

Like other transportation fuels, when biodiesel is burned it releases CO<sub>2</sub>. CO<sub>2</sub> is a major contributor to climate change; however, biodiesel is made from crops that absorb carbon dioxide and give off oxygen. This cycle would maintain the balance of CO<sub>2</sub> in the atmosphere, but because of the CO<sub>2</sub> emissions from farm equipment and production of fertilizer and pesticides, biodiesel adds more CO<sub>2</sub> to the atmosphere than it removes.

Compared to diesel, the production and use of soybean biodiesel could result in little to no CO<sub>2</sub> reductions in the near future. This is because an increased demand for biodiesel may lead to converting forests and grasslands to crop land for fuel and food. This conversion releases carbon dioxide into the atmosphere. When these factors are taken into account, switching to soy biodiesel from petroleum diesel would provide little or no climate change benefit in the next 50 years. By comparison, the production of and use of biodiesel from recycled waste oils could reduce CO<sub>2</sub> emissions by over 80 percent compared to petroleum diesel.

## Land Use and Biodiesel

One concern with the use of biodiesel is that the land required to grow the increased amount of soybeans might compete with land needed to grow food. If this is true, the increased demand for soybeans could cause food prices to rise. A study by the Department of Energy and the Department of Agriculture concluded that by 2030 it would be possible to replace 30 percent of our gasoline and diesel use with biofuels without increasing demands on cropland. This would be accomplished by using mostly agricultural and forestry waste and perennial crops grown on marginal lands.

Biodiesel is a domestic, renewable fuel that can improve air quality. The expanded use of biodiesel by fleets, as well as individual consumers, has the potential to reduce the importation of foreign oil and promote national security.

## WASTE OIL



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## SOYBEAN FIELD

