



Vegetable Oil And Biodiesel: No, They're Not The Same

This is a source of confusion for many new to the world of alternative fuels. Many people are mistaken and think the two are interchangeable. Not so. Following is a summary of some of the key differences between the two.

What is biodiesel?

Biodiesel is a domestic, renewable fuel for diesel engines derived from natural oils like soybean oil, and that meets the specifications of ASTM D 6751. Biodiesel can be used in any concentration with petroleum based diesel fuel in existing diesel engines with little or no modification. **Biodiesel is not the same thing as raw vegetable oil.** A chemical process that removes the glycerin from the oil produces Biodiesel.¹

Isn't special machinery needed to burn biodiesel?

No. Biodiesel can run in any diesel engine with little or no modification. Rudolf Diesel designed his engines to run on plant-based oils.

What about vegetable oil? Does it require a special engine?

While some alternative fuel enthusiasts claim that vegetable oil can run in diesel engines with no modifications, it's not recommended. PrairieFire Biofuels of Madison specializes in converting diesel vehicle engines to run on vegetable oil. Recently, PrairieFire Biofuels converted a truck from Madison's fleet to run on vegetable oil. INOV8 International of LaCrosse specializes in creating cutting-edge heaters and boilers that run on vegetable oil and other fuels.

What is the difference in cost?

The weekend of May 19, 2007, PrairieFire Biofuels of Madison was selling its B100 (that's 100% biodiesel with no petroleum additives) to its members for \$3.28 per gallon. Many businesses have reported saving thousands of dollars in fuel costs each year when using vegetable oil to heat their buildings and fuel their boilers.

How will the use of vegetable oil and biodiesel affect global warming?

The percentage of harmful pollutants is greatly reduced when using engines fueled by biodiesel or vegetable oil. The use of biodiesel is the best greenhouse gas mitigation strategy for today's medium- and heavy-duty vehicles.²

How Much Energy Does It Take To Produce Biodiesel versus recycling waste vegetable oil?

Both are preferable to refining fossil fuels. According to a comparative life-cycle study by the US Department of Energy's National Renewable Energy Laboratory, biodiesel requires only 0.31 units of fossil energy to make 1 unit of fuel. By contrast, it takes 1.2 units of fossil resources to produce 1 unit of petroleum diesel.³ Recycling vegetable oil requires a minimum of electricity – nothing more.

¹ National Biodiesel Board – www.biodiesel.org

² Ibid

³ Journey To Forever – www.journeytoforever.org