

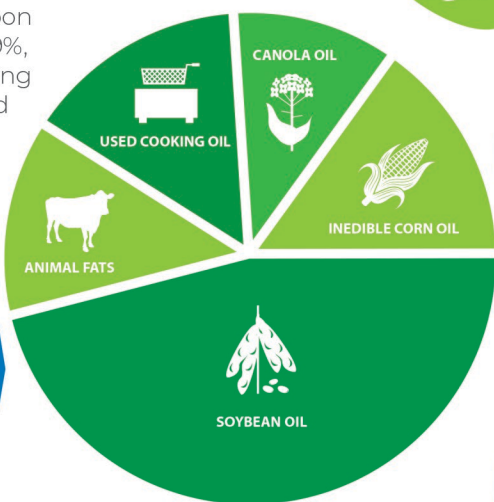
BIODIESEL DRIVES SUSTAINABILITY IN FOOD & FUEL SUPPLY LINES

Biodiesel and renewable diesel production improves U.S. food availability and affordability by utilizing byproducts of U.S. food and fuel supply lines.

REDUCING WASTE & EMISSIONS

Biodiesel and renewable diesel are produced from diverse U.S. resources – such as used cooking oil, recycled animal fats and surplus soybean oil – all of which are excess byproducts of food production. These domestically produced, commercially available advanced biofuels reduce carbon emissions by 52%-79%, even when accounting for market-mediated land use change.

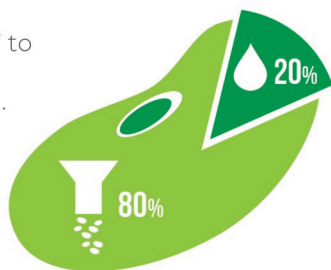
**52%-79%
REDUCTION IN
CARBON
EMISSIONS**



CROPS TO CRUSH

U.S. soybeans are grown primarily for protein meal.

Soybean crops are “crushed” to separate excess oil from the protein-rich meal. Of the U.S. soybean crop’s total yield, more than 80% is protein meal and less than 20% is surplus oil.



Palm oil is not an advanced biofuel feedstock under the U.S. Renewable Fuel Standard. U.S. biodiesel and renewable diesel producers do not use palm oil.



BIODIESEL COMPLEMENTS RATHER THAN COMPETES WITH FOOD PRODUCTION

Virtually every stage of U.S. biodiesel and renewable diesel production lowers protein costs, helping to reinforce the international food supply and lower costs.

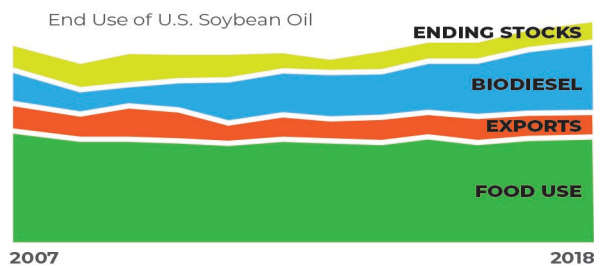
RECYCLING EXCESS OILS

The rendering industry recycles 10 billion pounds of oil and fat and collects 4.4 billion pounds of used cooking oil each year. These excess oils can be further recycled as biodiesel feedstock.



SUPPORTING SOYBEAN DEMAND

Soy-based protein meal is used as animal feed. Excess soybean oil can be used in food production. However, there is a growing global demand for soy-based animal feed and relatively stagnant demand for soybean oil in food production. Biodiesel supports a new market for the growing surplus of excess soybean oil.



Sources: Massachusetts Clean Energy Center; Massachusetts Department of Energy Resources.