Special Report

Next Generation Biofeedstocks: Resources for Renewables

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1.1 OVERVIEW

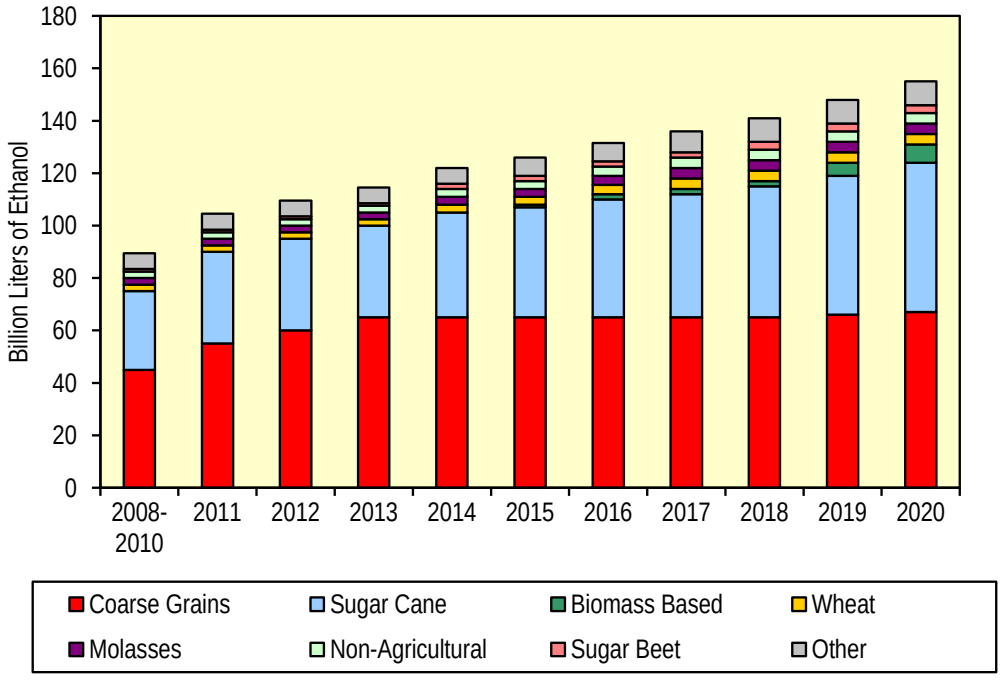
Broad concerns about the future of the global economy and the environment have brought about a new goal for industries, consumers, and governments to strive towards in the twenty-first century: sustainability. Current-generation conventional carbohydrate feedstocks include a wide variety of plant sources. These can include grains such as corn and wheat, grasses such as sugarcane, and roots and tubers such as cassava and sweet potatoes. By far the most abundant of the global biofeedstocks for oils are virgin refined vegetable oils. These feedstocks are already heavily used in fuels production, as food products, and in some industrial applications including oleochemicals and surfactants. Next generation feedstocks are currently under development, as well as the technologies to enable them. Vast quantities of biobased feedstocks are available in all regions.

1.2 CARBOHYDRATE AND BIOMASS FEEDSTOCKS

1.2.1 Conventional Feedstocks

Current global feedstocks for ethanol production are shown in Figure 1.1.

Figure 1.1 Global Feedstocks for Ethanol Production
(Billion liters of ethanol)



Source: Adapted From OECD Agricultural Outlook 2011-2020, http://www.oecd.org/site/oecd-faoagriculturaloutlook/48178823.pdf

Dominant global conventional feedstocks include corn and sugarcane. Significant quantities of first generation feedstocks such as these are available in all regions; however these are generally supplies of food as well as feedstocks for industrial biochemicals.