Due to the finite stock of fossil fuels and its negative impact on the environment, many countries across the world are now leaning toward renewable sources energies like solar energy, wind energy, biofuel, hydropower, geothermal and ocean energy to ensure energy for the countries development security. Biodiesel is one kind of biofuel that is renewable, biodegradable and has similar properties of fossil diesel fuel. The aim of this paper is to provide the substantial information on biodiesel to the researchers, engineers and policy makers. To achieve the goal, this paper summarizes the information on biofuel development, feedstocks around the world, oil extraction technic, biodiesel production processes. Furthermore, this paper will also discuss the advantages of biodiesel compared to fossil fuel. Finally, the combustion behavior of biodiesel in an internal combustion engine is discussed and it will help the researchers and policy maker and manufacturer. To determine the future and goal of automotive technology the study found that, feedstock selection for biodiesel production is very important as it associates 75% production cost. Moreover, the test of fuel properties is very important before using in the engine which depends on the type of feedstocks, origin country, and production process. Most of the researchers reported that the use of biodiesel in diesel engine reduces engine power slightly but reduces the harmful emission significantly. Finally, the study concludes that biodiesel has the potential to be used as a diesel fuel substitute in diesel engines to solve the energy and environment crisis.