

Farmer best management practices for lucerne in 350-450mm rainfall zone

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Legume pastures underpin the mixed cropping systems of central and southern New South Wales. At the western edge of the cropping zone (350-450mm average annual rainfall) the success rate of pasture establishment is estimated to be as low as 30-40%. The pasture phase is frequently characterised by being weedy, grass dominant and having a low sown legume content.

To address this issue, a GRDC- funded project was developed with the aim of looking at the problems of pasture establishment and management from farmer perspective. One aspect of this project was to increase the adoption of lucerne due to its potential to increase livestock production (longer growing season), crop yield and quality (greater N₂ fixation) and farm sustainability (more efficient water use, better ground cover). Initial farmer discussions indicated great interest in lucerne but also raised problems expressed as "lucerne management is most frustrating, not often do we get good strikes" and "we certainly come unstruck with our management (of lucerne) as far as grazing it too early".

In response to this, successful lucerne growers at six locations within the region were invited to meetings to determine the reasons for their success. Pooling this information allowed the development of Farmer Best Management Practice (FBMP).

Methodology

Farmers invited to the six meetings were

successful lucerne growers with at least ten years experience. Each was asked to write down five or six factors they considered to be important to the successful establishment and management of lucerne. These were then listed and grouped by the participants and groups were then prioritised. Comparison of the findings from each group was then undertaken.

Results

Across the groups the highest priority was given to weed control in the year prior to sowing and in first year stands. This was considered essential if lucerne was to be established successfully.

A more contentious issue was cover cropping with views ranging from no cover crops to a range of cover crops such as lupins, barley, triticale and wheat. There was general agreement that where cover crops were used, sowing rate of the crop should be reduced.

Control of red-legged earth mite was highlighted and, as with weeds, was needed both in the year before sowing and seedling stands.

Sowing equipment and grazing management were other major factors listed. In relation to the former, it was recognised that successful establishment could be achieved with a wide range of equipment, assuming it was operated correctly. Sowing depth was a critical issue, with sowing too deeply being a significant contribution to failure.

Grazing management related to the need to graze

lightly in the first year and to allow lucerne to flower at least once a year.

Outcome

The ideas of the group members have been collated into brochure to provide guidelines for less experienced lucerne growers. However, even the

'experts' recognised failures occurred from time to time and that some lucerne should be sown each year to balance out the good and the bad years.

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