



New alliance brightens mallee future

A new alliance between the Future Farm Industries CRC (FFI CRC), Virgin Australia, the Renewable Oil Corporation and Dynamotive is set to turn mallees into a sustainable fuel source for the aviation industry.

The agreement between the organisations was announced during July and should provide the impetus needed to expand the mallee industry.

The partnership brings together companies with expertise in growing, harvesting and processing feedstock into aviation fuel to support the development of a full-scale commercial plant in Western Australia. In a world first, the alliance plans to use innovative fast pyrolysis technology developed by Dynamotive to process mallees.

Kevin Goss, CEO of FFI CRC, believes the alliance has the potential to deliver strong markets for tree crops, which is just what is needed by farmers who have planted mallees.

“Our research shows mallees can be an option for wheatbelt farmers in WA.

“We know mallees provide environmental benefits when interplanted with cereal crops – they do all the right things in terms of lowering water tables, preventing salinity, reducing erosion, providing shelter, and providing wildlife habitat,” Kevin said.

“However, for mallee biomass to provide a diversified on-farm income stream it requires new processors entering the market and a sharp reduction in supply chain costs through technological change. The alliance with Virgin Australia, Renewable Oil Corporation



By Jill Griffiths
Future Farm Industries CRC

Virgin Australia CEO John Borghetti (left) and Future Farm Industries CEO Kevin Goss have the mallees in hand. (Photo: Virgin Australia)

and Dynamotive opens up a new industry development path.

According to Virgin Australia CEO John Borghetti, during the past few years Virgin Australia has been working with stakeholders across the industry to research and develop bio-derived renewable fuels that could be used to progressively replace conventional aviation fuels.

“We believe this new project has great potential given the results with the technology and the availability of this unique Australian feedstock,” John said.

Vancouver-based Dynamotive Energy Systems Corporation has invested more than \$100 million over 10 years to develop its carbon-neutral, fast pyrolysis technology.

The technology uses medium temperatures and oxygen-less conditions to turn dry, waste cellulosic biomass into BioOil for power and heat generation. BioOil can be further converted into vehicle fuels and chemicals. The pyrolysis plants also produce biochar, for soil improvement and carbon sequestration.

“We have a great opportunity to develop a sustainable industry in WA capable of producing second generation fuels that do not require food sources and have positive effects for land and water management,” Dynamotive CEO Andrew Kingston said.

Renewable Oil Corporation (ROC), which identified the mallee tree as a promising

biofuel feedstock, is Dynamotive’s Australian partner and develops biofuel projects in Australia. ROC has an exclusive licensing agreement with Dynamotive.

The consortium is currently finalising plans for a demonstration unit that will make biofuels for testing, certification and public trials. The demonstration unit is intended to be operational during 2012, followed by the construction of a commercial-scale plant, which could be operating as early as 2014.

In related research, FFI CRC and Biosystems Engineering are working together on the prototype mallee harvester. The harvester is expected to start large-scale trials in WA later this year.

Kevin Goss is enthusiastic about the potential benefits these partnerships could deliver to the mallee industry.

“Just imagine if this takes off – a complete supply chain from mallees in the ground, through harvesting, to processing and then into transport fuels – Australian mallees fuelling jet engines; a double win for environmental sustainability with airlines running on fuel the production of which actually benefits the environment and farmers. It doesn’t get much better than that,” Kevin said. 🌱

👉 for more information

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