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Stubble : friend and foe

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Several articles in this issue of the *Journal of Agriculture* discuss some of the important issues of stubble management.

The articles are condensed from some of the papers presented at a stubble workshop at Geraldton in 1991.

In the past, farmers and agriculturalist scientists have regarded crop stubbles as an unwanted by-product. Phrases such as 'stubble trouble' and 'stubble management with a matchbox' have perhaps exemplified our attitude to crop stubbles, as they still do for some farmers.

On the other hand, some farmers view stubble as an essential part of their cropping system — something that makes it possible to crop.

This divergence of attitude and practice is one reason that stubble management remains a controversial issue.

In July 1991, the Department of Agriculture and the Western Australian committee of the Grains Research and Development Corporation organized a workshop at Geraldton on stubble farming systems. Ninety people attended, coming equally from grain growers and organizations servicing agriculture.
The origins of the workshop go back to a conference on soil management for sustainable agriculture held by the research committee of the Western Australian Farmers' Federation (WAFF) in 1987.

The 1987 conference was held in response to growing concern about environmental degradation. Its objective was to:

'examine soil research undertaken to date ... with a view to the management of the soil resource for profitable, sustainable grain production, and to suggest some models for the integration of such research'.

As a result of that conference and a subsequent report to the WAFF research committee by Dr John Loveday, the Department of Agriculture organized the 1991 stubble workshop. The Grains Research and Development Corporation provided financial assistance.

The aims for the workshop were to:

• Review what is known about stubble, both in general and in relation to research conducted in Western Australia.
• Identify research, extension and machinery needs to overcome barriers to the adoption of stubble retention farming practices.

The review and research papers presented at the workshop, and the research and extension priorities that were established, are being published by the Department of Agriculture's Division of Plant Industries. The publication will be available from the administrative assistant, Division of Plant Industries, Department of Agriculture, Baron-Hay Court, South Perth WA 6151.

Priorities for extension and research

The workshop established 20 priorities for extension and research on stubble management (see Table). The results have been separated into those of practising farmers and other delegates, who were mostly Department of Agriculture extension and research officers.

Both groups ranked 'Farm scale demonstrations of systems and machinery on a regional basis' as the highest overall priority for extension of information on stubble management and practice. This reflects a view that greater extension and development of existing technology are the major needs.

Discussion with participants suggested that the desire for demonstrations arose from scepticism about results obtained from small plots — especially where machinery was concerned — and a desire by farmers to test machinery before buying.

Research on 'Long term effects of stubble retention' was ranked second by farmers, but only fourth by other delegates. This perhaps reflects a concern by farmers to develop truly sustainable cropping systems.

Further research on the economics of stubble retention systems was ranked third by farmers, but lower (seventh) by other delegates. Fourth in priority for farmers was 'Integrated information packages for specific soils and regions', but this was given a higher priority (second) by other delegates.

The top eight priorities set by farmers illustrate their desire to be convinced that stubble retention and management is the practice they should be adopting in the long term. The components of the technology — machinery, disease control and use of herbicides — were of lesser immediate concerns.