

Potential Crops for Ethanol Production in Thailand

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Abstract

The importance of ethanol rises dramatically due to an introduction of gasohol 95, which is a mixture of 10% ethanol and 90% gasoline. Since the Royal Thai Government planned to totally replace benzene 95 with gasohol E10 by 2006 and benzene 91 by 2011, this means ethanol production must increase from 1.0 to 3.0 million liters per day. Subsequently, ethanol production has been supported and promoted continuously. One area of interests is exploring bioethanol made from economic crops. In this way, the Royal Thai Government can ensure the energy security, as well as, guarantee agricultural products' prices. Experts in this field identified several economic crops, which could be used to produce bioethanol, namely rice, corn, cassava and sugarcane. A series of research consensually agree that **cassava** and **molasses**, which is a by-product of sugar production, have the most potential. Firstly, cassava's annual production exceeds domestic demand and export; thus, there is a sufficient amount to supply ethanol manufactures (see table below). In the case of sugarcane, although its production is merely enough to fulfill domestic consumption, its by-product, molasses, can be used as a feedstock for ethanol production without any consequent effect to other industries. Remains of cassava and molasses can produce 2.0 million liters of ethanol, which is enough to supply the current production of gasohol. It was predicted that cassava production will reach 20 million tons in 2010. As a result, there will be an adequate amount to produce 3.0 million liters of ethanol. Lastly, cassava and molasses's production cost and price are relatively low compared to other crops; therefore, gasohol price remains competitive.