

## BIOFUELS

1. Fill in the gaps with words provided. Beware of the spelling or it will be marked as a mistake.

|         |            |           |          |         |
|---------|------------|-----------|----------|---------|
| wood    | waste      | vegetable | plants   | methane |
| heating | fertilizer | fermented | ferment  | engines |
| dung    | distilled  | diesel    | converts | cane    |
| burning |            |           |          |         |

Bioethanol and wood are obtained from growing -----. Biogas is obtained from the recycling of ----- products.

Fuel ----- is used for ----- and cooking.

Biofuels are obtained either from ----- oils for use in ----- engines or from ----- and ----- products of crops such as corn and sugar ----- for use in petrol -----.

Biogas is clean ----- gas produced from animal ----- and other wastes. Dung is allowed to ----- in pits; the methane gas which is given off is stored. A small structure ----- the cow dung into clean ----- gas, with plenty of material left for-----.

2. Classify the following statements into advantages (A) or disadvantages (D) of biofuels:

- A lot of land is needed to grow crops for fuels
- Appropriate scale technology (dung from 25 cows sufficient to generate electricity to power TV and fridge in a household)
- Appropriate to supply power to rural areas far away from power grid.
- Biodiversity loss
- Biofuels can be used in existing combustion engines with minor modifications
- Biofuels CAN be renewable if managed carefully
- Carbon dioxide and other toxic gases produced when burnt
- Carbon neutral
- Cheap and readily available
- Collecting fuel wood is very time consuming

- Competition for water
- Deforestation causes soil erosion
- Easy to use and store
- Potential removal of natural ecosystems to grow crops
- Results in loss of forested areas
- Soil exhaustion from monoculture
- Trees are rarely replanted so supplies run out
- Use of agrochemicals to produce the crops