Biotechnology in biofuels-A cleaner technology

Abstract

The issues of global warming and greenhouse gas emissions are increasingly becoming one of the major technological, as well as and also important societal and political challenges. With increasing gap between the energy requirement of the industrialized world and inability to replenish such needs from the limited sources of energy like fossil fuels, ever increasing levels of greenhouse pollution from the combustion of fossil fuels in turn aggravate the perils of global warming and energy crisis. One quarter of the world's CO 2 emissions are created by the transport sector which accounts for some 60% of the world's total oil consumption. Biofuel made from biomass has the potential to reduce greenhouse gas emissions compared to fossil fuels. By using cleaner technology, it is possible to enhance economic growth in industries all over the world while at the same time saving water, energy, raw materials and waste to minimize the environmental footprint. The cleaner technology involves the use of enzymes in an industrial process. Enzymes can be used to make fuels and chemical intermediates in more sustainable, environmentally friendly ways. The development of new enzymes, including through the production and purification of enzymes from genetically modified organisms, is a major driving force in the commercialization of cleaner technology products and processes.