

Castro was right

Apr 4th 2007

From *The Economist* print edition

As a green fuel, ethanol is a good idea, but the sort that America produces is bad

IT IS not often that this newspaper finds itself in agreement with Fidel Castro, Cuba's tottering Communist dictator. But when he roused himself from his sickbed last week to write an article criticising George Bush's unhealthy enthusiasm for ethanol, he had a point. Along with other critics of America's ethanol drive, Mr Castro warned against the "sinister idea of converting food into fuel". America's use of corn (maize) to make ethanol biofuel, which can then be blended with petrol to reduce the country's dependence on foreign oil, has already driven up the price of corn. As more land is used to grow corn rather than other food crops, such as soy, their prices also rise. And since corn is used as animal feed, the price of meat goes up, too. The food supply, in other words, is being diverted to feed America's hungry cars.

Ethanol is not much used in Europe, but it is a fuel additive in America, and a growing number of cars can use either gasoline or ethanol. It accounted for only around 3.5% of American fuel consumption last year, but production is growing by 25% a year. That's because the government both subsidises domestic production and penalises imports. As a result, refineries are popping up like mushrooms all over the midwest, which now sees itself as the Texas of green fuel.

Why is the government so generous? Because ethanol is just about the only alternative-energy initiative that has broad political support. Farmers love it because it provides a new source of subsidy. Hawks love it because it offers the possibility that America may wean itself off Middle Eastern oil. The automotive industry loves it, because it reckons that switching to a green fuel will take the global-warming heat off cars. The oil industry loves it because the use of ethanol as a fuel additive means it is business as usual, at least for the time being. Politicians love it because by subsidising it they can please all those constituencies. Taxpayers seem not to have noticed that they are footing the bill.

Bad, good and best

But corn-based ethanol, the sort produced in America, is neither cheap nor green. It requires almost as much energy to produce (more, say some studies) as it releases when it is burned. And the subsidies on it cost taxpayers, according to the International Institute for Sustainable Development, somewhere between \$5.5 billion and \$7.3 billion a year.

Ethanol made from sugar cane, by contrast, is good. It produces far more energy than is needed to grow it, and Brazil—the main producer of sugar ethanol—has plenty of land available on which to grow sugar without necessarily reducing food production or encroaching on rainforests. Other developing countries with tropical climates, such as India, the Philippines and even Cuba, could prosper by producing sugar ethanol and selling it to rich Americans to fuel their cars.

There is a brighter prospect still out there: cellulosic ethanol. It is made from feedstocks rich in cellulose, such as wood, various grasses and shrubs, and agricultural wastes. Turning it into ethanol requires expensive enzymes, but much research is under way to make the process cheaper. Cellulosic ethanol would be even more energy-efficient to produce than sugar ethanol and would not impinge at all upon food production. Eventually, it might even allow countries with lots of trees and relatively few people, such as Sweden and New Zealand, to grow their own fuel rather than import oil.

That is still some way off. In the meantime, America should bin its silly policy. If it stopped taxing good ethanol and subsidising bad ethanol, the former would flourish, the latter would wither, the world would be greener and the American taxpayer would be richer.

Ethanol is not going to solve the world's energy problems on its own. But its proponents do not claim that it would. Ethanol is just one of a portfolio of new energy technologies that will be needed over the coming years. Good ethanol, that is—not the bad stuff America is so keen on.