in 1996 and 1998, the whole property is inundated. Small patches of lippia were first recognised on the property a number of years ago and presented no significant problem prior to 1996. The density and extent of the lippia population across the property increased markedly following widespread flooding in 1996 and 1998. Recent floods, such as in February 2006, have contributed to widening the extent of the lippia infestation.

During wet periods, cattle spread lippia seed around the grazing country with the mud on their hooves. The conditions for lippia seed germination are perfect following a flood, so the regular flooding regime of the property is ideal for increased lippia spread.

In the past, 1,215 hectares were sown under crops and 3,650 hectares of predominantly native grassland were used as grazing land. Currently, 2,840 hectares are cropped and 2,025 hectares remain for grazing. Lippia affects the total area of the remaining grazing land to varying degrees, with approximately 1,620 hectares having more than 50% lippia cover.

The traditional stocking rate was one cow and calf unit per 4 - 4.5 hectares (4.2 DSE/ha equivalent) utilising crop stubble for grazing post harvest and until 1996 the property regularly ran 600 cows. The current stocking rate is now one cow and calf unit per 10 hectares (1.8 DSE/ha equivalent) with a total mob of 300 cows. The 50% reduction in stocking rate across the property is due solely to lippia invasion.

In addition to lippia, the Woods are experiencing an increase in Mimosa bush (*Acacia farnesiana*) infestation throughout the whole property. Mimosa bush is even appearing in cultivation paddocks as the zero-till farming system used on 'Limebon' allows the weed to become established due to the cessation of cultivation.

The effect of lippia on the banks and riparian zone of Croppa Creek itself is a cause of concern for the Woods family and other landholders in the area. Lippia has caused creek banks to slump, due to the drying out effect, causing the soil to crack and fall apart. This is leading to an increase in erosion and turbidity.



Black wattle country infested with lippia on the left, compared with the cultivated and very productive country in the same paddock on the right

(Photo by P. Crawford)

## Methods of lippia management

The main lippia control measure on 'Limebon' has been cultivation. A 1,620 hectare grazing paddock on an area of flood country on Croppa Creek would consistently grow clover which would fatten 700 head of cattle in a good season however lippia spread to 100% coverage, making this country useless for grazing. Since being cultivated for crops, the paddock has been returned to a very productive state and with current high grain prices it is unlikely to be returned to pasture, at least in the near future.

## Future control options

The area of native pastures being slowly overtaken by lippia is a serious cause of concern for Tony Woods. The drought has reduced the effects of lippia to some degree. However Tony is concerned that a return to good seasons could see the lippia out-compete the native grasses. He doesn't believe that the native grass species are capable of out-competing the lippia on the floodplain, even with very careful grazing management.

Although Tony is supportive of cell grazing systems, he believes that such a system would be very difficult to manage on a floodplain. Apart from the massive damage following a flood to the huge amount of fencing that would be needed for cell grazing on a property of this size, the other problem is where to relocate the cattle during a flood. There is generally not much warning prior to a flood event, which would make moving stock very problematic. With the present grazing system and large paddocks, stock generally have access to high ground during a flood.

Although Tony believes that cell grazing could be a valuable tool for lippia control, there would need to be much research and planning prior to establishing such a system on the property.

It is likely that there will be some chemical control work on lippia carried out on 'Limebon' in future years, depending on the availability and cost-effectiveness of chemicals. There will need to be more research on chemical control, especially as currently there are no registered chemicals (except under permit) for lippia control in pastures in New South Wales.

