Biodiesel comparision with Diesel

Biodiesel's physical and chemical properties, as it relates to operation of diesel engines, are similar to petroleum diesel. This allow it to be used as neat fuel or splash blended with petroleum diesel. A comparison of various properties of biodiesel with petroleum diesel is as follows:

Property	Biodiesel	Petroleum Diesel
		(CARB low-sulfur diesel)
Cetane Number	51 - 62	44 - 49
Lubricity	Much greater than diesel comparable to oil lubricants	Low-Sulfur fuel has very low lubricity factor
Biodegradability	Readily biodegrades	Poor biodegradability
Toxicity	Essentially non-toxic	Highly toxic
Oxygen	Up to 11% Free Oxygen	Very low
Aromatics	No aromatic compounds	18-22%
Sulfur	None	0.05%
Cloud Point	Slightly worse than diesel	
Flash Point	300-400 Deg. F	125 Deg. F
Spill Hazard	None	High
Material Compatibility	degrades natural, butyl rubber	No effect on natural, butyl rubber
Shipping	Shipped as non-hazardous and non-flammable material	Hazardous
Heating Value	2-3% higher than diesel	
Renewable Supply	Renewable Fuel	Non-Renewable
Supply	U.S. est.2 billion gallons/yr	Limited
Energy Security	Domestic raw materials	Mix of domestic and imports
Alternative Fuel	Yes	No
Production Process	Chemical Reaction	Reaction + Fractionation