



Figure 1: As seen in the graph, a higher biodiesel blend results in a lower emission of pollutants. Nitrogen oxides are emitted slightly more with increased biodiesel blends, with a 3-4% increase in B20.

As of 2010, new engines manufactured in the United States must meet emission standards comparable to biodiesel emissions, whether using diesel or biodiesel as fuel. Therefore, the reductions in pollutant emissions attributed to biodiesel only apply to engines manufactured before 2010.⁴

However, the use of biodiesel will still reduce carbon dioxide emissions. Although there is no difference in exhaust emissions between biodiesel and diesel, the decrease in carbon dioxide emissions of biodiesel is attributed to the consumption of carbon dioxide by biodiesel feedstock, such as soybeans and rapeseeds. According to the US Department of Energy, B100 reduces carbon dioxide emissions by 75% compared to petroleum diesel while B20 reduces emissions by 15%.⁵

Carbon dioxide and air quality emission reductions are roughly proportional to the biodiesel blend.⁶ For example, B20 has about 20% of the reduction in emissions as B100.

Safety

Biodiesel is nontoxic and less combustible.⁷ If the biodiesel is split during transport or leaked into the environment during storage, it will cause less damage

⁴ "Biodiesel Blends." *Alternative Fuels Data Center: Biodiesel Blends*. US Department of Energy. Web. 06 Dec. 2013.

⁵ "Biodiesel Benefits and Considerations." *Alternative Fuels Data Center: Biodiesel Benefits*. US Department of Energy, n.d. Web. 05 Dec. 2013.

⁶ *Ibid.*

⁷ *Ibid.*