Biofuels feedstocks

Animation transcript

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Conventional biofuels, made from intensively farmed energy crops like corn, wheat and sugar cane, are available today and used throughout the world.

New technology may permit biofuels to be made from new feedstocks which minimize the impact that biofuels have on food production. In this animation we explain some of the different feedstocks that can be used to produce biofuels.

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Feedstocks

Biofuels can be made from a wide range of organic materials (called feedstocks) for example…

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Sugar cane

Sugar cane has been used to produce bioethanol in Brazil since the 1970s. It is a perennial plant that needs few inputs, such as fertilizers, and has long root systems that can store carbon in the soil. It has a good net GHG balance (up to 90% reduction in GHGs from ethanol produced from sugar cane, compared with conventional gasoline). Sugar cane can be used to make biobutanol and bioethanol.

BP has a joint venture currently producing ethanol from sugar cane in Brazil. [Link to relevant content]

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Corn

Corn is a cereal grain that was domesticated in Central America. Corn can be used as a feedstock to make biobutanol and bioethanol.

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Wheat

Wheat is a grass that is cultivated worldwide. Wheat grain is used to make flour for breads, biscuits, pasta and couscous; and for fermentation to make beer, alcohol or vodka. Wheat can be used as a feedstock to make bioethanol, and it has few sustainability issues. Wheat can also be used to make biobutanol.

BP, ABF and DuPont have a joint venture, called Vivergo Fuels, which is constructing a world-scale bioethanol plant to produce bioethanol from wheat feedstock in the UK. [Link to relevant content]

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Energy grasses

Energy grasses are a new sort of biofuel feedstock that are being developed. New technology means that so-called 'lignocellulosic biofuels' can be produced using the whole of the plant. Perennial energy grasses are a lignocellulosic feedstock. They are fast growing grasses that require few inputs such as fertilizers. They have good GHG reduction potential and long root systems that can store carbon in the soil.

BP has a joint venture with Verenium Corporation in the US to develop and commercialize the technology to make biofuels from energy grasses and other lignocellulosic feedstocks.

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Soya

Soya bean oil is the most widely produced edible oil. Soya is the major source of vegetable oils for manufacturing diesel biofuel in the US.

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Rapeseed

Rapeseed is very widely cultivated throughout the world for the production of animal food, vegetable oil for human consumption and diesel biofuel. It is the preferred feedstock for diesel biofuel production in most of Europe.

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Jatropha

Currently, jatropha grows mostly in the wild or as a boundary for fields. It is a hardy perennial plant that can grow on a wide range of land types. It requires less fertilizer. Its cultivation will help develop the economies of lesser-developed countries where it tends to grow.