

## Setting the Ethanol Record Straight

The Midwest is proud of its leadership in renewable fuel production and recognizes the benefits the biofuels industry plays in our individual states and across the country. The MGA has long prioritized and advocated for the expanded use of biofuels and our region has been a global leader in its development. Unfortunately, many myths about biofuels persist, particularly regarding ethanol. Midwestern governors hope to dispel many of these myths about this vital, job-creating industry.

### **MYTH: Ethanol is to blame for increasing food prices**

**FACT:** Higher food prices are the result of many factors, most notably the rising production and transportation costs, which is due to increased oil prices. The blame placed on ethanol for higher food prices is misguided.

The U.S. Department of Agriculture (USDA) cites that only about 16 cents on the retail food dollar comes from the farm value. Therefore, 84 cents of the retail food dollar accounts for transportation, processing, packaging, labor and other costs after leaving the farm. In 2009, the Congressional Budget Office (CBO) found that the rise in corn prices due to the expanded production of ethanol only accounted for 0.5-0.8 percentage points of the 5.1 percent increase in U.S. food prices<sup>i</sup>. The Farm Foundation found that not only is the increase in corn prices begin driven by high oil prices, but that price volatility in commodity markets is increasing due to increased trading volume.

A policy paper released in 2010 by the World Bank concluded that the impact of biofuels on food prices is less significant than previous stated by the organization.

### **Myth: Ethanol is costly to the American taxpayer**

**FACT:** Even with federal subsidies, the use of ethanol generates a net increase in revenue for the U.S. economy. In 2010 alone, the Renewable Fuels Association (RFA) cites that the ethanol industry added revenue of \$7 billion to the U.S. Treasury and \$4 billion to state and local governments. While the blending of ethanol into gasoline accounted for an estimated \$6 billion in Federal tax incentives, the use of ethanol actually generates a net-increase in revenue for the U.S. economy.

Consumers also realize savings at the pump. Blending ethanol into gasoline **LOWERS** the cost of ethanol-blended gasoline, even after adjusting for the lower energy content of ethanol and eliminating the impact of subsidies. A 2008 study by the National Renewable Energy Laboratory (NREL) found that ethanol blending, at a 10 percent level, lowered gas prices by 17 cents per gallon, and 14 cents--without ethanol subsidies<sup>ii</sup>. A 2011 study by the Center for Agricultural and Rural Development found that from 2000 to 2010, ethanol reduced gasoline prices nationwide by \$0.25 and by \$0.39 in the Midwest<sup>iii</sup>. In 2010 alone, ethanol reduced gasoline prices by \$0.89 nationwide and \$1.37 in the Midwest due to higher gasoline prices.

### **Myth: The ethanol industry only benefits large-scale farming operations**

**FACT:** Ethanol is a domestic energy industry with jobs that cannot be shipped overseas. This has resulted in revitalizing rural economies. In its 2011 ethanol industry outlook, the RFA cites domestic ethanol production for supporting 400,000 jobs across the country in 2010. Nearly 70,400 of these jobs were directly involved with the production, delivery and services to producers of ethanol. A 2010 survey by *Ethanol Producer Magazine* cited in the RFA's report showed that these were high paying jobs with 99 percent of the employees receiving benefits, compared to a national average of only 71 percent<sup>iv</sup>.

Ethanol production generates the protein-rich distillers grains and gluten feed—both of which serve as feed for livestock. Fed to livestock, these co-products result in high quality meat products for distribution domestically and abroad. In addition, this serves as a value-added income stream for farmers and producers.

These feeds are also helping to fuel the export growth of agricultural products in the Midwest. According to the RFA, the export of distillers grains exceeded 8 million metric tons in 2010. These exports were up more than 40 percent from 2009 and nearly doubled the exports of distillers grains in 2008. This has helped to reduce the trade imbalance between the U.S. and China. The RFA cited that one out of every four tons of distillers grains were exported to China.

### **Myth: Using ethanol is tantamount to burning food for human consumption**

**FACT:** When most people think of corn, they think of sweet corn, the type that is eaten right off the cob, at the fair or purchased at a supermarket. But sweet corn only makes up about one percent of total U.S. corn production according to the Economic Research Service (ERS) at the USDA. Field corn, on the other hand, is the predominate type of corn crop grown in the United States. Field corn, which is also used as feed for livestock, is the feedstock that is typically used to produce the 15 billion gallons of ethanol.

Furthermore, even the field corn processed during ethanol production has byproducts, such as distillers grains, which serves as a crucial feed for livestock

**Myth: Cellulosic ethanol is too underdeveloped to contribute to U.S. energy independence**

**FACT:** The U.S. Department of Energy (DOE) counts six commercial scale and seven demonstration scale cellulosic biofuel projects<sup>v</sup> proposed for the U.S., as well as many more pilot scale projects. Most of these projects are ready to be built within the next few years. Inbicon is already operating a 1.5 million gallon per year cellulosic ethanol plant in Denmark using wheat straw.

The world's largest ethanol producer, POET, is already producing about 20,000 gallons of cellulosic ethanol annually at a pilot plant in Scotland, South Dakota. In addition, a new ethanol plant is scheduled to begin operations in 2012 near Emmetsburg, Iowa. This plant, named Project Liberty, will be POET's first commercial-scale cellulosic ethanol plant. Project Liberty will have the capacity to produce 25 million gallons of cellulosic ethanol a year. Despite the growth in cellulosic ethanol and progress towards commercial-scale availability, conventional ethanol will continue to be an essential part of our nation's transportation and energy policies. Stifling the growth of conventional ethanol undermines the goal of making cellulosic ethanol a full-commercial reality. Unjustified criticism of conventional efforts also stymies the development of advanced biofuels, such as algae.

The *Energy Independence and Security Act of 2007* (EISA) requires the use of 36 billion gallons of renewable transportation fuels by 2022. Of that, conventional ethanol is capped at 15 billion gallons and cellulosic ethanol must account for 16 billion gallons. These two types of fuel are both necessary to meet the goals of EISA and reduce consumption of overseas oil.

**Myth: Ethanol is harmful to the environment**

**FACT:** According to analysis by the U.S. Environmental Protection Agency (EPA), increased use of renewable fuels, like ethanol, will reduce traditional car pollutants, such as benzene and carbon monoxide. The DOE has found that corn ethanol has been shown to decrease life-cycle greenhouse gas emissions by 19 percent, while cellulosic ethanol reduces emissions by 86 percent. Ethanol is non-toxic, water soluble and biodegradable. In addition, ethanol poses no threat of contamination or degradation of surface or ground water.

**Myth: It takes more energy to produce ethanol than it contributes as a fuel**

**FACT:** Ethanol has a positive energy balance. In June 2010, the USDA updated its 2008 analysis and determined that the net energy balance of ethanol production is 2.3 to 1; meaning that for every 100 BTUs of energy used to make ethanol, 230 BTUs of ethanol is produced. The USDA findings have been validated by additional studies conducted by the University of Nebraska and Argonne National Laboratory.

Over the last 20 years, the amount of energy needed to produce ethanol from corn has significantly decreased because of improved farming techniques, more efficient use of fertilizers and pesticides, higher-yielding crops and more energy efficient conversion technology. As ethanol production continues to become more efficient, the net energy balance improves even more.

**Myth: Using ethanol in an automobile harms engine performance**

**FACT:** All automobile warranties allow for the use of ethanol blends of up to 10 percent (E-10 unleaded). In fact, many auto manufacturers recommend the use of clean, renewable fuels such as E-10 unleaded because it prevents build-up of olefins in fuel injectors, thus keeping the fuel system cleaner. Cars built since the 1970s are fully compatible with E-10 unleaded<sup>vi</sup>. Ethanol burns cleaner and cooler in engines, which helps the performance level of the engine and can extend the life of the engine. Using ethanol also adds oxygen to the fuel, resulting in more complete fuel combustion and reducing emissions<sup>vii</sup>.

In its testing last year, the EPA found that E-15 (15 percent ethanol) is safe for engines in automobiles built in the 2001 and newer model years.

Flex-fuel vehicles designed to run on higher ethanol blends (up to E85 or 85 percent ethanol) do experience reduced miles per gallon, but have a higher octane rating that can boost horsepower.

<sup>i</sup><http://www.cbo.gov/ftpdocs/100xx/doc10057/04-08-Ethanol.pdf>

<sup>ii</sup><http://nrel.gov/analysis/pdfs/44517.pdf>

<sup>iii</sup><http://www.card.iastate.edu/publications/dbs/pdffiles/11wp523.pdf>

<sup>iv</sup><http://www.ethanolrfa.org/pages/annual-industry-outlook>

<sup>v</sup>[http://www1.eere.energy.gov/biomass/integrated\\_biorefineries.html](http://www1.eere.energy.gov/biomass/integrated_biorefineries.html)

<sup>vi</sup><http://www.ncga.com/killing-myths-ethanol>

<sup>vii</sup><http://www.ethanolrfa.org/pages/E15;/pages/ethanol-facts-environment>

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