

ETHICAL CONCERNS OF AGRICULTURE: SUPPLIER OF FOOD OR ENERGY

Mad Nasir Shamsudin¹

The oil price hike is inflationary in effect. The impact on the food sector is transmitted through input costs, directly for fuel and electricity, and indirectly for inputs such as fertilizer. These increase farm production costs, but more significantly, increase the costs of transportation, processing and marketing food products to consumers. Unlike the previous price spikes, where the impacts is only on higher cost of producing food, the current increase in oil prices is creating a more sustained interest in agriculture as a supplier of energy. High oil prices have drawn attention to biofuels. Thus consumers are not just facing higher food costs, but also potentially low supply of food.

In response to the high oil prices, Malaysia has also entered the race. She announced her National Biofuel Policy in August 2005 to spur the biofuel industry. The justification is that biofuel production has the potential to generate new jobs, raise palm oil prices through increased demand, hence boost farm incomes, and as a tool for rural economic development by promoting value-adding activity. Thus biofuel production could help retain or even attract new resources to rural areas.

From environment view point, use of biofuel is a means to help mitigate serious pollution problems. The benefits include the potential to reduce emissions of green house gases (GHG). Both biofuels and petrol give off CO₂ when burned. But biofuels are theoretically carbon neutral, releasing CO₂ recently absorbed from the atmosphere by the crops used to produce the biofuel. Petrol and other fossil fuels, on the other hand, add to the CO₂ supply in the atmosphere by giving off CO₂ absorbed and trapped in plant materials millions of years ago.

But policy makers must be mindful of economic tradeoffs of biofuel production. Increased demand for a biofuel feedstock will raise its price, making it more expensive for competing users. Also the environmental benefits are less clear in the life-cycle analysis that examines not just combustion, but the production and processing of the feedstock into fuel. In general, agriculture is the biggest source of another GHG, nitrous oxide (N₂O), which is released by naturally occurring bacteria stimulated by the cultivation of soil and from the application of nitrogen and animal waste fertilizers.

In temperate countries where corn and sugar are turn into ethanol, the prices of these commodities are highly correlated with the price of oil. This affects the price of sugar for human consumption. Higher corn prices raise feed costs for livestock production, and translated to higher prices of meat. In Malaysia, the price of palm oil, the feedstock for biodiesel production, has risen in tandem with oil prices.

¹ *The Author is Professor of Agricultural and Resource Economics and Dean, Faculty of Agriculture, Universiti Putra Malaysia.*

Another important consideration in biofuel production is potential land requirements if biofuel become a more mainstream fuel. Biofuel production is still a very land-intensive energy source. Studies by OECD indicate that the EU would have to convert 70% of its agricultural land area to meet 10% of its fuel need; the United States 30%; and Canada 36%. Use of so much land to meet relatively small share of fuel demand is improbable, though the resource commitment would be much less in developing economies because of lower fuel demand. In Malaysia, there is concern if expanding palm oil production encroaching on fragile rainforest areas. Thus there are ethical concerns about the diversion of crops, land and other resources in very large quantities for the production of fuel instead of food, especially where there are millions who are hungry. These are questions that we together have to articulate and weigh in the process of economic development. We need a relatively cheaper and reliable source of energy, but millions out there are still starving and under-nourishment.

But in a capitalist economic system like ours, at the end of the day, *invisible hand* will determine whether agriculture is for energy or food, or to balance between the two. Continuing high or rising oil prices will boost the commercial prospects for alternative energy, while the decline will do the reverse. As for Malaysia, biofuel production should only be an element of a broad-based portfolio of energy policies. Other policy elements must include promotion of energy conservation, development and promotion of more efficient uses of energy, and expanded production of non-conventional fossil fuels.

