

## Energy from biomass

### Activity sheet B – Energy from biomass

Most of our energy comes from **non-renewable** fossil fuels (coal, oil and gas). Many people think that we should be using fuel made from **renewable energy** sources like **biomass**. Biomass is the name given to anything made from plant material.

Some plant material can be burned straight away. **Wood** has been used in this way for thousands of years. In some countries it is still the main source of fuel.

Sometimes plant material can be turned into a better fuel. If wood is heated without oxygen it can be turned into **charcoal**. This is a better fuel than wood because it burns slowly. Charcoal is often used in barbecues.

Waste plant material such as straw and manure can be used to make a fuel called **biogas**. This biogas can be used for cooking and heating.

In Brazil sugar cane is used to make **alcohol**. The alcohol can then be used instead of petrol in cars. The left over woody material from the sugar cane, called **bagasse**, makes a good solid fuel. It is used to provide the heat needed to distil the alcohol.

Some fruits, nuts and seeds produce oils. Rapeseed oil, soya bean oil and palm oil are all being used to make **biodiesel**. This can either be used pure or mixed with normal diesel.

Many people see alcohol and biodiesel as the fuels of the future but others are concerned at the environmental cost as tropical forests are cut down to make way for plantations of sugar cane and palm oil.



Palm oil tree and its fruits