

FARMER ADOPTION OF DRYLAND LUCERNE SYSTEMS IN NORTH-CENTRAL VICTORIA

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Abstract

A 1991 farmer survey found establishment and management problems were a barrier to achieving adoption of dryland lucerne. A 3-year (92-95) extension project was designed. The 1991 survey placed respondents in four categories according to lucerne area and attitude toward it: *Established* - successful lucerne growers, *Planners* - intending to grow more, *Deterred* - felt there were too many problems, *Disinterested* - not interested in lucerne. In 1997 the survey was repeated to monitor adoption of lucerne and measure changes in attitude and behaviour of farmers. The *deterred* growers had increased their lucerne area significantly ($P < 0.05$). The lucerne establishment success rate overall had increased from 36% to 60% ($P < 0.01$). The *disinterested* respondents had moved from 0% to 67% success rate. Improved establishment success was attributed largely to spring sowing and improved undersowing techniques. The percentage of all farms sown to lucerne remained static.

Key Words: Lucerne, establishment

Increasing the area of dryland lucerne is a key recommendation of the catchment management plans developed for north-central Victoria. Previous research has shown the ability of lucerne to reduce groundwater recharge (2). Dryland lucerne is a valuable grazing plant in areas normally sown with annual pastures. Local on-farm research in the region has indicated that alternative lucerne grazing systems can be up to 300% more profitable than traditional systems (3).

The current study was undertaken in early 1997 as a direct follow up to a farmer survey carried out in 1991 (a). The major conclusions from the 1991 study were: 1) Many farmers in the region had a very positive attitude to lucerne. (b) The average success rate of lucerne establishment (36%) had to be increased. (c) Many farmers had a cautious approach to increasing stocking rates and associated management changes. "Lucerne for Profit", a research and extension project (1992-95), was planned and carried out by DNRE in conjunction with farmer discussion groups and agribusiness. The project was three pronged: (a) Improve lucerne establishment success; (b) Demonstrate grazing management and livestock profitability; (c) Integrate lucerne into cropping systems.

The 1997 follow up survey and interviews aimed to monitor any changes in farmer's attitude and behaviour towards lucerne over the last five years and to measure the actual impact of that on area of lucerne grown. It was also seen as an opportunity to evaluate the impact of the "Lucerne for Profit" project.

Materials and methods

The survey population was 90 farmers. Respondents to the previous survey were categorised into groups based on their response to five specific questions which were retained in the current study. The four groups were labeled as follows: ***Established lucerne growers*** had a history of success with lucerne establishment and management and an average of 43% of their farm sown to lucerne. ***Lucerne planners*** who had little lucerne on their farms but believed there was a place for it on their farms if problems could be overcome. ***Deterred growers*** had little lucerne, would like more but believed the problems made lucerne to difficult a proposition. ***Disinterested*** farmers believed lucerne had little place on their farms whether the practical problems were overcome or not (4). In the current study the respondents were re-categorised according to their most recent response. A sub-group of fifteen farmers were personally interviewed to determine what had influenced them to change their adoption of lucerne.

Results and discussion

Over the five year period there was a significant positive shift in farmers' attitudes and skills. Figure 1 shows that in 1991 there were 5 farmers in the *established* lucerne grower category this has grown to 11 in 1997. The numbers of *planners* has also increased whereas the number of *deterred* and *disinterested* farmers has decreased accordingly. The previously *deterred* farmers are more positive about lucerne management hence the shift from 2.7 to 7.8% of their farms under lucerne ($P < 0.05$). The previously *disinterested* farmers are more positive ($P < 0.05$) about the potential financial return from lucerne farming systems. Note that Fig.1 relates only to the 45 farmers that responded to both surveys and have a valid match.

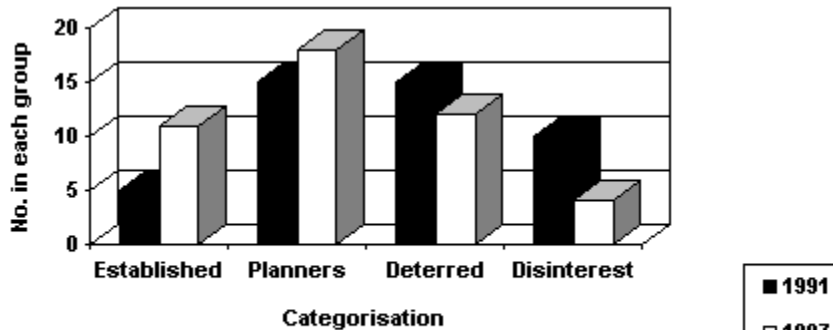


Figure 1 The change in number of respondents in each categorisation.

Farmers are more successful at establishing lucerne. The average establishment success rate has improved from 36% to 60% ($P < 0.01$). Interviews attributed this to the uptake of new establishment techniques, namely spring sowing under a safflower crop and modifying undersowing methods. The main source of knowledge was usually direct extension contact or speaking to successful lucerne growers. Factors other than agronomy are tempering the adoption of lucerne, interviews revealed that relatively low wool prices and buoyant grain prices over the last five years are two such factors. Drought in 1994 adversely affected establishment but also showed off the advantages of lucerne. There remains a negative attitude to sheep management changes and rotational grazing systems.

Conclusions

North-Central Victorian farmers are more positive now than in 1991 about the benefits of including lucerne in their farming system. They have significantly improved their skills in the establishment and management of lucerne. Qualitative interviews suggest that the "Lucerne for Profit" project had a catalytic affect on these outcomes.

References

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