

# information sheet

## SUSTAINABLE LAND USES

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## Biofuels information sheet

**Please note:** While all care has been taken in the preparation of this information sheet, it is not a substitute for legal advice in individual cases. The content of this information sheet is current as of July 2011.

This information sheet is one of a series on sustainable land uses which have been developed for Local Aboriginal Land Councils (LALCs) by the NSW Aboriginal Land Council (NSWALC). Copies of the information sheet are available from [www.alc.org.au](http://www.alc.org.au) or by calling the NSWALC Policy and Research Unit on (02) 9689 4444.

### What are biofuels?

Biofuels are fuels which have come from non-fossil fuel materials, such as waste, plant and animal matter. They are used as replacements for gasoline and diesel. The three main types of biofuels are biogas, bioethanol and biodiesel.

**Biogas** refers to a gas created by the natural breakdown of organic matter in the absence of oxygen. The gases methane, hydrogen and carbon monoxide can be mixed with oxygen to create a gas mix which can be used as fuel. Australia's **bioethanol** is currently produced from farm products such as wheat and sugar. **Biodiesel** is mainly produced from processed waste, such as used cooking oil and tallow.

### Why biofuel?

Biofuel usage is steadily growing worldwide. The rising costs of oil and the move towards renewable fuels will continue to drive replacement of traditional fuels with biofuels.

Biofuels are sustainable and renewable and are important because transportation is currently dependent on limited fossil fuels (oil and petroleum) for its energy needs.

### How does it work?

The term "feedstock" refers to the starting materials that are used to make biofuels. There are a wide range of potential feedstock crops as described in the *Biofuel farming options* section in this information sheet. To participate in biofuel markets, LALCs can either grow biofuel feedstock on their landholdings or lease their landholdings for someone else to farm. The feedstock

is harvested and can be turned into a biofuel product directly by the grower. However, as the equipment used to turn feedstock into biofuel is expensive, growers usually sell the feedstock to a biofuel manufacturer who will turn it into a biofuel product.

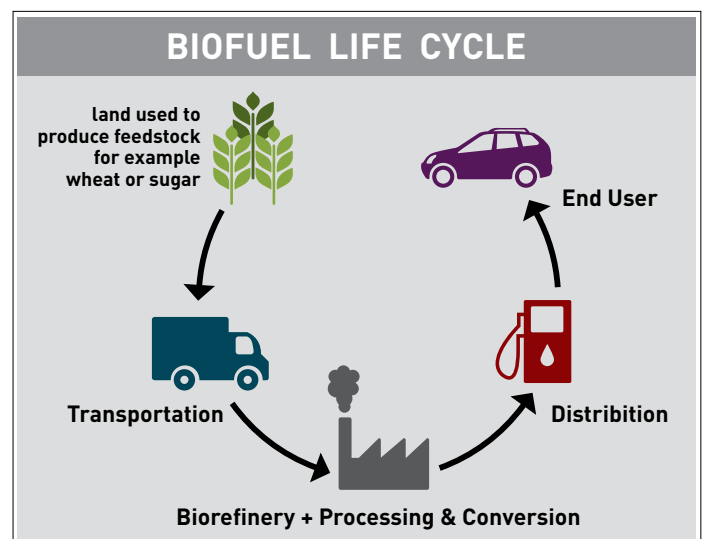
Profits for selling feedstock can vary depending on the crop, current market prices and the transportation costs of delivering the stock to the manufacturer.

### First steps

If a LALC is interested in engaging in the biofuel market the following points are indicators of some of the first steps to undertake:

- Investigate whether their land would make a good site for biofuel feedstock production. A crop scientist or agricultural consultant will be able to assist with this.
- Contact NSWALC for information regarding land dealings policies and procedures.
- Contact the Office of Biofuels at Land and Property Information to discuss your feedstock options.

For more information go to [www.biofuels.nsw.gov.au](http://www.biofuels.nsw.gov.au) or phone 02 9236 7655.



## Biofuel farming options

There are numerous biofuel feedstock options for landowners. Some examples of feedstock are corn, sugarcane and agave for producing ethanol; soybeans and palm for biodiesel and manure and sewage for biogas.

Waste starch, molasses, sugarcane and sorghum are also key feedstocks for ethanol production.

## Future of biofuels

Bioethanol and biodiesel are referred to as “first generation” biofuels. In Australia they are produced from agricultural waste. First generation biofuels in some countries can threaten food security and increase food prices as food crops are used as the base for biofuel production. However, as it is the waste of food crops and animals that is used to produce biofuels in Australia, there is at present no threat to food security.

“Second generation” biofuels use biomass, meaning any plant-derived materials that do not compete with food production such as leaves, tree bark, straw or woodchips. Second generation crops use a wider range of feedstocks than first generation biofuel which significantly reduces the impact of biofuels on the environment. They are generally more energy efficient than first generation biofuels as they release more energy per volume (meaning that a car will go further on less fuel). Additionally, fewer plants can be grown and cultivated on less land to produce the same amount of energy. However, the production costs of second generation biofuels are currently high which means they cannot yet be produced economically on a large scale.

Competition with food producers for crops is so far not a problem in Australia. However, as the use of biofuels increase, there will be a need for second generation biofuels in order to prevent the use of food crops to produce biofuels.

## Benefits and risks

Biofuels are environmentally sustainable, provide an income for those who farm them and reduce Australia's reliance on foreign fuel. An advantage for those who farm feedstock for biofuels is that some plant based fuel can be regrown without replanting. This saves money, time and waste.

Biofuel production in Australia is a growing industry and provides an income to landowners. The NSW Government is ensuring that ethanol-blended petrol is becoming widely available. From 1 July 2012, all regular grade petrol will be 10% ethanol (E10), meaning that there will be a larger demand for bioethanol.

Australia's biofuel production is forecast to rise to 1.519 billion litres by 2015 from 636 million litres in 2011. Most Australian demand is for ethanol.

The key risk to biofuel landowners is uncertainty about demand. The Australian Government promotes alternative fuel use and has many measures in place to support alternative fuels and their use.

A landowner considering farming feedstock's for biofuels should seek advice to determine how production of the feedstock will interact with the *Aboriginal Land Rights Act 1983* (NSW) (**ALRA**) and prevailing land rights. In particular, it is important to determine:

- Whether the production of biofuel feedstock constitutes a land dealing requiring NSWALC approval under Part 2 Division 4 of the ALRA
- Whether changing land use (i.e. to a commercial purpose) will result in a change in any rates, levies or charges payable in relation to the land as described in Part 2 Division 5 of the ALRA, and clause 7 of the *Aboriginal Land Rights Regulation 2002*.

NSWALC can assist with answering these questions.

## mythbusters

**myth:** Biofuels use valuable food resources and divert them away from human consumption.

**fact:** Biofuels in Australia are produced from waste streams and by-products, so there is no current conflict with food production or human consumption.

**myth:** Biofuels do not have any environmental benefits.

**fact:** Biofuels produce significantly less carbon dioxide emissions than oil based fuels over the full life cycle of production and use.

**myth:** Biofuels cause deforestation.

**fact:** In Australia, biofuels are produced from waste streams, so this is not an issue for Australian biofuels. However, if biofuel demand increases and second generation biofuels are not yet put into production, there is a risk that food crops will be used and land could potentially be cleared for biofuel production.

## mythbusters

**myth:** Biofuels are not economically viable without government funding.

**fact:** Biofuels do currently attract a lower excise rate than gasoline and diesel, in the same way as other fuels such as Liquefied Petroleum Gas (LPG) and Liquefied Natural Gas (LNG). However this lower excise is due to the lower energy content of the product and also in order to encourage the public to use other fuels which are better for the environment and reduce our reliance on the imports of oil. Most of this reduced excise is actually passed straight through to the consumer, so biofuel blended fuels are usually cheaper than non-blended options.

**myth:** Biofuels are bad for my health.

**fact:** Biofuels help your vehicle run more efficiently and cleaner, which results in lower emissions of particulates and toxic gases and better air quality.

## Available Grants

Grant	Purpose	Contacts and Information
Cleaner fuels grants scheme	Encourages the manufacture of fuels that have a reduced impact on the environment. (Please note: this grants scheme will be progressively phased out from July 2011- 30 June 2015).	This scheme is funded by the Australian Taxation Office (ATO). Web: <a href="http://www.ato.gov.au">www.ato.gov.au</a> Phone: <b>13 28 66</b>
Small Grants for Small Rural Communities Program	Open to not-for-profit organisations for projects that offer public benefit for small rural and remote locations in Australia, contributing to their development in social welfare, the environment or cultural areas.	Foundation for Rural & Regional Renewal (FRRR). Web: <a href="http://www.frrr.org.au/programsDetail.asp?ProgramID=4">www.frrr.org.au/programsDetail.asp?ProgramID=4</a> Email: <a href="mailto:info@frrr.org.au">info@frrr.org.au</a> Phone: <b>1800 170 020</b>
Community Builders Funding Program	A community strengthening building program. It includes fixed term funding available each year for new projects. Only not-for-profit legal entities and local government authorities which have an ABN may apply.	Department of Family and Community Services. Web: <a href="http://www2.communitybuilders.nsw.gov.au/">www2.communitybuilders.nsw.gov.au/</a> Email: <a href="mailto:askcommunitybuilders@community.nsw.gov.au">askcommunitybuilders@community.nsw.gov.au</a> Phone: <b>1800 277 994</b>
Various grants under the Environmental Trust	Environmental Trust is an independent statutory body that supports exceptional environmental projects that do not receive funds from the usual government sources.	For information on available grants. Web: <a href="http://www.environment.nsw.gov.au/grants/envtrust.htm">www.environment.nsw.gov.au/grants/envtrust.htm</a> Email: <a href="mailto:info@environmentaltrust.nsw.gov.au">info@environmentaltrust.nsw.gov.au</a> Phone: <b>(02) 8837 6093</b>