

Sustainability Talking Points

April 2008

- U.S. Biodiesel Industry Supports Sustainable Practices
 - The U.S. biodiesel industry takes the sustainable production of biodiesel feedstocks very seriously; it supports sustainable practices and is committed to making biodiesel from feedstocks produced in a sustainable way.
 - U.S. manufacturers are producing a sustainable fuel that is good for the environment, and opposes the use of non-sustainable agriculture practices worldwide.
 - The industry's Sustainability Task Force, comprised of members from the various sectors of the industry and country, is working to ensure that the U.S. biodiesel industry continues to protect the environment, while producing jobs and reducing dependence on foreign oil.

- U.S. Biodiesel Industry is Producing a Sustainable Fuel That is Good for the Environment
 - Sustainability can be defined as doing things efficiently to preserve resources and minimize environmental impacts, which describes biodiesel produced in the U.S.
 - Biodiesel also has a significant positive energy balance. A 2007 update to the USDA/DOE study found that for every unit of fossil energy it takes to make biodiesel, 3.5 units of energy are gained.
 - In the United States, more than 80% of estimated 2007 biodiesel production came from domestic soybean oil. A growing amount of biodiesel produced in the U.S. is also being made from other feedstocks such as recycled cooking oil, fats, and vegetable oils from other oilseed crops.
 - The increased demand for biodiesel is stimulating research and investment in developing new feedstocks such as algae, camelina, jatropha and arid land crops. The result is that we will see additional feedstock volumes coming from marginal lands and utilizing innovative technologies.
 - The USDA reports that U.S. acreage for crop production has not increased since 1959. Major land use changes in the United States that would endanger environmentally sensitive lands are not

expected due to biofuels. In fact, there are very solid federal and state laws in place to help ensure these lands remain undisturbed.

- Crop production in the U.S. is trending significantly toward utilizing more conservation practices. According to the Conservation Technology Information Center, conservation tillage practices—including no-till farming—has increased dramatically both in terms of percentage and actual acreage since 1990.
 - The United Nations Food and Agriculture Organization (FAO) has calculated that of the land that could be used for agriculture today, only 370 million acres of the 10.4 billion acres are used, and of that, only 1% of that area is used for biofuels, which includes ethanol.
 - According to U.S. Census data, the country currently has the equivalent of more than 400 million gallons of soybean oil sitting in inventory. The 2009 RFS goal is the use of 500 million gallons of biomass-based diesel, which includes biodiesel. Soybean oil only represents half of the domestic raw materials available for biodiesel production in the United States.
- A U.S. Department of Agriculture (USDA) and Department of Energy (DOE) study has already shown soy-based biodiesel has a 78 percent carbon dioxide reduction. This study takes into account everything from planting the soybeans to delivering biodiesel to the pump.
 - Furthermore, for every gallon of B100 that is consumed, we are reducing Greenhouse Gas Emissions by 16.12 pounds!
 - A fleet that uses 1,000 gallons of B100 per year generates CO₂ emission reductions equivalent to removing 1.4 cars from our roadways. These numbers become even more extraordinary when you look at the overall benefit on a national scope both in terms of tonnage of CO₂ reductions and vehicle equivalents.
 - In 2007 alone, biodiesel's contribution to reducing greenhouse gas emissions was equal to removing 700,000 passenger vehicles from America's roadways, and decreasing CO₂ by 8.06 billion pounds.
 - According to the National Renewable Energy Laboratory (NREL) in Golden, Colorado (March 2006), current domestic feedstocks for biodiesel totaled nearly 2.0 billion gallons (including greases, animal fats, and vegetable oils). NREL anticipates the natural growth and expansion of existing feedstocks (soy, canola, and sunflowers) will expand feedstock supplies for an additional 1.8 billion gallons by 2016.
 - Biodiesel's Additional Public Health and Energy Security Benefits are Substantial and Well-Documented.

- Reduction in Regulated Emissions including PM, CO, HC. Toxicity of exhaust is less than conventional diesel.
 - Biodiesel has virtually no sulfur and is naturally high in oxygen, cetane, and lubricity, which makes it burn cleaner with less engine wear.
- Biodiesel's multiple environmental, public health, and energy security benefits are well-documented. Many of the claims currently being leveled against biofuels are in no way conclusive and significant research must be done in this area before any definitive conclusions can be drawn.
 - Concerns raised involving indirect impacts of biofuel production are a new area of research with almost no established, peer-reviewed models for use.
 - There are limited data points; worst-case scenarios are asserted; transparency into the supporting information for claims made is limited; and there are questions relating to the accuracy of calculations used as the basis for determining certain indirect impacts.
- Conclusion:
 - U.S. biodiesel manufacturers are producing a sustainable fuel that is good for the environment. Significant, credible research bears this out.
 - Sustainable production practices for biofuels are important and the U.S. biodiesel industry supports sustainable practices and is proactively engaged in this area.
 - Conclusions are being made against biodiesel that are based on limited data points. As a result, these findings should in no way be characterized as a definitive or conclusive description of biodiesel's carbon footprint. In order to more conclusively claim a negative carbon profile of biofuels because of indirect impacts, considerably more research and work must be done, and agreement reached, involving not only biofuels but also indirect impacts associated with conventional fuels as the basis for comparison.