

# Comments on the Quantitative Analysis of a Clearing Ban in the Moree Plains Shire

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**The purpose of this paper is to provide comments on the *quantitative analysis of impacts in the Moree Plains Shire (Native Vegetation Draft Report, Appendix K)*.**

## Overall assessment of the Quantitative Analysis

The analysis provides a fairly consistent approach to the impacts in the Moree Plains Shire compared to previous studies and reports. As with all previous studies there are considerable assumptions that have to be made due to the lack of appropriate data. The assumptions presented in this study are logical and consistent with data collected in other similar reports examining the impacts of clearing restrictions.

## Assumed land-use and management practices

The general purpose of clearing in the Moree Plains Shire is to facilitate a switch from grazing to cropping. Cropping is perceived to have a higher gross margin per hectare. Also, there may be idle capital to allow this expansion of cropping.

The relative profitability between livestock and cropping enterprises drives the land-use change over a period of time. Once land is cleared it can be managed for either cropping or livestock so if cropping profitability declines or livestock profitability improves then there can be shifts in the land use in the short term. Once land is cleared it can be opportunity cropped or opportunity grazing crops grown to take advantage of markets and seasonal conditions.

## Estimated returns from clearing and clearing costs

The average returns used for grazing and cropping of \$24 per hectare and \$112 per hectare respectively are broadly consistent with those figures used in the Constable 2003 report.

Clearing costs are taken from Constable 2003 which were originally based on figures supplied by the Moree Remnant Vegetation Committee.

## **The assumed business-as-usual rate of clearing**

Farmers will retain native vegetation on land that is perceived as less productive for grazing and cropping purposes. There will be minimal land set aside for voluntary conservation of remnant vegetation without financial support or some form of community valuing of conservation.

Clearing occurs incrementally based on the need for the land for rotations, cropping cycles (product prices and perceived future markets), available capital, the life situation of the land manager, idle capital and available equipment. Annual clearing rates will vary with the seasons and markets. The average clearing rate of nearly 7,000 hectares per year between 1985 and 1990 provides a reasonable indication of clearing under a wide range of seasonal and market conditions.

The 242,000 hectares of extra clearing by 2030 is based on an estimated average clearing rate of 6,900 hectares per year. This is a decline in remnant vegetation from 49% to 33% over the 35-year period. Closer inspection of individual properties within the Moree Shire shows that some vegetation communities have been completely cleared whilst other properties are relatively uncleared. From this you would expect that there is more pressure to clear remnant vegetation on properties that have had very little historical clearing.

## **Suggestions for future studies**

On-farm impacts of land-use changes that include farm overhead costs, capital use issues and economies of scale. This would allow the examination of whole-farm profitability in the context of land-use change rather than on an enterprise base.

Purely focusing on the enterprise margins and increases in land available for cropping will generally show that there is an opportunity cost in not being able to clear. Farmers need to be made aware of soil landscapes and capability mapping to ensure that they are fully informed of the impacts of clearing certain soil types, vegetation communities and land classes. Not all areas will respond in a positive nature when cleared.

We need to understand what the drivers for clearing are so that these issues can be addressed in any compensation or valuing models. If profit is a driver then this issue needs to be addressed on a farm level not the shire level.

## **General comments**

Farmers' terms of trade have continued to decline over the years, with few periods when it has actually improved. These periods of improving terms of trade have been historically short term in nature.

Whilst profit per hectare or DSE has declined, total farm profit has been maintained to some degree through efficiency gains but to a larger extent through increases in the scale of operations. The expansion of land use change has been driven by movement towards more profitable enterprises (as perceived by producers) without empirical information to back this assumption.

The majority of clearing would occur on soil types that are consistent with crop production. Over time the more productive landscapes are cropped and therefore those areas not cleared at present could be assumed to be of comparatively poorer quality. Experience would suggest this is the case in many agricultural regions.

## **Further reading and contacts**

Moree Rural Financial Counselling Service

Moree Regional Vegetation Committee

DIPNR Tamworth Office

NSW Agriculture Budget Handbooks

## **Questions of clarification**

What is the basis for the returns used – grazing \$24.00/ha, cropping \$112/ha?

How is the figure of discounted expected returns of \$146 million under the business-as-usual scenario calculated?

What is the foregone development opportunities cost of \$79.9 million relative to the business-as-usual scenario and how does this compare to the \$146 million expected returns under the business-as-usual scenario?

What is the basis for the 767,200 hectares of clearing used in the study? This is approximately 80,000 more than Constable 2003.