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Biofuels in Western Australia



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Outline



- The Department of Agriculture and Food activities and experience with Biodiesel
- The Department of Agriculture and Food ethanol research update
- Overview of the Biofuels Taskforce



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Biodiesel - Department of Agriculture and Food WA

- DAWA began research into alternative oilseeds in 1996
- Past 2 years grew commercial trials with mustard
- 5 Research Stations grew mustard, had the seed crushed and reacted and use the biodiesel produced
- Biodiesel demonstration trailer developed for field days and shows

Biodiesel Trailer



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Biodiesel

- Began using Biodiesel in Government vehicles and machinery in 2004 ; trucks, utes, tractors and headers
- 2005 Pajero running on B100
- Recent permission to extend trial to 15 fleet vehicles running on blended fuel





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Biodiesel - Department of Agriculture and Food WA

- Market analysis on the world biodiesel and ethanol industries
- An overview of the crude oil market and the future opportunities
- Several economic analysis on the viability of biodiesel and ethanol production in WA



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Biodiesel - Department of Agriculture and Food WA

- Assisting several farmer groups with business structures for biodiesel production
- Assisted industry for investment attraction into the WA biofuels industry
- Collaborative work with SEDO and DOIR on bio-energy



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Biodiesel research in 2006

- Conducting trials on alternative oilseeds & on early maturing canola varieties
- Canola and mustard meal fertilizer trials
- A glycerine trial for non-wetting soils
- Research into other alternative uses for the by-products





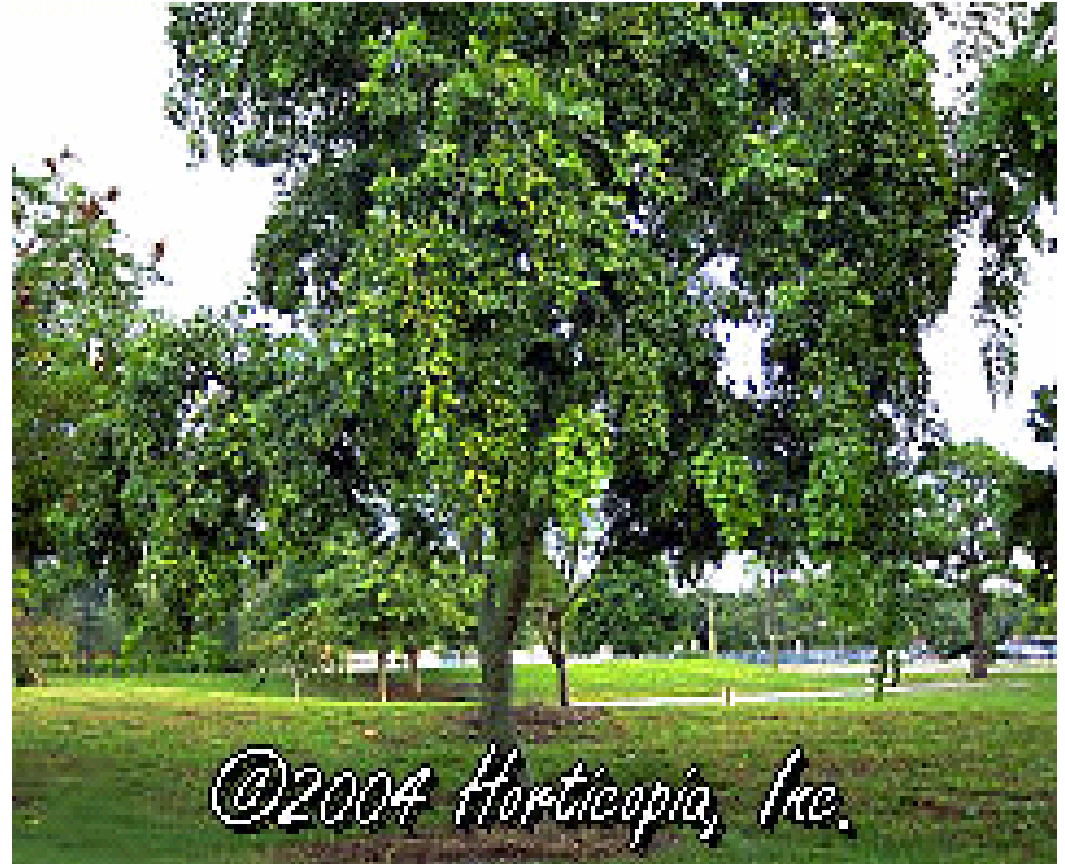
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Biodiesel - Profitable alternatives



Pongamia pinnata

- Most soils
- pH 4.5 – 8.5
- 1 – 38 deg. C
- 500 – 1500mm
- 600/ha, seed or seedling
- Produce yr 3
- Nitrogen fixing



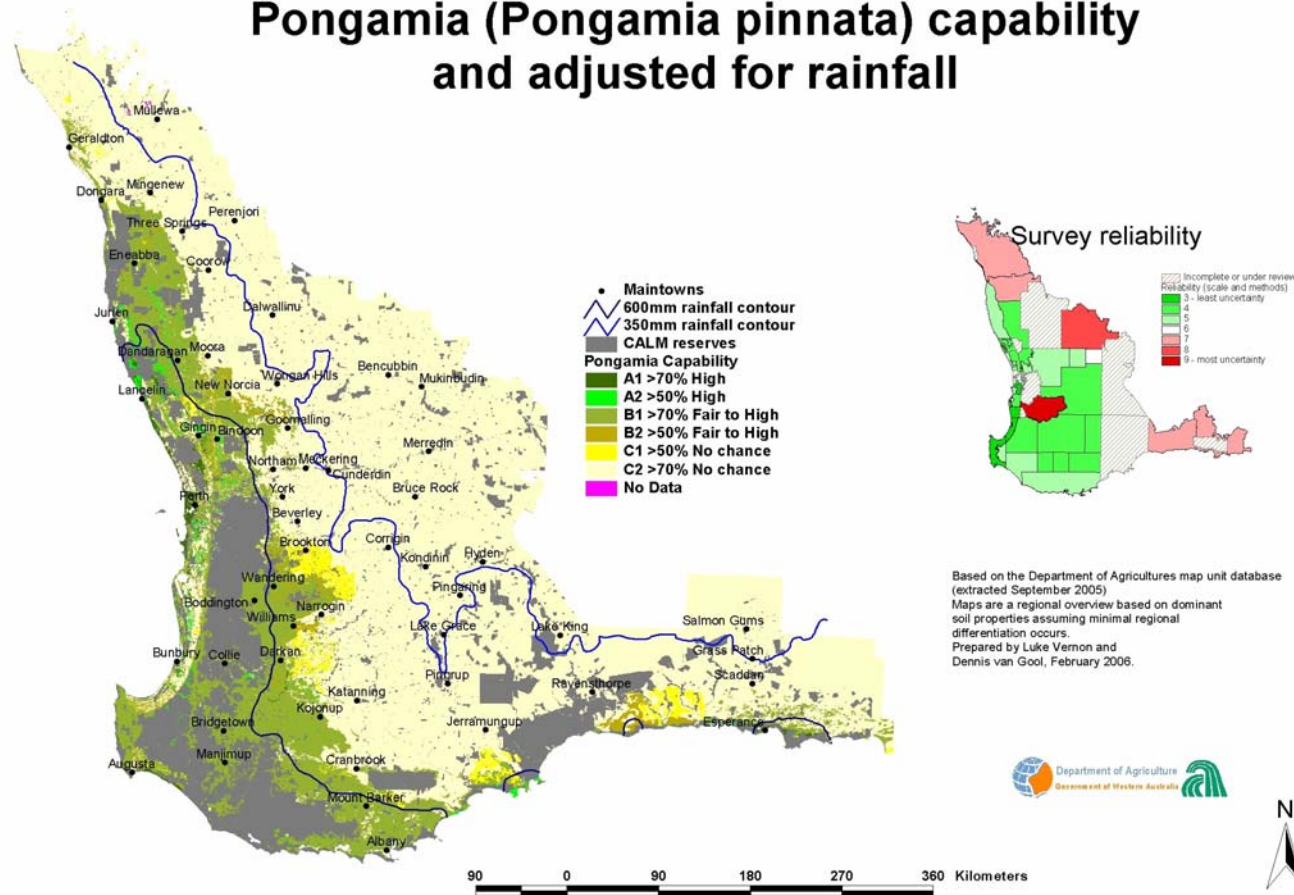


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Biodiesel - Profitable alternatives

Pongamia (*Pongamia pinnata*) capability and adjusted for rainfall





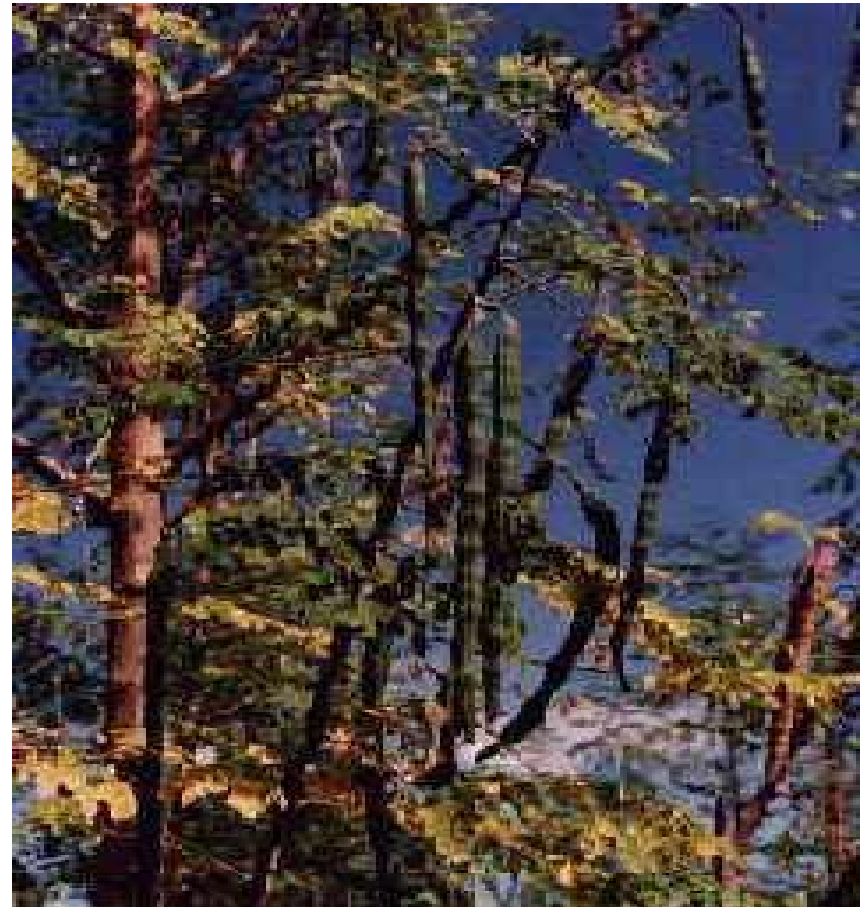
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Biodiesel - Profitable alternatives



Moringa oleifera

- Dry destitute soils
- 0 – 40 deg. C
- 250 – 1000mm
- pH 5 – 8
- Flower & fruit yr round
- 1000/ha, seed or seedling
- Produce 6 – 8months



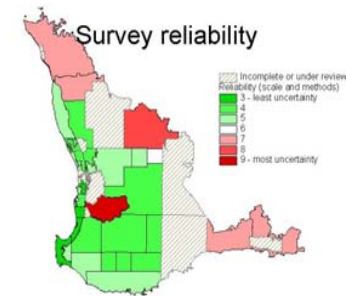
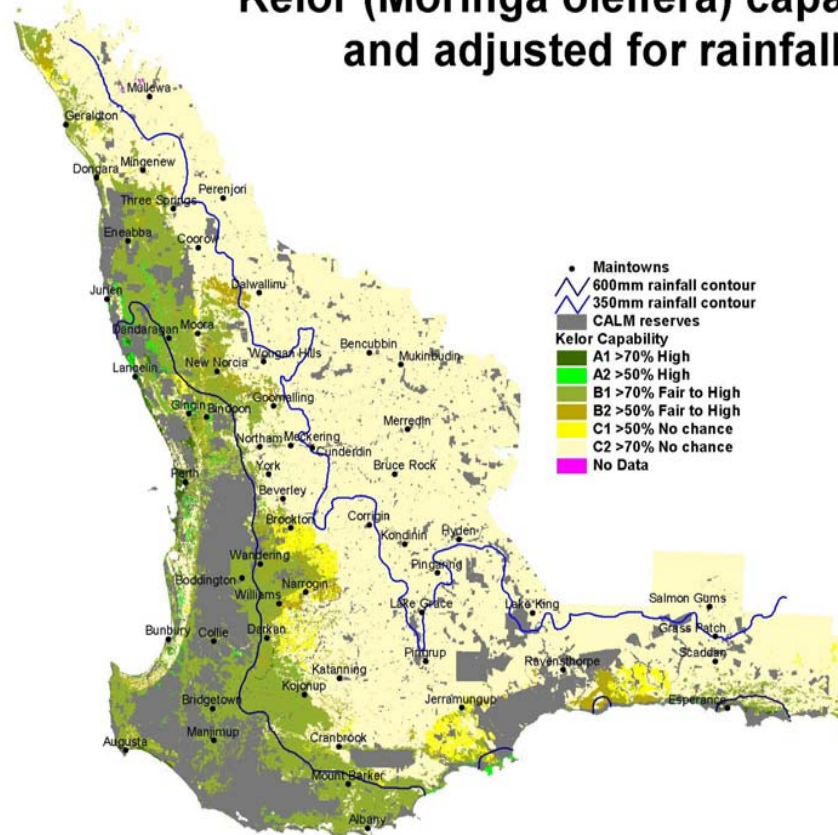


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Biodiesel - Profitable alternatives

Kelor (Moringa oleifera) capability and adjusted for rainfall



Based on the Department of Agriculture's map unit database (extracted September 2005). Maps are a regional overview based on dominant soil properties assuming minimal regional differentiation occurs. Prepared by Luke Vernon and Dennis van Gool, February 2006.



90 0 90 180 270 360 Kilometers

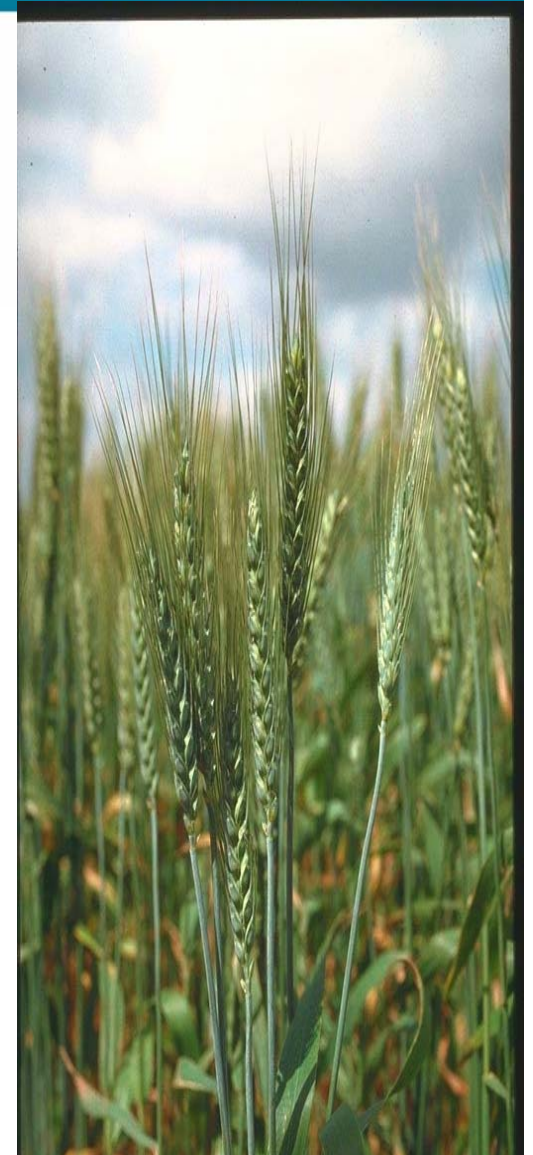


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Ethanol research by the Department

- DAFWA are investigating establishing a new industrial wheat breeding program that is high in starch, low in protein and high yielding
- DAFWA is about to conduct a feasibility study into sugar cane production for Ord River Stage 2





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Biofuels Taskforce

- The Taskforce operational in February 2006. Representatives are from :
 - Labour, Liberal, Nationals and Greens Parties plus
 - Departments of Agriculture, Industry and Resources (DOIR), Health, Planning and Infrastructure (DPI), Office of Energy, Environment, Consumer and Employment Protection (DOCEP), and Minister for Energy, Science and Innovation



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Biofuels Taskforce

The Taskforce is working with Government and industry. It's role is to provide recommendations and strategies on how the State Government can assist with the future development of a biofuels industry in WA. This will include addressing:

- review and address the opportunities and impediments to the development of a biofuels industry in Western Australia;
- increase consumer acceptance and use of biofuels;



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Biofuels Taskforce

- use biofuels as cost-effective alternatives to petrol/diesel, particularly in regional areas; and
- promoting a whole of Government and industry approach to the use of biofuels.

The Taskforce has conducted consultation with industry through:

- Letters to stakeholders
- Ads in newspapers; and
- Interview stakeholders



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Summary

- DAFWA is continuing research into feedstocks for biodiesel & ethanol in WA
- As crude oil prices continue to increase, biofuel production in WA becomes more viability
- The Biofuels Taskforce is currently in the consultation phase with stakeholders
- The Taskforce will be presenting a report by April 2007 with recommendations to the State Government on policies, strategies, initiatives & actions



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Thank you



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Planning our energy future