

## Management - a constraint to the early adoption of conservation cropping in the South Burnett?

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Over the past decade there has been considerable research, development and extension of conservation cropping in the South Burnett. The system involves a two year rotation of summer legumes and summer and winter grains grown under reduced tillage and stubble mulched conditions and has been summarised previously (1). The system maximises ground surface cover over the high soil erosion risk period, from November to March.

A survey in 1981 indicated that 31 percent of farmers at Wooroolin would attempt conservation cropping in the future (2). A more recent survey (3) has shown considerable adoption with 31 percent of farmers 'always' using reduced tillage, and about half of these also practising stubble mulching. However, 31 percent of farmers still 'always' use conventional land preparation practices at this time.

The adoption of reduced tillage and stubble mulching was found to be highest at Wooroolin where more farmers follow a simple maize-peanut summer crop rotation. The practice was appropriate and easy to integrate, with the immediate benefit of reduced costs.

At Kumbia and Murgon where the cropping system is more complex and intense, involving at least 3 crops in a summer winter rotation, conventional land preparation is still more commonly used. However, farmers who keep both physical and financial records of cropping activities as an aid to planning and decision making are more often practising reduced tillage and stubble mulching.

Crouch (4) stated that the choice of practices depends on the stage of farm development at a given time and *on its* relevance, as perceived by the farmer, to continuing development. As the situation becomes more complex a higher level of conceptual skill is needed to handle it. The use of records for planning and decision making has been included as one of the variables in forming a scale of conceptual skill which has been found to be significantly related to the adoption of improved practices (5).

While the practice of reduced tillage and stubble mulching provides the farmer with more time for planning and decision making, the whole conservation cropping system requires a high degree of managerial skill (6). The survey results (3) indicated a logical pathway for the development of management skills. Farmers who kept detailed physical and financial records (18 percent) were very interested in advanced decision analysis, management courses and computers. By contrast, farmers who kept no formal records (22 percent) saw financial record keeping as a priority need. Physical records, computers and courses were much less important to them.

An extension programme is being planned to meet the needs of identified target groups in farm management. Over time this will help both farmers and extension workers gain a greater understanding of the farming system in which they work. As a result the farmer should more actively seek appropriate innovations at the right time, while for extension workers sensitive areas for further research, development and extension should be more easily identified. This will greatly complement the cropping systems research approach being advocated by some agronomists today (7).

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