

## FOOD VS BIO-FUEL AND ITS IMPACT ON THE FOOD COMMODITY MARKET IN INDONESIA

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### Abstract

The increase in demand and price of fuel has made renewable fuel as an alternative energy including the bio-fuel. Bio-fuel, especially bio-ethanol and bio-diesel, are produced from food stocks. In world market, the process of conversion from corn to ethanol and soybean to bio diesel is becoming prevalent. This process can endanger food safety, primary for those in under-developed and developing countries. For Indonesia, the case is highly relevant as both corn and soybean are imported commodities. The present study aims at: (1) demonstrating the impact analysis of corn and soybean conversion to bio-fuel in the world market upon corn and soybean market in Indonesia, and (2) proposing the formulation policies to increase corn and soybean domestic production in Indonesia. Using time series data of 1983-2006 as well as econometric model of simultaneous equations that was estimated through the 2SLS procedure, the study found that: (1) the conversion of corn and soybean to bio-fuel in the world market have a relatively low impact (less than 5 percent) for increasing/decreasing price, production and demand of corn and soybean in Indonesia, and (2) policy about fertilizer subsidy and import tarif increased production of corn and soybean in Indonesia.

Keywords: *corn, soybean, bio-fuel, policy*

### Introduction

Biofuel is a one of a kind renewable fuel, which can reduce the greenhouse effect and dependency to fossil fuel. Recently, there are three kinds of biofuel, they are bio-ethanol, bio-diesel and bio-gas. Biofuel, especially bio-ethanol and bio-diesel, are produced from food stocks. In the world market, the process of conversion from corn to ethanol and soybean to bio diesel is becoming prevalent. This process can endanger food safety, primarily for those who live in under-developed and developing countries.

Indonesia imports food stocks like corn and soybean. They are strategic food stocks in Indonesia. Corn is a second source of carbohydrate after rice and raw material for animal food. A soybean has a role to supply vegetable proteins for a low income community. Also, a raw materials can provide for a food home industry. This is the second most important raw material after corn for animal food. It means corn and soybean have a

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