

WOOD WASTE

Waste-into-fuel project off ground in December

WORLD-first technology allowing ethanol to be produced from agricultural industry waste products is being trialled in north-eastern New South Wales in a project hailed as the solution to the 'fuel-versus-food' debate. Ethanol will be made from woody plants which contain lignin and cellulose, such as timber milling residue, cane bagasse (waste from sugar production) and crop stubble, providing not only a transport fuel that is 90% more effective than petrol in reducing greenhouse gases but a significant opportunity for primary production industries to value-add.

The use of the waste or surplus materials to produce fuel will also take the pressure off conflicting demand for grain and cane crops to produce food and fibre.

According to The Land, construction of a pilot lignocellulosic plant at Harwood

Island, near Maclean, has started Processing is due to kick off on December 17.

The operation is being run by Australian biofuel company Ethanol Technologies Ltd, or Ethtec, which has the rights to commercialise a cutting-edge technology developed and proven at the laboratory stage by Australian and US researchers. The process uses hydrolysis to convert the hemicellulose and cellulose components of the fibre to sugars, which already have markets such as bioplastics. The sugar solution is then fermented with the resulting ethanol stream concentrated via distillation. The new technology allows for simultaneous ethanol recovery and liquid waste treatment, significantly reducing the environmental impact of ethanol distilleries.

In the state's southeast, Bombala-based softwood company Willmott IForests, which this year bought a 51% shareholding

in Ethtec for \$2.75 million, is confident the technology will provide big opportunities to add value to traditionally lower value wood products.

Willmott chief executive Marcus Derham said the project had the potential to change the structure and pricing of pulp, chip and mill residue markets across the whole forestry industry.

Ethtec company director Robert Carey said the process would be tested extensively at the Harwood plant next year, and if successful on a commercial scale, would have immediate application world-wide in ethanol distilleries utilising traditional sugar, corn or starch feedstocks.

"This is a world-wide race and if we can win it, the result will be Australian technology being exported on a large scale," Mr Carey said. "The commercialisation process is about ensuring we can get the same economies of scale in the real world as have been achieved



Ethanol is a clean-burning alcohol produced by bacteria that ferment the sugars in maize or sugar. Ethanol is a potential alternative to petrol and about five million vehicles already drive on 'flex-fuel' in the US.

in the laboratory."

There are now more than 300 ethanol distilleries around the world either in operation or in the final stages of construction, with about 50 billion litres of ethanol produced globally.