



*Working in partnership
with researchers and industry*

Discussion Topic 1

- EverCrop - Future Farm Industries CRC

What is Evercrop?

The CRC for Future Farm Industries is identifying, adapting and fine tuning the management of perennial-based systems for key agro-ecological zones in southern Australia.

EverCrop is a five-year project which aims to increase the profitability of livestock and crop enterprises by increasing the extent and performance of perennials in mixed farming systems. Key questions to be addressed are:

- Which perennial component is best for my circumstances,
- How much should I adopt, and
- Where on my farm should perennials be targeted for maximum impact?

In Western Australia, the EverCrop team plan to evaluate the role and benefits of pasture cropping in achieving NRM benefits, increased profits and flexibility to respond to variable seasons.

Pasture Cropping

Pasture cropping is a land management system where annual crops are sown into an existing perennial pasture. This system was pioneered by Collin Seis (NSW farmer) over 15 years ago and has grown in popularity in the eastern states due to profit and environmental benefits. As part of EverCrop activities, CSIRO and the Department of Agriculture and Food WA plan to establish two focus sites near Moora and Mingenew to evaluate the viability and benefits of this system in WA.

The research and development team would like to work with growers to determine:

- Is pasture cropping a viable technology in WA to integrate perennials into cropping systems?
- What are the benefits of pasture cropping across a range of environments, soil types and management regimes?
- What research and extension activities would be useful to test and integrate the concept of pasture cropping into current farming systems?
- What tools and approaches would assist farmer decisions about the placement and management of perennials in their cropping systems?

Benefits for growers to become involved

Participating growers will have the opportunity to provide input into the type of activities used to evaluate the concept of pasture-cropping. Growers will also play a key role in road-testing tools developed to assist decisions about the placement of perennials on farm (what species, where and what extent). The Future Farm Industries CRC would also like grower input to identify the best ways to convey research findings and preferred mix of extension activities (e.g. case studies, workshops, on-farm demonstrations).

Session Leader

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Discussion Topic 2

– New landuse systems – ARWA Climate Adaptation Program

Overall aim

Scoping and analysis of transformational productive land uses for wheat-sheep farms in the WA agricultural zone that promote reliable farm income, greater ground cover and efficient use of rainfall, labour and capital.

Background

This project has arisen out of a need, expressed by farmers and industry, to re-assess the nature of broadacre farming systems in the Western Australian wheatbelt. Future predictions for climate change in the state include warmer and drier seasons, extended dry spells, later starts to the growing season and greater summer rainfall.

In the longer term we would like to evaluate, through bio-economic modelling and farmer interviews and experience, alternative broadacre crop-livestock systems that are adapted to climate change for all regions in the WA wheatbelt. Some key questions are:

- What new cropping and livestock systems are needed to cope with a future drying climate and incidence of higher temperatures?
- What opportunities are there for crop production to extend into the higher rainfall regions and what systems could be designed to take advantage of out of season rainfall?
- What changes in tactical and strategic farm management are needed?
- Are there forms of contracting, pooling of resources and management that can buffer the effects of increased seasonal variability?
- How will the advent of a National Emissions Trading Scheme impact on farming systems, both directly and indirectly?

New systems will be evaluated against economic criteria, income variability, compatibility with farm resource constraints (labour, machinery) and impacts on natural resources such as groundcover.

The primary client for the work will be the members of farmer groups, their advisors, agribusiness and policy makers in the WA State Government.

Benefits for growers

Participating growers will have input into the types of systems being evaluated including: identifying currently available innovations and potential benefits, identifying innovations not currently available or adoptable, potential benefits (economics, risk, NRM) and constraints to adoption; and assessing post farm gate impacts of new land use systems. The project will also seek grower input on questions such as: How far ahead should we be looking – 30, 50, 100 years, is looking beyond the farm gate a useful thing to do, what other future influences will we need to account for – e.g. prices/costs?

Session Leader

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Discussion Topic 3

- Opportunities for energy production by Australian grain growers- CSIRO & GRDC

Project Outline

GRDC has funded a project with CSIRO to examine opportunities for grain growers to reduce reliance on fossil energy.

The grains industry is, like many other sectors, being bombarded by oft conflicting information about the future of oil supplies, fossil fuel prices, and the promise and perils of biofuels. There is a clear need for some reliable analysis of the situation so that grain growers can better understand the implications of high energy costs, possible supply constraints, and an emerging 'renewable energy' sector for grain farms and grain growing regions.

This project is currently at the end of the first phase and focuses potential opportunities in energy efficiency, regional self sufficiency and energy production. This work focussed on:

- **Energy efficiency.** Farmers have absorbed past increases by changes to minimum/zero till, and by including legumes in their farming system. What are typical energy flows through current grain farming systems? Have farming systems reached their limits of energy efficiency gains to buffer against increased oil price?
- **Energy self sufficiency.** Energy self sufficiency has been proposed at farm and regional scales by many – but are these opportunities real or perceived? Which areas in Australia could potentially become self-sufficient in their fuel requirements, and what factors would be important in achieving this?
- **Energy production.** Production of ethanol from new technologies which use the stubble rather than the grain is of great interest to the grains industry. How much stubble is currently produced in grain growing areas? What proportion of it could potentially be used for bioenergy and biofuels, and what would be the implications of removing it from the paddock?

Although this report is clearly focussed on the energy considerations of the farming systems, issues of energy security (availability and cost) must be viewed in the broader context of the tensions and trade-offs with food security, water security, and the need to reduce greenhouse gas emissions.

The second phase of the project will focus on case studies in the regions. The number of case studies, their location, and the depth to which various issues are explored is yet to be decided.

Key Questions for Discussion

1. Trends in energy on farms: more or less vulnerable? Compared to international competitors?
2. Biodiesel: a barrel of opportunities for Australian grain farmers, or for oil companies?
3. Synergy or trade-off: Energy security, climate change, sustainability
4. Beyond the research: where to next for Australian grain farmers?

Session Leaders

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