Crops and Pastures - a Profitable Combination for the Central Tablelands of NSW?

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Abstract

Results of a mail survey of landholder's attitudes and practices on the Central tablelands of New South Wales are presented.? Information was obtained on enterprise types, grazing management, fertiliser history, improved pasture production and crop production. The main enterprises were wool and beef production. Cropping (grain and forage), although a minor enterprise, had increased on 14% of properties in the last 10 years. Over half of the properties had sown improved pastures which had declined since sowing due to seasonal conditions, financial constraints and grazing management. Cropping was thought to have a role in a pasture improvement program to provide forage for stock, provide rapid returns and reduce weeds and diseases. The major limitation to the expansion of cropping on the central tablelands is perceived non-arable soils, financial considerations, lack of suitable machinery and rain at harvest time. It is believed however, that opportunities for increasing pasture productivity through crop pasture integration are missed.

Key words: Attitudes, central tablelands, cropping, grazing management.

The major enterprise on the central tablelands of New South Wales is grazing, but low returns have placed a greater emphasis on investigating the possibility of higher return enterprises such as cropping to improve producer cash flows. The problem with low returns from grazing enterprises is thought to be partly associated with the poor composition of tablelands pastures (3), yet producers are reluctant to undertake pasture improve-ment, especially because of the higher costs involved. Vere *et. al*. (5) estimated that pasture establishment costs between $190-$220/ha and, depending on soil fertility and rainfall, would take 3-9 years before the initial outlay was recovered.

It is believed that integration of a cropping phase within the perennial pasture environment might encour-age a greater interest in pasture re-establishment as it would offset establishment costs and provide an opportunity for the incorporation of lime in areas where the soil pH is low. Currently, there is not enough informat-ion known about current practices and attitudes to pasture and crop production to encourage their integrat-ion. This paper describes the results of a mail survey consisting of 96 randomly selected landholders conduct-ed during March to July 1997 on the central tablelands of NSW. The survey was aimed at identifying current practices and attitudes to pasture and crop production.

Results

The survey showed that wool and cattle production are the two main enterprises on the central tablelands.? Cropping was a minor enterprise, although compared to 10 years ago, cropping (grain and forage) had increased on 14% of properties. In the last 10 years there has been a decline in sheep numbers and a subsequent increase in the number of cattle. At least 55% of landholders have pasture improved over 50% of their properties, generally through undersowing with a crop or direct drilling.? Fertiliser is applied once every three years to the major-ity of properties. A large percentage of landholders believe that their pastures have declined since sowing (more weeds, less vigorous). This was attributed to seasonal conditions (35%), financial constraints, graz-ing management (9%), and soil acidity (8%).

The main role of cropping in a pasture improvement program were perceived to be more rapid returns and useful cashflow (18%) and reduced weeds and diseases (17%). Although 26% of landholders believed that cropping had no role on their properties because of non-arable soils, 53% have planted oats for grain and forage every year for the past 10 years. Only 9% of landholders surveyed had never planted a crop. The most limiting factors to cropping were unsuitable soil types/non-arable soils (33%), financial

constraints (16%), lack of suitable machinery and rain at harvest time (9%). The major benefits of cropping were: provided forage for livestock (54%), reduced weeds, enabled diversification (12%), offset the cost of pasture establishment (7%) and enabled the incorporation of lime (5%). Only 2% did not believe that cropping had any role.

Discussion

The general decline of introduced perennial species in sown pastures on the central tablelands reported here is a considerable problem in terms of loss of productivity. Though not quantified this decline can be attributed to a combination of factors which have resulted in weed invasion and reduced pasture vigour *eg.* financial con-straints leading to a decrease in fertiliser application (1), with landholders applying fertiliser once every three years. Acid soils are also a major cause of pasture decline with the central tablelands having a high proportion of acid soils (1).

The most serious consequence of pasture decline is the considerable cost associated with resowing. Under current price/cost regimes there is not a great incentive for producers to resow pastures and increase perennial-ity. Thus, a short period of cropping could overcome this problem. Currently cropping on the central tablelands largely consists of forage or dual purpose winter cereal crops such as oats with the majority of landholders believing that it did not have a major role due to the terrain and/or unsuitable soil types. This was also found by Johnston and Dann (2) on the southern tablelands and the monaro region of NSW, where they believed that the adoption of minimum tillage technology would help to overcome the problem. As a large proportion of central tableland landholders are currently using minimum till-age techniques to sow pastures it would appear that this should increase the area of land that is suitable for cropping.

Financial constraints were also considered to be a major limitation to cropping on the tablelands. Indeed a shift to cropping activities would involve the invest-ment in new machinery and skills (2), yet gross margin figures from the southern tablelands have indicated that cropping following a period of pasture improvement was more profitable than traditional livestock activities (2).? Currently there is approximately 1.2 million ha of land under improved pasture on the central and southern tablelands (1), if only 5% (60,000 ha) of this area was suitable for cropping this would result in a considerable contribution to the economic productivity of the area through increased pasture renovation and increased opportunity for the incorporation of lime.

Conclusion

The results suggest that cropping does not currently have a major role to play on the central tablelands due largely to perceived limitations of non-arable soils and financial considerations. Presently, cropping has been mainly used to provide forage for stock and was not con- sidered to be of great benefit in off-setting the cost of pasture re-establishment or used as a means of incorporating lime. However, based on the greater sustainable productivity of perennial pastures though, we feel that landholders are missing the opportunity for raising long term pasture productivity through the integration of cropping into pasture improvement programs on the central tablelands.

References

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