

The Trouble With Corn Ethanol

Corn ethanol is the most prevalent biofuel produced and used in the United States. However, corn ethanol seriously damages the environment by negatively impacting soil, air, water, land, and producing more greenhouse gas emissions than traditional gasoline. Additionally, corn ethanol is increasing the cost of food, harming consumers, and wasting taxpayer money. Corn ethanol is neither environmentally nor socially sustainable, and cannot be a part of any clean energy future.

Corn ethanol damages the environment:

- The National Academy of Sciences — found that using corn ethanol in engine fuel is increasing air pollutants, exacerbating global warming, degrading water sources, and damaging biodiversity.^{1,2,3,4}
- The U.S. grows corn for ethanol in huge industrialized, monoculture farms that require massive amounts of fossil fuels to run farm machinery and chemicals for fertilizer, pesticides, and herbicides. These chemicals leech into the soil, poisoning wildlife, waterways, and drinking water.
- Chemical runoff from corn fields is a primary cause of the “dead zone” in the Gulf of Mexico — an aquatic area the size of Massachusetts so polluted that nothing can survive in it.^{5,6}
- More than 30 years after its first usage, clean up procedures for corn ethanol spills are still not fully developed due to the massive variety of corn ethanol’s polluting byproducts.⁷

Corn ethanol does not reduce reliance on fossil fuels:

- If every kernel of corn produced in the U.S. were devoted to fuel, we would only displace 16 percent of gasoline demand.⁸
- From 2005-2009, taxpayers spent a whopping \$17 billion to subsidize ethanol. In return, they got a reduction in overall oil consumption equal to an unimpressive 1.1 mile-per-gallon increase in overall fuel economy.⁹

Corn ethanol costs consumers money:

- Corn ethanol is more corrosive and prone to fires than gasoline, and needs special infrastructure including gas pumps, storage tanks, and pipelines.^{10,11}

1 Hill, et.al. “Environmental, economic, and energetic costs and benefits for biodiesel and ethanol biofuels,” Proceedings of the National Academy of Sciences, 2006: 103; 111206-111210. From page 221 “EPA found corn-grain ethanol...to have life cycle GHG emissions higher than gasoline...thus, according to the EPA’s own estimates, corn-grain ethanol produced in 2011...is a higher emitter of GHG than gasoline.”

2 Ibid from page 10 of the NAS report “production and use of ethanol as fuel to displace gasoline is likely to increase such air pollutants as particulate matter, ozone, and sulfur dioxides.”

3 Ibid from page 11 of the NAS report “the increase in corn production has contributed to environmental effects on surface and ground water, including hypoxia, harmful algal blooms, and eutrophication. Additional increases in corn production under RFS2 likely will have additional negative environmental effects...”

4 Ibid from page 253 of the NAS report “monocultures, as is the case of growing corn continuously, threaten biodiversity, as a homogeneity of crop species often leads to intensive farming practices through increased fertilizer and pesticide application and tillage and has been shown to lead to a decline in biodiversity (GAO, 2009).”

5 National Agricultural Statistic Service. “Agricultural Chemical Use Database.” http://www.pestmanagement.info/nass/act_dsp_us_age_multiple.cfm

6 Donner, S.D. and C.J. Kucharik. “Corn-based ethanol production compromises goal of reducing nitrogen export by the Mississippi River.” March 18, 2008.

7 <http://www.epa.gov/oem/docs/oil/fss/fss09/kimblebiofuels.pdf>

8 Environmental Working Group <http://www.ewg.org/agmap/2011/01/whose-freedom-is-growth-energy-fueling/>

9 Craig Cox and Andrew Hug. “Driving under the influence: corn ethanol and energy security.” Environmental Working Group. June 2010. <http://www.ewg.org/files/EWG-corn-ethanol-energy-security.pdf>.

10 Brent D. Yacobucci and Randy Schnepf. “Ethanol and Biofuels: Agriculture, Infrastructure, and Market Constraints Related to Expanded Production.” CRS Report for Congress. March 16, 2007. <http://www.nationalaglawcenter.org/assets/crs/RL33928.pdf>

11 Sheila Karpf. “Locking in Corn Ethanol Locks Out Alternatives.” Environmental Working Group. April 7 2011. <http://www.ewg.org/agmag/wp-content/uploads/2011/04/Final-ethanol-infrastructure-report2.pdf>



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The corn ethanol industry and its congressional supporters are currently forcing taxpayers to subsidize this infrastructure through USDA programs.

- Even in new infrastructure, corn ethanol corrodes metals and cracks storage tanks, leading to dangerous leaks.¹² If corn ethanol leeches into the ground, the result will be poisoned water, toxic soil and fire hazards.¹³
- The use of higher ethanol blends in cars and other engines (including boats, chainsaws, and snowmobiles) will void many consumer warranties, leaving it up to consumers to pay for the damage that can occur to their engines, including corroded engine parts, stalling, misfiring or overheating and degradation of emission control systems.¹⁴
- Ethanol is 33 percent less energy efficient than gasoline, and the more corn ethanol in engine fuel, the lower the miles a car will get on a tank of gas. Having corn ethanol in engine fuel means consumers have to fill their tanks up more often to go the same distance.

Corn ethanol increases rates of hunger and poverty:

- Today the U.S. burns 40 percent of its corn for fuel. More corn goes to ethanol than to food or animal feed.¹⁵
- Hunger riots erupted in 30 countries during the 2008 global food crisis when over 100 million people fell into extreme poverty due to rising food prices. The World Bank and others estimated that biofuel policies, which support corn ethanol production, accounted for 30 percent of the price spikes.¹⁶
- If all biofuel targets are met, experts estimate that global food prices could increase by 76 percent by 2020, exposing 600 million additional people to chronic hunger.¹⁷
- Volatile food prices affect poor people's nutrition by causing them to shift to cheaper, lower quality foods, increasing chronic malnutrition.¹⁸

12 Government Accountability Office. "Challenges to the Transportation, Sale, and Use of Intermediate Ethanol Blends." June 2011. <http://www.gao.gov/new.items/d11513.pdf>

13 Patricia Ellis. "New England Interstate Water Pollution Control Commission." December 2010.

14 <http://sensenbrenner.house.gov/News/DocumentSingle.aspx?DocumentID=249952>

15 Bryan Walsh. "Why Biofuels Help Push Up World Food Prices." Time Science. <http://www.time.com/time/health/article/0,8599,2048885,00.html> (14 February 2011).

16 For a table listing out each of the studies in this period and their estimates see: http://www.actionaid.org.uk/doc_lib?meals_per_gallon_final.pdf

17 http://www.actionaid.org.uk/doc_lib?meals_per_gallon_final.pdf

18 <http://business-standard.com/india/news/biofuels-commodity-futures-mkt-threaten-global-food-security/148752/on>