

The role of farmer knowledge in developing sustainable pasture and grazing systems

Joanne Millar and Allan Curtis

The Johnstone Centre, Charles Sturt University, Albury, NSW, 2640

The research described in this paper explores the nature of farmer knowledge of both native and introduced perennial grasses, and the extent to which such knowledge is valued and integrated within community, government and industry programs dealing with pasture management issues. The knowledge and experience farmers gain from trial and error, personal observation and interaction with others in their local environment can be an important factor in decision making and in determining land management practices (Chambers *et al.* 1989, Kloppenburg 1991). Understanding the context in which farmer knowledge develops can be vital to participatory approaches such as Landcare and industry programs aimed at dealing with complex issues such as pasture and grazing management (Millar and Curtis 1997, Millar *et al.* 1997).

A qualitative approach

The methods of inquiry were based on a qualitative approach. Semi-structured interviews were carried out with 26 farm families in north-east Victoria and the southern tablelands of NSW, to hear about their experiences with managing native and introduced perennial grasses (Millar and Curtis 1995). Case studies of a Prograze and a Landcare group were chosen to explore how farmer knowledge is used and valued in groups. Group activity focused upon building landholder knowledge and skills for sustainable pasture management.

Results

Farmers talked about native grasses in terms of providing stability in the farming system, whereas introduced perennial grasses were valued for increasing productivity and adding flexibility to enterprise management. Limited research and extension of native grasses has meant that farmer knowledge of native pastures has evolved with little external influence and has largely relied on personal experience and inherited information. Although management of native grasses is constrained by terrain (remnants are often on hilly or non-arable country) farmers showed considerable local innovation aimed at increasing the productivity of native pastures whilst trying to maintain them. Even amongst farmers who have adopted recommended pasture technology for introducing exotic pastures, there exists an element of local knowledge as a result of their innovative adaptations of technical

information (Millar and Curtis 1995).

The extent that farmer knowledge was valued and used in the Prograze and Landcare studies varied according to the purpose of each group and the approaches used to facilitate activities. Interactions between group members and extension staff became an important stimulus for the emergence of local knowledge. These interactions were greatest when:

- practical, hands on activities were used
- time was allowed for dialogue
- a complexity of issues were addressed and
- actual on-farm figures were used in setting production targets and feed budgeting.

Research findings suggest farmer knowledge can remain dormant unless critical factors in group learning and development are addressed. These factors include experiential learning, integrating information, effective facilitation, group autonomy and building ongoing relationships and learning opportunities.

Conclusions

The knowledge and expertise farmers possess needs to be recognised within the agricultural research and extension community. As in many other parts of the world, much of this vital knowledge has remained hidden and marginalised within the traditional "technology transfer" paradigm of agricultural science (Kloppenburg 1991). It is therefore imperative that farmers are given the opportunity to share their local knowledge and experience with other farmers and scientists through industry networks and joint community and government programs.

References

- Chambers, R., Pacey, A. and Thrupp, L.A. (eds.) (1989). *Farmer first: Farmer participation in agricultural research*. Intermediate Technology Publications, London.
- Kloppenburg, J. (1991). Social theory and de/reconstruction of agricultural science: Local knowledge for an alternative agriculture. *Rural Sociology*, 56, 519-548.
- Millar, J. and Curtis, A. (1995). *Farmer knowledge and experience with perennial grasses*. The Johnstone Centre of Parks, Recreation and Heritage, Report No. 41, Charles Sturt University, Albury.

Millar, J. and Curtis, A. (1997). Perennial grasses: Finding the balance. *Australian Journal of Soil and Water Conservation*. 10(1), 21-28.

Millar, J. Curtis, A. and DeLacey, T. (1997). Perennial grasses in Australia: The place for local knowledge. *Rangelands* 19 (2), 6-11.

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