

# The benefits of biofuel

RENEWABLE  
ENERGY SOURCE

COST-EFFECTIVE FOR  
CONSUMERS

BIOMASS CAN BE GENERATED IN A  
MATTER OF DAYS, UNLIKE FOSSIL  
FUELS THAT REQUIRE MILLIONS  
OF YEARS TO GENERATE<sup>1</sup>

SAFER IN COMPARISON TO  
THE LARGE AMOUNTS OF  
POLLUTION THAT FOSSIL  
FUELS CREATE

DEPENDENCE ON  
VANISHING FOSSIL  
FUELS IS LESSENERD

Biofuels are derived from biomass, which is renewable organic material such as plants, vegetation or agricultural waste that can be used as a source of fuel. Biomass can be burned directly or processed into biofuels such as ethanol or methane.

## Market opportunities

According to Frost & Sullivan's *North American Biofuels Market: Investment Analysis*, the market earned revenues of \$9.98 billion in 2007 and is expected to reach \$18.52 billion in 2012.<sup>2</sup>

Several factors are influencing a growing interest in biofuels: climate change, rising oil prices, future

oil supplies, and exploration and drilling costs.

In addition, increased blending mandates will stimulate demand and encourage international trade. The United States Environmental Protection Agency, under the Energy Independence and Security Act of 2007, is responsible for regulations ensuring that gasoline sold in the U.S. contains a minimum volume of renewable fuel.

The Renewable Fuel Standard program will increase the volume of renewable fuel required to be blended into gasoline from 9 billion gallons (34 billion litres) in 2008 to 36 billion gallons (136 billion litres) by 2022. The European Union's Biofuels Directive has set a reference value of 5.75% market share for 2010, and 10% by 2020.<sup>3</sup>

## References

<sup>1</sup> <http://www.gogreenstreet.com/biofuel>

<sup>2</sup> Frost and Sullivan

<sup>3</sup> [http://ec.europa.eu/agriculture/biomass/biofuel/com2006\\_34\\_en.pdf](http://ec.europa.eu/agriculture/biomass/biofuel/com2006_34_en.pdf)

## KEY BIOFUEL CROPS

- Canola
- Corn
- Jatropha
- Miscanthus
- Soybeans (soya)
- Sugar beets
- Sugar cane
- Sunflowers
- Sweet sorghum





## FACTORS TO CONSIDER WHEN SELECTING BIOFUEL CROPS

Crop	Seasonal Water Use (mm)	Soil Type	Soil pH	Climate	Growing Season (days)
Canola	400 - 700	well drained, light to medium texture	6.0 - 7.0	temperate	80 - 100
Corn	460 - 700	well drained, light to heavy texture	6.0 - 6.8	temperate to tropical	80 - 140
Jatropha	500 - 1000	well drained, light to heavy texture	6.8 - 8.0	tropical, subtropical	365
Miscanthus	400 - 1200	well drained, light to heavy texture	5.5 - 7.5	temperate, subtropical	270
Soybeans	450 - 700	well drained, light to heavy texture	6.0 - 6.8	temperate to tropical	100 - 130
Sugar Beets	550 - 750	well drained, light to medium texture	6.0 - 8.0	temperate	140 - 200
Sugar Cane	1500 - 2500	well drained, light to heavy texture	5.0 - 8.5	tropical, subtropical	270 - 730
Sunflowers	600 - 1000	well drained, light to heavy texture	6.0 - 8.0	temperate to tropical	70 - 200
Sweet Sorghum	450 - 700	well drained, light to heavy texture	6.0 - 6.8	temperate to tropical	110 - 130



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