



CGPRT

Flash

Vol 1 No.5 December 2003

ISSN

1693-4636

Short Article

Soybean Self-Sufficiency in Indonesia: Dream or Reality?

Indonesia recently included soybean, one of its major food crops, on a "strategic commodity" list along with rice and corn (CGPRT Flash, Vol 1, No. 4). In the Indonesian diet, it is consumed in the forms of tofu, "tempe" (Indonesian fermented food consisting of tender-cooked soybean), soy sauce and other manufactured foods. Many efforts to achieve soybean self-sufficiency, including the introduction of high yielding varieties, special intensification programs, and soft credit in order to encourage farmers to increase soybean production, have not slowed soybean net import increases since 1975.

Until 1974, Indonesia was self sufficient in soybean (Swastika *et al.*, 2000), however, by 2000 imports had increased to about 1.3 million tons, equivalent to half of domestic production (CBS, 1974-1999; FAO-Stat, 2002). Over the last 30 years, soybean production has grown at a yearly rate of 2.4 per cent against 5.5 per cent for consumption. Moreover, recent trends show a decline in production due to the decline of harvested area and stagnant yields. Production decreased by 14 per cent per year during 1998-2001 (Ministry of Agriculture, 2002).

Several studies (Swastika *et al.*, 2000; Adnyana *et al.*, 2001; Simatupang *et al.*, 2003) show that soybean deficits will continue to grow in the future, indicating that domestic production will not be able to meet the growing demand for soybean.

In terms of technology, the lack of high yielding varieties, poor seed quality and cultural practices combine to induce low yields and productivity. While between 1982 and 1995, the Central Research Institute for Food Crops (CRIFC) released at least 24 varieties; with expected yield potential ranging from 1.1 to 2.5 t/ha (CRIFC, 1998), at farm level, the average yield of soybean in 2001 was 1.22 t/ha. In comparison, major soybean producers such as Brazil and USA reach around 2.6 tons per hectare

The lack of quality seeds adapted to the agro-climatic conditions is a constraint to the economic viability of soybean production in Indonesia (Gonzales, 1993). Although about 70 per cent of farmers use high yielding varieties, only 2 per cent use certified seed (Siregar, 1999). This is due to (i) financial inefficiency of seed production

because the poor condition of the seed industry makes it an unattractive business (high cost and low yield); (ii) farmers preference for fresh, cheap, and timely available seed (own-made), and (iii) short duration of seed storage (Siregar, 1999).

About 65 per cent of soybean area and production is located in Java where most food crops are produced (MOA, 2002). Soybean production faces a double challenge: the conversion of fertile agricultural land for non-agricultural purposes, especially in Java, and competition from other crops. The harvested area of soybean in Java declined from 0.7 million ha to 0.5 million ha between 1998 and 2001.

Economically, Indonesia has no comparative or competitive advantage in producing soybean. The revenue cost ratio (RCR) value is greater than one, meaning that every single dollar earned from soybean production requires more than a one-dollar resource cost (Gonzales, 1993). Among three main food crops (rice, maize, and soybean), soybean is the least efficient crop to grow. The RCRs of rice and maize are generally less than one indicating that they have competitive advantages for both inter regional trade and import substitution. This might be one factor determining the declining area of soybean in Indonesia.

On the demand side, continuous population growth (+ 1.36 per cent per year) and positive growth of per capita consumption (+ 0.27 per cent per year) result in significant growth in demand for soybean (+ 1.63 per cent per year). Therefore, one can conclude that, without a significant breakthrough, the soybean deficit will continue to steadily increase. In other words, self-sufficiency in soybean is a dream still very far from becoming reality ■

Dewa K.S. Swastika, Senior Research Officer, Indonesian Center for Agro-Socioeconomic Research and Development (ICASERD), Bogor, Indonesia.

(References available upon request)

Flash **BREAKING**

About 21 per cent Potential Increase through Better Post Harvest

CIAT survey results estimate a 21 per cent increase in economic value is possible through improvements in quality, processing and product marketing of cassava. In this increase, the weights of market premium for quality improvement, reduced loss through better processing, and market development are 13, 4 and 4 per cent, respectively■

Hershey, C., et al., 2000. Cassava in Asia, Expanding the Competitive Edge in Diversified Market, FAO.

Inequality Becoming Worse in Some Countries

Over the last two decades, inequality has risen in 48 countries out of a 73 country study. These 48 countries account for 59 per cent of the population and 78 per cent of GDP of the 73 countries studied. In Asia, study countries where equality worsened are China, Thailand, Sri Lanka, and Taiwan■

Cornia and Court, 2001. Inequality, Growth, and Poverty in the Era of Liberalization and Globalization, The United Nations University, WIDER.

Cassava Development to Improve Income Equity

The benefits of development that accrue to the cassava sector are generally skewed toward the lower income strata, thereby edging the economic system towards a greater level of income equity■

Hershey, C., et al., 2000. Cassava in Asia, Expanding the Competitive Edge in Diversified Market, FAO.

Thailand: Maize Production Increasing

The planted area of maize for crop year 2003/2004 is similar to last year's while maize production is set to increase. Suitable weather, sufficiency of rainfall and good practices by the farmers have all contributed to the rising yields this year. Higher average farm gate prices in 2002/2003 provided a better incentive to produce for the northern farmers (such as in Phetchabun, Tak, Kamphaeng Phet) and they increased planted area. However, in the northeastern region (such as Loei, Chaiyaphum, Nakhon Ratchasima) drought and higher cassava prices caused farmers to shift from maize to cassava. The situation of the maize market and price in Thailand indicates that the trend of the domestic demand for maize in Thailand is increasing due to the expansion of the domestic livestock industry■

Sent by Krittiya Jamsudha, Office of Agricultural Economics, Thailand Centre for Agricultural Information, based on Forecasting Report at www.oae.go.th.

Contribution of Rich Countries to Reduce Poverty

Rich countries account for two-thirds of world trade and comprise nearly three-quarters of world GDP. Therefore, their domestic policies, mostly evident in agriculture, have the greatest effect on the global market. Despite the fact that agricultural protection, tariff peaks, and anti-dumping measures shield powerful lobbies, rich-country leadership in reducing this protection is a prerequisite for a pro-poor development outcome■

World Bank, 2003. Global Economic Prospects: Overview.

Cassava as Raw Material for Biodegradable Plastics

The concern for biodegradable plastics is not only a matter for developed countries, such as Japan, but also for developing countries (CGPRT Flash, Vol 1, No. 4). Due to serious environmental issues, the use of biodegradable plastics is projected to increase. Starch from cassava could play an important role to fulfill this increasing demand. Starch, a natural polymer, can play an important role in the biodegradable plastic manufacturing process. In tropical countries cassava starch offers opportunities due to the purity and clearness of its paste and low cost of production. It is one of the cheapest carbon sources in the region and can be used for the production of biodegradable plastics in two different ways, namely as a source of carbon or as a blending material. In Asia and the Pacific, Thailand and China are the pioneers of this industry with China's annual production capacity at 100,000 tons■

Based on Shuren, J., 2001. Production and Use of Modified Starch and Starch Derivates in China. *In Cassava' Potential in Asia in the 21st Century*, Proceeding of the Sixth Regional Workshop, Ho Chi Minh, Viet Nam.

Barley Supply and Trade to Recover in 2003

World barley production, after experiencing a drop in drought hit 2002 (133 million MT), is forecast to return to normal in 2003 (142 million MT). Australia and Canada together are foreseen to give a significant contribution to this increase (around 8 million MT), while production in Russia will decline by around 3 million MT. World barley trade patterns are also expected to return to historical levels with total trade around 15.5 million MT. EU exports are forecast to stable at around 4.5 million MT, while Australian and Canadian exports are predicted to increase by 1.2 million MT and 1.4 million MT respectively, should extreme weather not hamper production■

Based on Mason, G., 2003. World Barley Supply and Trade, Mi Prospects-Fortnightly.

Potato Chips: A Growing Market in Taiwan

Snack foods, such as dried beef/seafood/tofu; flavored nuts and vegetables; confectionery products; baked goods; biscuits, cookies and crackers; and western-style chips, are an important part of the Taiwan diet. Potato chips have been most successful in this market. The US, United Kingdom and other EU countries dominate these markets. Industry sources estimate that consumption and imports will increase due to intensive advertising, especially through a series of TV commercials. Potato chips are distinctive from other snack foods in flavor and therefore competition from local snack foods is not a problem■

Based on Taiwan Commercial Guide, 2000. Best Prospects-Snack Food (Potato-Chips), American Institute, Taiwan.

Development of Small Starch Mills to Promote Rural Industry

The rapid expansion of starch utilization in Asia has created a new and increasing market demand for tropical root and tuber crops, especially cassava and sweet potato. Demand for starch by food and non-food industries in Asia is likely to grow by 5 - 10 per cent per year in low and middle income countries in the region. The expansion stems from the fast increase in consumption of products that use starch in their manufacture. Tropical root and tuber crops provide a versatile and low-cost raw material for meeting this new market demand from industry.

Due to the bulkiness and perishability of root and tuber crops, small starch mills run by smallholders and located near farms are more competitive than large-scale starch milling, especially in the intermediate processing stage. Small starch mills can convert fresh harvested roots into wet starch (consisting of 30-40 per cent water). The large-scale starch mills then process the wet starch into starch and starch products. This complementary partnership between large and small mills is exemplified in the system of sweet potato starch production in Shandong Province, China, where it has created new economic and employment activities for farms and rural households. The added value of these commodities has also increased ■

Based on Fuglie, K.O. and Oates, C.G., 2001. Starch Market in Asia, Bogor, Indonesia: International Potato Center.

Modest Increase in 2003 Pulse Trade

Limited supplies of pulses in major exporting countries and strong market prices are two factors that have constrained the growth of the global pulse trade in 2003. Slow growth is expected especially for lentils and chickpeas, and to lesser extent for dry peas, while dry bean exports are forecast to grow the fastest. Global trade is forecast to reach 9.5 million tons, a modest increase of around 2 per cent compared to 2002 global trade. United States dry bean exports are forecast to increase in relation to strong PL-40 food aid shipments. The EU is also expected to experience an export growth in 2003. However, pulse exports from Australia and Canada are likely to be lower than previous years as a result of production declines in these countries. Moreover, increasing domestic consumption in Australia is also attributed to the slow growth in exports. Mexico's 2003 chickpea exports are also expected to decline due to lower availability and lack of demand ■

Based on FAO, 2003. Pulse Market Assessment (June).

Flash EVENT



The 21th TAC (Technical Advisory Committee) and 22nd GB (Governing Board) Meeting of CGPRT Centre

14 - 17 January 2004
Bogor, Indonesia

Contact:

Dr. Nobuyoshi Maeno
CGPRT Centre,
Jalan Merdeka 145
Bogor 16111, Indonesia
Phone: 62-251-356813, 343277
Fax: 62-251-336290
Email: nobu_maeno@cbn.net.id

The 17th Research Meeting for Root Crops

4 - 5 December 2003

Hotel View Kagoshima, Kagoshima, Japan

Contact:

Satsumaimo@mykz.affrc.go.jp

5th World Potato Congress

24 - 30 March 2004

Kunming, Yunnan Province, China

Contact:

Lloyd Palmer, President
World Potato Congress, Inc.
Suite 101 - 420 University Avenue
Charlottetown, PE
C1A 7Z5 Canada
Phone: (902) 368 8885
Fax: (902) 628 2225
Email: info@potatocongress.org



UNESCAP CGPRT Centre

Jl. Merdeka 145

Bogor 16111, INDONESIA

Phone : (62-251) 356813, 343277

Fax : (62-251) 336290

Email : cgprt@cbn.net.id

www.cgprt.org.sg

www.cgprtstat.org



EDITORIAL COMMITTEE Nobuyoshi Maeno

Erna M. Lokollo

Robin Bourgeois

Tomohide Sugino

Wayan Reda Susila

EDITOR Matt Burrows

PRODUCTION Agustina Mardiyanti

DISTRIBUTION Fetty Prihastini

PRINTER SMK Grafika Desa Putra

LAYOUT DESIGN Fransisca A. Wijaya

Flash EDITORIAL CONTACT

Book Review

“Promoting the Millennium Development Goals in Asia and the Pacific: Meeting the Challenges of Poverty Reduction”

UN Publications, No. E.03.II.F.29 ST/ESCAP/2253, ISBN : 92-1-120268-3, New York, 2003.

This report by UNESCAP and UNDP is a collaborative assessment of the Millennium Development Goals (MDGs) in Asia and the Pacific, based on the Millennium Declaration issued in September 2000 at the Millennium Summit by United Nations' member states, committing themselves to a series of targets to be achieved by 2015 and representing a framework for achieving human development.

Taking a regional perspective and analyzing the prospects, challenges and opportunities for attaining the MDGs in Asia and the Pacific it reveals considerable differences in the level of achievement of the MDGs between countries and emphasizes that the prime responsibility for achieving the MDG's lies with individual countries. MDGs represent a firm commitment to a broader and more inclusive process of human development, as the Millennium Declaration makes it clear in its statement of “fundamental values” freedom, equality, solidarity, tolerance, and respect for nature and shared responsibility.

The report points out that Asia and the Pacific has many diverse forms of democratic governments. In some cases these involve highly centralized administrations that offer limited space for people participation. Nevertheless, in recent years there have been significant changes. In Indonesia, the strongly centralized government administration is moving toward decentralization. The government of India is determined to be more responsive and accountable to the public and the government of China is among those taking firm measures to combat corruption and promote integrity in governance. In the Philippines, thousands of non-governmental organizations (NGOs) operating in many different sectors have made contributions to democracy and good governance.

In promoting the rights of women, the report points out that the majority of countries still show various kinds of gender discrimination that prevent women from enjoying their basic rights.

The report argues that the most impressive achievement has been the overall dramatic reduction in income poverty. Several countries (e.g. Malaysia, Thailand, Korea, Brunei and Singapore) have already achieved many of the MDG targets, and set new “MDG Plus” targets that encompass higher minimum standards of living, educational attainment, health care, and a reduction in disparities between different population groups. However, overall progress remains fragile as long-term growth creates income inequality and is affected by external shocks. Furthermore some countries (e.g. Cambodia, Viet Nam, Lao PDR, and Sri Lanka) in the region are still far from achieving their MDGs.

The report stipulates that there is still time for action and concrete outcomes but countries and economies must show sufficient commitment and determination to pursue these goals. They need to work with each other and with other international partners but also the international community must come forward with required resources. Under these conditions, the MDGs may well be achieved.

From the CGPRT Centre viewpoint, the implication of the MDGs for CGPRT crop development are to be found in Goal 1 “Eradicate extreme poverty and hunger” and related to Target 1: “Halve the proportion of people whose income is less than one dollar a day” and 2: “ Halve the proportion of people who suffer from hunger”, as well as Goal 7 “Ensure environmental sustainability” and Target 9: “Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resource”.

These targets set the direction for refocusing CGPRT crop research and development activities in Asia and the Pacific. For more sustainable development three priorities that are not always immediately compatible have to be combined: improvement of CGPRT crop productivity to sustain growth, poverty reduction through promotion of CGPRT crop based pro-poor policies and sustainability of CGPRT crop Use to maintain the possibility to better redistribute growth■

Reviewed by Erna M. Lokollo, Programme Leader, CGPRT Centre, Bogor, Indonesia.