

Case 8: Biofuel

In his most recent State of the Union address, President Bush called for a five-fold increase in biofuel production over the next 10 years.¹ As oil continues to reach record-high prices, and the political landscape in the Middle East grows more violent, finding a sustainable, cheaper and cleaner alternative to fossil fuels seems imperative. Biofuels have been touted by some as a way to finally end U.S. dependence on foreign oil, and reduce our carbon foot-print.² However, this naive optimism about the future of biofuels was recently called into question as rising food prices caused riots across the globe.³

The production of corn-based ethanol in the U.S., an industry heavily subsidized by taxpayers' dollars,⁴ has caused the global price of corn and other grain commodities to rise. The devastating effect of inflated food prices on the global poor has led experts to question the wisdom of using food for fuel. Professor McKnight from University of Minnesota illustrates this tension clearly when he says, "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."⁵

The environmental benefits of corn-based ethanol have also been called into question. Growing corn requires massive amounts of fuel, pesticides and fertilizers, and causes erosion and nitrate depletion of the soil – with the nitrates then contaminating coastal waters and decimating sea life⁶ – only to produce a fuel that, compared to gasoline, reduces greenhouse gas emissions by (at most) 26%. Even more worrisome is the fact that as corn becomes a coveted commodity, tropical forests are being clear-cut for its cultivation.⁷

While the U.S. has focused on corn-based biofuels, the rest of the world has been exploring non-food-based alternatives to oil. Cellulose-based biofuels (e.g., waste sugar cane and switchgrass) seem to be the new energy crop, surpassing corn in environmental benefits. It has been estimated that "cellulosic ethanol could reduce greenhouse gas emissions up to 87 percent."⁸ Yet, even if the production of cellulose-based fuels ever becomes commercially viable, it is unclear whether it will be able to satisfy the escalating world demand for fuel.⁹

¹ Mouawad, Jad, "Oil Industry Says Biofuel Push May Hurt at Pump," *The New York Times*, May 24, 2007. <http://www.nytimes.com/2007/05/24/business/24refinery.html?hp>.

² Walsh, Bryan, "Solving the Biofuels vs. Food Problem," *TIME*, Jan. 7, 2008. <http://www.time.com/time/health/article/0,8599,1701221,00.html>.

³ Martin, Andrew. "Food Report Criticizes Biofuel Policies," *The New York Times*, May 30, 2008. Sec. Business / World Business. <http://www.nytimes.com/2008/05/30/business/worldbusiness/30food.html>.

⁴ Karetnikov, Daria, Elizabeth Skane, and Abdel Abellard. "How Far Can Corn Take Us? Evaluating the Impacts of Ethanol: Final Report," *National Center for Smart Growth Research & Education, University of Maryland*. 2007. <http://www.efc.umd.edu/pdf/EthanolFinalReport010208.pdf>.

⁵ Runge, C. Ford and Benjamin Senauer, "How Biofuels Could Starve the Poor," *The New York Times*, May 7, 2007. http://www.nytimes.com/cfr/world/20070501faessay_v86n3_runge_senauer.html?pagewanted=print.

⁶ Potera, Carol, "Corn Ethanol Goal Revives Dead Zone Concerns," *Environmental Health Perspectives*, Volume 116, Number 6, June 2008. <http://www.ehponline.org/docs/2008/116-6/EHP116pa242PDF.PDF>.

⁷ Runge, supra n. 5.

⁸ Clayton, Mark, "The Race for Nonfood Biofuel," *The Christian Science Monitor*, June 4, 2008. <http://features.csmonitor.com/environment/2008/06/04/the-race-for-nonfood-biofuel/>.

⁹ Mouawad, Jad. "The Big Thirst," *The New York Times*, April 20, 2008. Sec. Week in Review. <http://www.nytimes.com/2008/04/20/weekinreview/20mouawad.html?scp=10&sq=oil%20consumption%20more%20cars%20china&st=cse>.