Oilseeds and grain legumes in the southern wheatbelt of N.S.W.

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The potential for oilseeds and grain legumes as alternative crops will be strongly influenced by their ability to compete with alternative forms of land use. In the Southern wheatbelt of N.S.W., the traditional pattern of land use centres principally on wheat-pasture rotations, with oats and barley being grown as well. This pattern of land use provides farmers with an average level of income which is not only high by rural standards but also offers relatively low income risks. The underlying rotation system has been developed in accordance with long-term maintenance of soil productivity.

Incorporation of oilseeds and grain legumes into this traditional system will proceed only to the extent that average farm income is increased and/or variability of farm income is reduced. The ability of the newer crops to achieve this result will depend largely on their yield characteristics, price movements and rotational requirements.

Through the development of a farm-level programming model at the BAE, these features of the newer crops have been evaluated against those of the traditional forms of land use in the Southern wheatbelt. The main result is that the new crops have the potential ability to achieve minor increases in average farm income and minor reductions in income variability. Although this result may be interpreted as indicating an improvement in the risk-return situation of farmers, the magnitude of gains does not appear sufficient to induce a major restructuring of traditional land use patterns. Much will depend on the risk attitudes of individual farmers.

It was also found that both rapeseed and lupins enter farm plans at levels near the maximum allowable by rotation constraints. For rapeseed, this limit was 16 per cent of total arable area per annum and for lupins the limit was 12 per cent of total arable area. The fact that over the past decade actual sowings of these crops in the Southern wheatbelt have been far less than this, suggests that farmers may view risks in a manner somewhat different to that specified in the model. For instance, marketing risks are a very real concern to most farmers and yet it was not feasible to allow for such factors in the model.

The only risk elements which the model was capable of effectively handling were those associated with variability in yield and price. Measures of these risks were derived from ABS records of crop performance in the Kyeamba and Mitchell Shires as well as from CSIRO and N.S.W. Department of Agriculture sources. Again it is possible (indeed, likely) that individual farmers' perceptions of crop risks will be different from the empirical measures derived from these sources.

Sensitivity tests indicate that despite these data limitations, rapeseed and lupins have the potential to achieve positive benefits to the risk-return situation of farmers in the Southern wheatbelt. Realisation of this potential in the longer term will depend very much on the efforts of agronomists and extension workers. Even so, the traditional wheat-sheep pattern of land use is expected to continue as the dominant form of farming.