



Case studies

Phil and Pat Norrie, 'Mollee', Wee Waa NSW



PROPERTY DETAILS

Location: Narrabri, north-west New South Wales

Catchment: Namoi River

Property area: 1,270 hectares

Main enterprises: Grain, cotton and beef cattle production

Where lippia is a problem: Floodplain grazing country, river riparian zone



Cattle grazing floodplain country previously infested with lippia

(Photo by P. Crawford)

General information and lippia infestation

'Mollee' is located on the floodplain on the southern side of the Namoi River. The main enterprises of the property are cropping and beef cattle grazing. Approximately 25% of the property is grazed, with the remainder cropped. There are 474 hectares under flood irrigation, 267 hectares for dryland farming and 95 hectares with irrigation support.

Lippia was first observed on the property in the mid 1990s and became a significant issue following the 1998 flood when 10 to 20% cover of lippia appeared. Following the 2000 flood, the lippia cover increased to around 50% and lippia now covers 70% of the grazing area (300 hectares). Across a large part of this area, lippia provides 100% of the groundcover. Lippia is not present on land that is above the level of floodwaters.

The Namoi River frontage of the property has been fenced to restrict stock access and as a result of the absence of continuous grazing, lippia has not really taken hold in the riparian area.





Lippia controlled by cultivation compared with lippia infested country on the left. Note the difference in tree health

(Photo by P. Crawford)

Methods of lippia management

Cultivation was determined as the only viable option to suppress lippia on the river flats where it had become the dominant species and in 2002 cultivation for dry land farming was initiated on a 200 hectare paddock of lippia affected river flats. Of the 200 hectares, 140 hectares has been cultivated with the remaining 60 hectares being left for wildlife corridors and habitat areas.

The cultivated area of the river flats is now used for annual cropping. Due to the high risk of soil loss associated with floods, a summer/winter crop rotation is implemented to maintain stubble cover. A zero-tillage farming system also assists in this regard.

The New South Wales Native Vegetation Act only allows cultivation of previously uncultivated country if the groundcover consists of less than 50% of native

species and only if clearing of trees is not necessary. In the Norrie's case, the assessment revealed that the native species present ranged between 0% and 17% and the medium tree density could be accommodated by the farming machinery. The low percentage of native species has enabled the Norries to proceed to develop this country for cropping.

A very interesting observation has been the spectacular recovery of the trees. Prior to cultivation, with lippia cover up to 100%, the trees were in a very poor condition and looking stressed. This condition can still be seen on the adjoining property where the groundcover is mainly lippia.

The improvement in the health of the trees may be due to the lippia and its soil drying capability or it could be from improved moisture infiltration from the cropping system used. Whatever the case, the positive benefits of the lippia removal are very obvious in this case.

The country will be double cropped where moisture is available and sown using zero-tillage methods. The cropping rotation is forage sorghum in the summer (for hay or grazing) and barley in the winter. Soil conditions after grazing may require conventional cultivation methods in some instances.

Phil and Pat are unsure at this stage whether to keep cropping the paddock or return it to pasture. Current high grain prices are enabling the costs of development to be recouped.

Future control options

The cultivated river flat country may be returned to pasture in future years, depending on the economics of grazing versus farming. Because the main area of lippia infested country is now under control, future work will basically involve monitoring the situation and carrying on with the current property activities.

