

Biofuels Impact on Food Supply II

Editor's Note: In last month's SJ column we looked at the potential and real effects of crop produced biofuels on food prices. In this month's column, we continue to examine those impacts on world food and what the trends may be. The push for ethanol and other biofuels has spawned an industry that depends on billions of dollars of taxpayer subsidies, and not only in the United States. Whatever happens in the oil market, the drive for energy independence, which has been the basic justification for huge investments in and subsidies for ethanol production, has already made the industry dependent on high oil prices.

The enormous volume of corn required by the ethanol industry is sending shock waves through the food system. (The United States accounts for some 40% of the world's total corn production and over half of all corn exports.) In March 2007, corn futures rose to over \$4.38 a bushel, the highest level in ten years. Wheat and rice prices have also surged to decade highs, because even as those grains are increasingly being used as substitutes for corn, farmers are planting more acres with corn and fewer acres with other crops.

Assuming that a vehicle can run on 100% ethanol (some can), Filling the 25-gallon tank of an SUV with pure ethanol requires over 450 pounds of corn – which contains enough calories to feed one person for a year. By putting pressure on global supplies of edible crops, the surge in ethanol production will translate into higher prices for both processed and staple foods around the world.

Proponents of corn-based ethanol argue that acreage and yields can be increased to satisfy the rising demand for ethanol. But U.S. corn yields have been rising by a little less than two percent annually over the last ten years, and even a doubling of those gains could not meet current demand. As more acres are planted with corn, land will have to be pulled from other crops or environmentally fragile areas, such as those protected by the Department of Agriculture's Conservation Reserve Program.

Relation of Oil and Biofuels. Despite a recent decline, many experts expect the price of crude oil to remain high in the long term. Demand for petroleum continues to increase faster than supplies, and new sources of oil are often expensive to exploit or located in politically risky areas. According to the U.S. Energy Information Administration's latest projections, global energy consumption will rise by 71% between 2003 and 2030, with demand from developing countries, notably China and India, surpassing that from members of the Organization for Economic Cooperation and Development

by 2015. The result will be sustained upward pressure on oil prices, which will allow ethanol and biodiesel producers to pay much higher premiums for corn and oilseeds than was conceivable just a few years ago. The higher oil prices go, the higher ethanol prices can go while remaining competitive – and the more ethanol producers can pay for corn.

High oil prices over the past few years have made ethanol naturally competitive, however, the federal government grants ethanol blenders a tax allowance of 51 cents per gallon of ethanol they make, and many states pay out additional subsidies. In 2005, the U.S. government mandated the use of 7.5 billion gallons of biofuels per year by 2012; in early 2007, 37 governors proposed raising that figure to 12 billion gallons by 2010; and last January, President Bush raised it further, to 35 billion gallons by 2017. Six billion gallons of ethanol are needed every year to replace the fuel additive known as MTBE, which is being phased out due to its polluting effects on ground water.

European Actions. The European Commission is using legislative measures and directives to promote biodiesel, produced mainly in Europe, made from rapeseeds and sunflower seeds. In 2005, the European Union produced 890 million gallons of biodiesel, over 80% of the world's total. The EU's Common Agricultural Policy also promotes the production of ethanol from a combination of sugar beets and wheat with direct and indirect subsidies. Brussels aims to have 5.75% of motor fuel consumed in the European Union come from biofuels by 2010 and 10% by 2020.

Other Effects of US Biofuel Production. The use of land to grow corn to feed the ethanol demand is reducing the acreage devoted to other crops. Food processors who use crops such as peas and sweet corn have been forced to pay higher prices to keep their supplies secure – costs that will eventually be passed on to consumers. Rising feed prices are also hitting the livestock and poultry industries. According to Vernon Eidman, a professor emeritus of agribusiness management at the University of Minnesota, higher feed costs have caused returns to fall sharply, especially in the poultry and swine sectors. If returns continue to drop, production will decline, and the prices for chicken, turkey, pork, milk, and eggs will rise. A number of Iowa's pork producers could go out of business in the next few years as they are forced to compete with ethanol plants for corn supplies.



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