

Jariyaporn Tangman 2007: The Effect of Using Alternative Energy on Sugarcane and Sugar Industry. Master of Arts (Agribusiness), Major Field: Agribusiness, Department of Agricultural and Resource Economics. Thesis Advisor: Mrs.Kanchana Sripruetkiat, Ph.D. 140 pages.

Effective on January 1, 2007, Thai government policy of using gasohol 95 instead of Octane 95 was presumed to be implemented. The purpose of this research is to study the effect of using alternative energy on sugarcane and sugar industry. The objectives of this study are (1) to study agribusiness system of sugarcane and sugar industry in Thailand and Brazil, (2) to analyse the supply response function of sugarcane production, and (3) to analyse the effect of using Gasohol 95 on sugarcane and sugar industry.

A study of agribusiness system of sugar and sugarcane was found that 7 agribusiness sub-system in Thailand are regulated by Ministry of Industry, Ministry of Agriculture and Cooperative and Ministry of Commerce Thailand. Agribusiness sub-system in Brazil are managed by industry and farmer organization, while Brazilian government's responsibilities are as policy maker and regulator.

The study on supply response function of sugarcane production to the price change and other involving factors, it is revealed that the quantity of sugarcane production has response in the same direction as previous year sugarcane price, previous year cane sugarcane price, amount of rainfall and area of cultivation, but opposite sign to the previous year diesel price.

The analysis of the effect of using only Gasohol 95 (mixture 10% ethanol) on the sugarcane and sugar industry is as follows. The forecasting quantities showed that amounts of remaining sugarcanes (after using them to produce sugar and ethanol) in 2007 and 2008 are 3.33 and 1.31 million ton. Thus, if demand of Gasohol 95 is increasing, the demand of sugarcane to produce ethanol is also increasing. The result is that sugar stock is decreasing. To prevent shortage of sugar in the market after promoting policy of using Gasohol 95 is implemented, Thai government and related organizations should plan to manage sugar industry more efficiently.

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Student's signature

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