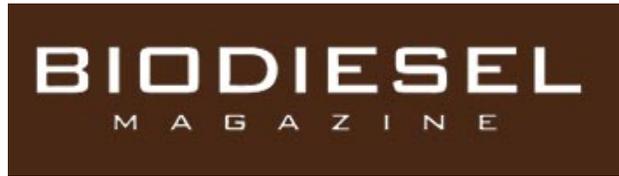


A Critical Assessment of Biodiesel Feedstocks

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While biodiesel is being touted as part of the solution to US energy independence and a way to slow global climate change by curbing greenhouse gas emissions, a scientific debate has arisen concerning the true sustainability of biodiesel as compared to conventional petroleum fuel in regard to climate change. Factors such as land use and net carbon emissions are being analyzed, yet important details have often been left out of recent sensationalist media reports. The media are oversimplifying complicated issues surrounding very different types of biodiesel.

Not all biodiesel is created equal, and some types are more sustainable than others. While many factors affect biodiesel's sustainability, the choice of feedstock is the most crucial. Each feedstock has its own unique ecological footprint and many factors contribute to its sustainability.

The current debate is centered on the virgin feedstocks that currently dominate the biofuels industry. Biodiesel from virgin feedstocks such as soy and palm oil are being seriously reviewed for their long-term environmental impact. Biodiesel made from recycled resources, such as waste cooking oil, is extremely sustainable and far better for the planet than petroleum and even some other types of biofuels.

Blue Ridge Biofuels in Asheville, NC, is a sustainable biodiesel company committed to making the most sustainable choices available in our biodiesel production. The most important of these choices is the feedstock. Blue Ridge Biofuels was founded on the "waste fryer oil-to-biodiesel" production model. Our goal has been to produce fuel from sustainable, local sources and to buy recycled oils as long they are obtainable when we need to supplement our own supply. Blue Ridge Biofuels is unique in that it is vertically integrated in all of the aspects of biodiesel feedstock collection, production and distribution. We have long believed that having control over the other aspects of the fuel business is integral to a financially viable and sustainable business model.

Feedstocks are not the only aspect to consider when looking at biofuels and sustainability. Energy inputs for processing are often fossil energy sources and thus impact a facility's sustainability index. Most biodiesel producers use methanol derived from natural gas, which is a fossil fuel source contributing to net carbon dioxide emissions and global warming. Blue Ridge Biofuels has installed a special boiler that allows us to cleanly burn our glycerin or waste oils to generate heat for our biodiesel production.

Critical examination of all these processes must occur if we are to truly produce and use fuels that are renewable, sustainable and green.

Soybeans and other common feedstocks are currently available "gateway" feedstocks and will ultimately open the door for new markets, research, development, and the commercialization of smarter and more sustainable feedstocks. In the case of biodiesel, it appears that algae could be the leading contender for large-scale production and sustainability.

Early research indicates that algae could grow up to 500 times more oil feedstock annually for biodiesel production than oil derived from soybeans on a per acre basis. Algae systems can also be used to treat domestic and industrial waste water streams found in every city across the United States.

Just as energy will have to come from diverse sources in the future, so should biodiesel feedstocks, and a diverse portfolio of agricultural products for both fuel and other resources is a plausible approach. It is likely that all feedstocks will find their niche in the biofuels industry as long as they are balanced in providing value in the form of other products.

Brian Winslett is a founding partner of Blue Ridge Biofuels. Reach him at (828) 253-1034. Melita Kyriakou contributed to this article.