Alternatives to tobacco – a closer look

The Malaysian government developed kenaf as an alternative crop to tobacco since 2005 through an industrial plan. Kenaf provides a good return with little investment in terms of money, time and labour. Nevertheless, farmers rely on government’s subsidies and the state monopoly for a greater market support and marketing.

Ecologically, kenaf cultivation does not involve as much chemicals as tobacco. Kenaf grows fast and in crop rotation with rice. However, kenaf also encounters similar risks as most monocrops.

Socially, kenaf cultivation has a positive impact on farmers’ communities. It is less harmful to farmers’ health, because the plant is not poisonous and is the chemical-less. Children are not involved in cultivation and economic returns support their education.

Although the National Kenaf and Tobacco Board will further promote kenaf as a sound alternative to tobacco farming, long-term sustainability of the kenaf sector strongly depends on the government’s ability to gradually phase out subsidies and render the sector self-sufficient.

CONCLUSION

In the 1960s, tobacco (Nicotiana tabacum L.) was recognized as a socio-economic crop in the province of Aceh, Indonesia. Between 1971 and 2000, the tobacco cultivation area tripled, but tobacco was not a key contributor to the Malaysian economy. In 2005, the Malaysian government started a restructuring plan to phase out the tobacco farming sector, in line with its commitments under the WHO Framework Convention on Tobacco Control (FCTC) Article 17, promoting economically viable alternative livelihoods to tobacco farmers and growers. Since 2013, the government disbanded from supporting and promoting tobacco and now solely implements policies to regulate the tobacco industry.

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Year
Tobacco Growers
Tobacco Curers
Area Harvested (ha)
Total Production (t)
2000 20,821 326 9,129 7,172
2001 18,906 347 8,863 9,000
2002 16,201 348 12,404
2003 14,579 302 13,526
2004 11,708 292 13,100 13,850
2005 8,412 292 13,000 11,400
2006 3,835 166 10,650 8,900
2007 3,140 77 7,726 6,453
2008 3,846 77 7,200 6,278
2009 2,987 77 8,207 2,473
2010* 2,125 77 2,855 3,143
2011 1,953 77 2,636 2,916
2012 1,515 77 2,562 1,972
2013 587 77 538 453

SOURCES

4. BRIS = beach ridges interspersed with swales
13. Most rains are usually expected during the monsoonal season between November and December.
15. Between MYR 100 to 150 (USD 25 to 37) per loaded trip.
20. FAOSTAT/en/#data/QC [22.11.2017]
27. Between MYR 100 to 150 (USD 25 to 37) per loaded trip.
29. Although the National Kenaf and Tobacco Board will further promote kenaf as a sound alternative to tobacco farming, long-term sustainability of the kenaf sector strongly depends on the government’s ability to gradually phase out subsidies and render the sector self-sufficient.

sector and child labour is not used. Due to state subsidies, growing kenaf does not require much investment; hence, farmers are less likely to fall into debt. Kenaf cultivation helps to generate sufficient income for household expenses and children’s education and in addition to income sourced from rice as a rotation crop.11

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In addition, the advent of the ASEAN Free Trade Area (AFTA) agreement, fully implemented in 2010, meant that imported tobacco leaves from neighbouring countries such as Thailand, Vietnam and the Philippines would become much cheaper than locally produced leaves. With tobacco no longer a viable crop, the number of tobacco growers plunged as did the amount of harvested tobacco leaves. Consequently, tobacco farmers were encouraged to switch to kenaf and adopt crop integration with food crops such as corn, pumpkins, watermelon, okra, and vegetables. With Tobacco Industry Restructuring Plan (RIPS) the government aimed to break the poverty cycle and contribute to food security.

KENAF INTRODUCTION IN MALAYSIA

Grown for its fiber and seed oil, kenaf (Hibiscus cannabinus L.) is a versatile plant that easily adapts to a wide range of climate and soil types.5 It is a hardy, quick-growing plant with a long growing season and produces high-quality paper, biocomposites for car door trimmers and interior shelving, bioplastics, building materials such as medium-density fibreboards, textiles, furniture, and even high protein animal feed. Vegetable oil from kenaf seeds has high omega antioxidant content, which is used in cosmetics, industrial lubricants, and biofuel.6

In 2005, kenaf was recognized in Malaysia as a new industrial crop supporting the diversification of the country’s commercial sector. Thereafter, kenaf research and development (R&D) was conducted and a Kenaf board was established in 2006 to provide technical support, financial incentives as well as seeds, fertilizers, pesticides, mechanization and training.9 Consequently, the National Tobacco Board (NTB) is the agency that oversees the cultivation of kenaf. The next phase (2006-2010) involved kenaf crop introduction and training for growers, the development of a kenaf master plan and farming. Between 2011 and 2015, the focus shifted to the commercialization of kenaf crops and its core products. The current phase (2016-2020) targets on commercialization of new applications and branding of kenaf Malaysia’s products.

From 2006 to 2010, the Ministry for Plantation Industries and Commodities allocated about MYR 100 million (USD 32.41 million) for R&D projects.9 Consequently, the National Tobacco Board was replaced by the National Kenaf and Tobacco Board (NKTB) in April 2010.10 The government aimed at reaching 1,000 hectares of kenaf cultivation by 2010, but under the direction of the National Tobacco Board, the target was reduced to 500 hectares. The NKTB was established to provide the framework for the development of the kenaf industry and was emphasized that kenaf could be a strong economic alternative to tobacco when it is able to bring an income of between MYR 4,000 to 8,000 per hectare per year.11

ECONOMIC ASPECTS

Kenaf is heavily subsidized by the government via its state monopoly NKTB. The NKTB is mandated to assist tobacco farmers in shifting to alternative crops, especially kenaf, by providing technical support, financial incentives as well as seeds, fertilizers, pesticides, mechanization and training.12 Soil tillage and biofertilizer applications are available to farmers without the need to own the machinery.13 Generally, NKTB licenses all kenaf upstream and downstream activities such as planting, processing, manufacturing and salting.14 The NKTB also manages all activities related to the sale and purchases of kenaf from smallholders, thereby assuring them a market at a price ranging from MYR 170 (USD 42) for wet stem to MYR 4,000 (USD 1,022) for dry stem per tonne as determined by the NKTB. Growing kenaf could therefore provide a good return of investment. Former tobacco growers acknowledge that kenaf is easy to grow and an excellent plant to replace tobacco when it is able to bring in a profit.15

Kenaf has a high ability to absorb nitrogen and phosphorous present in the soil and also to accumulate carbon dioxide at a significantly high rate.21 Another study found that kenaf offers ecological advantages over fossil fuels, such as contributing to the reduction of greenhouse gases and energy savings.22 Compared to other annual energy crops such as hemp or maize, kenaf requires less pesticides and fertilizers. Kenaf stalks are associated with soil quality, erosion, use of resources, and biodiversity as most monocrops.23 Kenaf stalks and leaves contain many carbon-dialy cladophylls and sodium.24 Tobacco farming was once popular on BRIS soil, which is too sandy, weakly structured, and nutrient deficient.25 It has low water retention capacity, limited ability to support plant growth, and a soil temperature that is relatively high for many types of agricultural uses.26 Consequently, kenaf requires the application of more fertilizer and water on BRIS soil than on alluvial soil. Increased cultivation cost and slender kenaf yield on BRIS soil sometimes force tobacco growers to choose food crops such as watermelon, sweet potatoes, and corn which suit soil conditions better. According to farmers, kenaf stalks and roots remaining after the harvest are left to biodegrade on the field.27 The ecological impact of post-harvest processing of kenaf fibres into various finished products is difficult to assess because manufacturers don’t disclose them referring to their proprietary rights.

SOCIAL ASPECTS

Farmers from Paipulah, Kelantan, reported in interviews that kenaf cultivation is less labour intensive than growing tobacco. Kenaf plants grow quickly to a height of 3.5 to 4 meters and its maturity can be reached within four to six months. Harvested kenaf will be bundled up and delivered to an assigned NKTB Raw Material Collecting Center (RMCC) located nearest to the farm, with a relatively small transportation cost compared to tobacco.28

At the NKTB Raw Material Collecting Center, the kenaf fibres will be soaked in water without adding chemicals to allow the extraction of cellulose tissues and pectins around the bark’s fiber strands (bast fibers).29 The ecological impact of post-harvest processing of kenaf fibres into various finished products is difficult to assess because manufacturers don’t disclose them referring to their proprietary rights.