Taxpayer Supports for Corn Ethanol in Federal Legislation

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Since its creation of the domestic market for corn ethanol after the energy crisis of the 1970s, the federal government has nurtured and maintained the ethanol industry with a steady stream of subsidies. Originally sold as a way to achieve energy independence and reduce greenhouse gas emissions, ethanol has been a favorite of many lawmakers: ethanol producers have received favorable treatment under the tax code, tariff protection from foreign competition, and even a government mandate for its use. As a result, taxpayers have spent billions of dollars over the last 30 years subsidizing the production of corn ethanol, while at the same time creating unintended costs for consumers and the environment.

To start, the 2008 farm bill, a massive piece of legislation covering topics ranging from nutrition assistance to broadband internet, provides government subsidies for the now-mature ethanol industry, including corporate giants such as Archer Daniels Midland. The majority of support for corn ethanol in the farm bill comes from the energy title programs like the Rural Energy Assistance Program. Subsidies for corn ethanol also litter the tax code – including tax breaks for biodiesel and blender pumps – in addition to Department of Energy loan guarantees and other subsidies scattered throughout the federal government.

Members of the House and Senate Agriculture Committees have said they would like to see Congress pass a farm bill this year that "by and large" contains similar language to bills passed in the full Senate and House Agriculture Committee last year (but which never became law). If this occurs, corn ethanol would continue to receive handouts through the energy title. The mature corn ethanol industry should no longer receive taxpayer support, whether through infrastructure subsidies for ethanol blender pumps in the tax code or production subsidies in the farm bill's energy title. Given the nation's current fiscal health, these subsidies are more egregious than ever.

Corn Ethanol Supports in the Farm Bill

Realizing that the corn ethanol industry had already received its fair share of federal handouts, House and Senate Agriculture Committees ultimately prohibited corn starch ethanol from qualifying for energy title spending authorized in the 2008 farm bill. Their intention was to allow the next generation of biofuels (advanced fuels made from non-food sources like agricultural residues, wood waste, and perennial grasses) to receive a greater share of grants, loan guarantees, and other subsidies. But even though corn ethanol facilities are prohibited from receiving energy title funding, at least four of its 15 programs allowed nearly 90 million taxpayer dollars to be spent on corn-based biofuels from 2009 to 2012, in addition to potential taxpayer liabilities with the federal backing of conditional loan guarantees in the U.S. Department of Agriculture's (USDA) Biorefinery Assistance Program.

Corn ethanol producers also avoided the restrictions on corn starch ethanol by convincing USDA to add ethanol blender pumps to its list of projects eligible for energy funding in the farm bill,

even though Congress never authorized this controversial use of taxpayer dollars. Recipients can also circumvent energy title program eligibility rules by refining biofuels from corn oil instead of corn starch and producing fuels like butanol and biodiesel instead of ethanol.

In addition to the numerous special-interest supports corn ethanol has received over the years, including tax breaks, an import tariff, and infrastructure subsidies, a federal production mandate called the Renewable Fuel Standard (RFS) also heavily benefits corn ethanol. Thankfully, the tariff and $6 billion-per-year tax credit were forced into retirement at the end of 2011, but the RFS mandate still requires oil and gas companies to blend increasing amounts of ethanol with gasoline each year. The maze of historic subsidies for corn ethanol has allowed the federal government to pick winners and losers, distort energy and agriculture markets, and contributed to expansion and overproduction of ethanol in the industry.

Corn ethanol has exceeded its RFS mandate every year since the mandate originated. With annual ethanol production around 14 billion gallons, most U.S. gasoline is now a mixture of 90 percent gasoline and 10 percent ethanol. Ethanol used in our nation's vehicle fleet is primarily from corn despite requirements that increasing volumes consist of second-generation biofuels like cellulosic ethanol and advanced biofuels derived from non-food feedstocks.

Farm bill energy title programs supporting corn-based biofuels, in addition to other forms of renewable energy, include the following:

Table 1: Corn Ethanol Subsidies in the Farm Bill Energy Title

Program name	Description	Corn-based biofuels projects receiving funding	Funding for corn-based biofuels from 2009 to 2012
Bioenergy Program for Advanced Biofuels	Payments to advanced biofuels facilities to expand annual production	1 corn oil biodiesel facility and several corn ethanol facilities, presumably because some also use milo (in addition to corn) as a feedstock in the refining process.	$53 million (grants and loans)
Biorefinery Assistance Program	Grants and loan guarantees for advanced biofuels and heat and power facilities	SoyMor, a facility using corn and soybean oil for biodiesel production, received a conditional loan guarantee in 2009.	$25 million (conditional loan guarantee)
Repowering Assistance Program	Reimbursements for biorefineries to replace fossil fuel power sources with biomass (like wood chips, municipal solid waste, or perennial grasses)	Two corn ethanol facilities received taxpayer funding to replace natural gas and fossil energy with a biomass boiler and a biogas digester.	$6.9 million (reimbursement payments)
Rural Energy for America Program (REAP)	Grants and loan guarantees for rural energy efficiency and renewable energy projects, including solar, wind, hydropower, geothermal, and biomass	Beginning in 2011, pumps dispensing corn ethanol became eligible for REAP funding.	$2.9 million (grants)

Corn Ethanol Supports in the Federal Tax Code

Some subsidies for corn ethanol are still scattered throughout the federal tax code. Two of the most prominent are listed in the table below. Ten-year cost estimates are derived from the Joint Committee on Taxation.

Table 2: Corn Ethanol Supports in Federal Tax Code		
Tax Credit Name	**Description**	**Total Ten-Year Cost (FY13-22)**
Volumetric Biodiesel Excise Tax Credit and Renewable Biodiesel Tax Credit	The biodiesel production tax credit of $1 per gallon supports eligible feedstocks such as "virgin oils, **esters derived from corn**, soybeans, sunflower seeds, cottonseeds, canola, crambe, rapeseeds, safflowers, flaxseeds, rice bran, mustard seeds, and camelina, and from animal fats."[1]	$16.2 billion
Alternative Fuel Vehicle Refueling Property Credit	Facilities dispensing certain alternative fuels can receive a refueling property credit in the form of a 30% tax break. Eligible facilities include gasoline stations, those installing biodiesel or **85% ethanol (E85) blender pumps**, or repowering sites for electric vehicles. Stations dispensing natural gas, liquefied natural gas (LNG), and liquefied petroleum gas (LPG) are also eligible.[2]	$220 million

Corn Ethanol Supports: Taxpayer and Environmental/Consumer Costs

Federal supports for corn ethanol result in increased economic and environmental costs. Corn ethanol's historic trifecta of federal subsidies, a production mandate, and import tariff, combined with agricultural subsidies that increase as agribusinesses engage in riskier production practices and convert more land to corn, has resulted in higher costs for consumers, taxpayers, and other industries.[3] Ethanol producers compete with other users, including livestock, food manufacturers, industrial users, and exporters, for a limited supply of corn. Today, more than 40 percent of corn production is converted into vehicle fuel.

While ethanol proponents such as the National Corn Growers Association promised several years ago that corn yields would keep up with the additional corn required for ethanol production, they failed to meet expectations. In fact, while corn ethanol production increased nearly eight-fold over the past decade, yields failed to keep up since corn production only increased by 25 percent, mainly due to an increase in corn acreage.[4] States with huge increases in corn acreage (and lower reliance on diversified crop rotations) primarily include those in the lower Mississippi River Basin and dry areas of North Dakota, South Dakota, Nebraska, Oklahoma, Texas, and Montana.[5] For these reasons, corn stocks have dropped to dangerously low levels and some livestock herds are the lowest they've been in decades due to short supplies. And since yields failed to keep up with demand, corn producers have torn up pasture, native grassland, and switched from other crops to plant the most acres to corn in over 75 years.[6] The numerous unintended consequences and public costs of expanded corn ethanol production are listed below.

Taxpayer Costs

- **Federally-Funded Conservation Clean-up Programs:** as agricultural subsidies spur agribusinesses to plant crops on risky, marginally productive lands, federal conservation program funding is often used to clean up the resulting agricultural pollution and attempt to undo the damage that has been caused by misguided federal biofuels supports.

- **Increased Crop Insurance Payments:** taxpayers have seen an increased cost of crop insurance since corn ethanol production has not only contributed to higher crop prices but has also resulted in an expansion of corn and soybean acres. In fact, a recent study by researchers at South Dakota State University found that between 2006 and 2011, 1.3 million acres of grassland were converted to corn and soybeans partially as a result of biofuels mandates and subsidies.[7] Because crop insurance premium subsidies are tied to crop prices, as prices increase, so does the total cost of the highly subsidized federal crop insurance program. In addition, taxpayers are also put on the hook for risky production practices like planting input-intensive crops on land that has never been cropped before because agribusiness can receive subsidies to plant corn on converted grassland and other highly erodible land prone to crop failures. Finally, as the livestock industry's profit margins are squeezed with more corn being diverted to ethanol production, taxpayers are forced to pay for more insurance indemnities for programs such as the Livestock Gross Margin insurance policy.

- **Increased Costs to Federal Dairy Programs:** a new farm bill program proposed in 2012 would create a profit margin guarantee for dairy producers to compensate for high feed costs that they are currently experiencing (partially due to the fact that over 40 percent of the corn crop is used for ethanol production).

- **Taxpayer-Funded Disaster Programs:** similar to crop insurance, when farmers plant corn in risky areas (for instance, poor growing areas in North or South Dakota or dry areas of Nebraska), the cost of disaster programs increases since the probability of crop losses increases.

- **Increased Food Aid and Countries' Import Bills:** higher crop prices due to corn ethanol production increase costs of food aid to needy countries and reduce the amount of food that developing countries can afford with stagnant or decreasing budgets. Corn exports have actually decreased in recent years as more corn is used for ethanol production.[8] Tufts University researchers found that from 2006 to 2011, U.S. ethanol production cost net corn importing countries $11.6 billion in higher corn prices; ActionAid notes that "more than half this cost was borne by developing countries."[9]

- **Higher Nutrition Program Costs:** higher food prices increase the cost of nutrition programs and decreases purchasing power of programs such as the Supplemental Nutrition Assistance Program (SNAP, or food stamps) and the Women, Infants, and Children (WIC) Program.

Environmental/Consumer Costs

- **Environmental and Public Health Costs:** with more and more acres being converted into input-intensive corn and soybean production to meet the RFS and farmers attempting to maximize short-term profits at the expense of long-term soil productivity, fertilizer and chemical runoff has increased, resulting in increased costs for downstream users. Since corn is the largest user of nitrogen fertilizer and pesticides, nearly half of U.S. inputs are applied to corn (46 and 43 percent, respectively).[10] More water pollution has increased water treatment costs for municipalities, resulted in lower returns for fishermen in the Gulf of Mexico (due to the presence of the annual dead zone), and lessened opportunities for fishermen, hunters, and recreational water users to enjoy the benefits of clean water sources and adequate wildlife habitat.

- **Increased Food Prices:** prices of meat, poultry, eggs, and dairy products have increased as greater levels of corn ethanol production contributed to corn prices quadrupling over the past decade. A large percentage of the production costs of these foods can be attributed to corn prices.[11] The Congressional Budget Office (CBO) also found in 2009 that one-fifth of the increase in corn prices between 2007 and 2008 could be attributed to increased corn ethanol production. The International Food Policy Research Institute (IFPRI) agreed, estimating that "40 percent of the rise in corn prices between 2000 and 2007 was due to global ethanol demand."[12]

- **Increase or No Impact on Gas Prices:** both government and academic studies have found that overall, ethanol use has either slightly increased gasoline prices or had no impact on gasoline prices at all despite claims from the ethanol industry that ethanol reduces gasoline prices. This is primarily due to the fact that ethanol has less energy content than gasoline and hence results in lower gas mileage for drivers.[13]

- **Increased Infrastructure Costs of Higher Blends of Ethanol:** as the country's fueling infrastructure struggles to keep up with the shift to higher blends of ethanol (such as the Environmental Protection Agency's recent approval of 15 percent ethanol, or E15), consumer costs increase, including damage to vehicles, cost of replacing blender pumps and storage tanks at fueling stations, and replacement of snowblowers, chainsaws, outboard motors, and other small equipment that is not compatible with higher blends of ethanol.[14]

Conclusion

It's time the mature corn ethanol industry survived on its own two feet without taxpayer support. After more than 30 years of federal backing, corn ethanol subsidies scattered throughout the federal tax code and farm bill energy title should be eliminated once and for all. Economic, environmental, and public health costs would also decline if unintended consequences of ethanol production were ended, benefiting drivers, consumers, and the general public.

For more information, contact Taxpayers for Common Sense at 202-546-8500.

[1] http://www.gpo.gov/fdsys/pkg/BILLS-109hr4756ih/html/BILLS-109hr4756ih.htm
[2] http://www.law.cornell.edu/uscode/text/26/30C
[3] http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib79.aspx
[4] http://usda.mannlib.cornell.edu/MannUsda/viewDocumentInfo.do?documentID=1194
[5] http://www.ers.usda.gov/publications/eib-economic-information-bulletin/eib79.aspx
[6] http://www.nass.usda.gov/Newsroom/2012/06_29_2012.asp
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[8] http://www.actionaidusa.org/press/us-ethanol-policy-costs-mexico-250-500-million-each-year-fuels-hunger, http://www.purdue.edu/newsroom/releases/2012/Q4/u.s.-unlikely-to-dominate-future-corn-exports,-economist-says.html
[9] http://www.ase.tufts.edu/gdae/Pubs/rp/ActionAid_Fueling_Food_Crisis.pdf
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