



GM Observer

News about farming and GM in the United Kingdom

Welcome to the GM Observer – the newsletter of the Agricultural Biotechnology Council (abc). abc is the umbrella group of the agricultural biotechnology industry in the UK. Our goal is to provide factual information about the agricultural use of GM technology in the UK.

This special edition of the GM Observer focuses on biofuels and describes the important role of GM technology in delivering sustainable agriculture.

The role of biofuels in delivering sustainable agriculture

abc believes that UK farmers should benefit from the opportunities arising from a growing demand for biofuel crops grown, balancing sustainable food security with sustainable fuel security, whilst providing a diverse countryside.

Reducing CO2 emissions

From many perspectives, biofuels present a considerable opportunity to help mitigate against greenhouse gas emissions. Subject to policies supportive of economic and sustainable production, farmers are in a good position to benefit from the growing demand for biofuels in the UK, and this can in turn help increase the competitiveness and sustainability of British agriculture. Several studies have been published on the efficiency of carbon dioxide savings from current biofuels, which all fell within the range 20% to 80% carbon reduction (depending on the crop and conversion process) compared with using conventional petroleum. In the future this may increase to over 90%, thanks to such developments as improved nitrogen use efficiency (reducing the amount of fertiliser needed to produce crops), or through second generation biofuels. Both these examples can be facilitated through genetic modification. Experiences in other world regions also shows that GM technology increases productivity whilst reducing the environmental footprint of agriculture, key prerequisites for sustainable biofuel production

Biofuels for transport

EU figures show that transport fuel accounts for 25% of all energy consumption and greenhouse gas emissions. The only realistic near-term alternatives to fossil fuels for the transport sector are biofuels. abc believes that sufficient production of fuel feedstocks for biofuels could replace up to 5% of current fossil fuel use in the medium term. This can be achieved without a significant increase in land under cultivation, or a significant reduction in food security, as long as farmers have access to the tools they need to maintain and increase productivity.

Efficient and sustainable land use

Techniques within plant science, such as crop protection technology and enhanced farming practices, have a vital role to play in increasing land productivity. Alongside other advances in the scientific study of soil management and crop breeding, GM technology can help develop a productive biofuels sector making more efficient use of the land we farm. In order to preserve our countryside and national parks, farmland in the UK needs to be used productively, and modern crop technologies, including GM, can help raise production without needing to raise inputs. In this way we can meet the ambitious targets set for biofuel adoption without impacting food production. Developments under way in plant biotechnology may also help by enabling farmers to grow specific energy plants in areas prone to drought or flooding.

Increasingly in the future, biofuels will be produced from sources other than starch, sugar and oil crops, such as agricultural waste. Such 'second generation' biofuels will benefit enormously from innovations in plant science and industrial biotechnology.



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