

# ENERGY MATTERS

## Ethanol: Key To U.S. Energy Independence

(NAPSA)—Since its inception, the ethanol industry has had a profoundly positive impact on the U.S. economy. Ethanol is helping America reduce its dependence on foreign oil, lowering prices at the pump, improving the environment with lower emissions, and growing the economy with jobs that can't be outsourced.

### Ethanol's Advantages

In 2013, ethanol production contributed more than \$44 billion to the Gross Domestic Product and generated more than \$4.5 billion in federal tax revenues<sup>1</sup>. And in 2013 alone, the ethanol industry created and supported nearly 400,000 new jobs across the country<sup>2</sup>. Contributing to food production, as well, ethanol supports the livestock industry by producing dried distiller's grains, or DDGs—a high-protein livestock feed and ethanol by-product. Every 56-pound bushel of corn processed by a dry mill ethanol plant generates 2.8 gallons of ethanol and approximately 17.5 pounds of animal feed.

Ethanol is making a difference at the gas pump, too, representing nearly 10 percent of America's transportation fuel, according to the U.S. Department of Energy, and saving American consumers \$100 billion per year. In fact, a University of Wisconsin/Iowa State University study found that, in 2011, ethanol saved consumers an average of \$1.09 per gallon<sup>3</sup>.

And E15—a gasoline blend containing 15 percent ethanol—is finding particular success in the nation's heartland. E15 can be used by nearly two-thirds of light-duty vehicles and could replace more than 80 percent of the unleaded fuel sold, further extending the benefits of this home-grown fuel<sup>4</sup>. According to Growth Energy, more than 80 percent of the cars on the road today—those manufactured since 2001—are eligible to use E15. And there are more than 16 million flex-fuel vehicles in the U.S., with more on the way. This demonstrates that there is a market ready for a less expensive, higher-octane, more environmentally friendly alternative fuel. Clearly, we have the vehicles capable of using blends higher than E10, but consumers need greater access to stations capable of providing it—and the petroleum marketing industry's support to make that access a reality.



**The U.S. Department of Energy estimates for every billion gallons of ethanol produced, 10,000 to 20,000 jobs are added to our domestic economy.**

Enogen<sup>®</sup> trait technology, available only from Syngenta, is the industry's only corn trait bioengineered specifically to enhance ethanol production. Enogen corn creates a win-win-win situation by adding value for ethanol plants, corn growers and rural communities. Last year, as part of its Good Growth Plan, Syngenta announced six commitments to address the global food security challenge. The Good Growth Plan has specific, ambitious and measurable targets which focus on boosting resource efficiency, rejuvenating ecosystems and strengthening rural communities. Enogen is just one example of how Syngenta is bringing its Good Growth Plan to life.

### How it Helps

By incorporating Enogen grain into its existing production process, an ethanol plant can enhance its production efficiency and decrease costs associated with natural gas, electricity, water and chemical usage. Using Enogen trait technology, ethanol producers can circulate the money they previously used to buy liquid alpha amylase enzyme, a key component of ethanol production, to local farmers instead. This promotes the growth and stability of rural communities through an energy source that is helping to make America more energy independent.

And it doesn't stop there. First-generation biofuels, made from sugars and vegetable oils, have become the foundation for the development of advanced biofuels from a broader range of feedstocks. Ethanol, whether from corn or from other biomass sources, is a fuel for today and tomorrow. Supporting both food and fuel production, ethanol is making a significant contribution to the U.S. economy, helping to drive down gasoline prices for consumers and reduce carbon emissions for a cleaner environment.