Organic Farming Movement in Central Java

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Abstract In this report, we examined the situation of organic rice farming in Indonesia. We interviewed an organic farm product dealer S in Yogyakarta, and four organic farming groups in Central Java. Dealer S started the organic business with the support of an international non-governmental organization (NGO) in the United Kingdom, and has been instrumental in the initiation of the organic rice market in Yogyakarta since 1997. Dealer S sold organic rice from 14 farmers’ groups living in the suburbs of Yogyakarta as of September 2003. The higher price for organic products is a major incentive to switch to organic farming. However, it is necessary to obtain a sufficient amount of organic materials to produce organic fertilizers for organic farming. The sustainability of organic rice farming, and certification for organic agricultural products should be considered for the promotion of the organic farming movement in Indonesia.

Key Words: Farmers’ Field School, Indonesia, Organic certification

Introduction

Alternatives have been sought to conventional farming in recent years as a consequence of the growing concern about the environment, ecosystems, and food safety.

The organic food market is growing rapidly at an annual rate of 10% to 40% in Europe (HALWEIL, 2001). The same trend is observed in developing countries, despite the need to address food shortages. According to YUSSEFI (2003), the area under organic management in most Asian countries is still very small, but organic agriculture is progressing as the area under conversion is increasing. In Indonesia, the land area under organic management accounted for only 0.09% of the total agricultural area as of the year 2003.

LIFE (http://www.ne.jp/asahi/life/home/) reported the existence of organic vegetable farming in West Java, although no social scientific study on Indonesian organic farming has yet been conducted.

In Indonesia, a nationwide program of integrated pest management (IPM) has been implemented since 1989, when the pesticide subsidies were discontinued (TAKADA et al., 2003). The concept of the IPM program is to reduce pesticide use as much as possible. Therefore, IPM may be partly responsible for the promotion of organic farming in Indonesia. It is important to obtain information about organic farming in Indonesia. In the present report, we examined the situation of organic rice farming in Central Java³.

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Survey

In September 2003 we interviewed an organic farm product dealer S in Yogyakarta, and four organic farming groups located in Central Java. Dealer S is the most senior of at least seven organic farm product dealers in Yogyakarta. Organic farming groups are scattered throughout Central Java, and there are differences in the conditions of organic fertilizer use among them.

Results

Organic farm product dealer S

In response to the efforts by three organic farming groups in Yogyakarta to seek a market for their organic crops, dealer S initiated the organic business in 1997, beginning with organic rice. When he started the business, dealer S was supported by an international non-governmental organization (NGO) in the United Kingdom. Dealer S sold organic rice from 14 farmers’ groups in the suburbs of Yogyakarta as of September 2003. The sale of organic rice increased from 500 kg per month in 1997 to 5 t per month in 2003 (Table 1). The number of rice varieties handled increased from two in 1997 to four in 2003. Prices of organic rice are higher than those of conventional varieties. All the varieties of organic rice are local varieties. Table 2 lists the destination and the customers for organic rice from dealer S. Dealer S sells rice directly to consumers living in Yogyakarta, and also to supermarkets and dealers in Yogyakarta, Jakarta, Bogor, Bandung, and Surabaya. Most consumers belong to the upper middle class. Dealer S started to sell organic vegetables in 2002 to customers in Yogyakarta, but organic rice has remained the major product. Since the Indonesian government does not implement a certification system for organic farm products, dealer S puts his own logo on the packages. According to the shop manager, no scientific analysis is conducted. However, the consumers trust the organic farmers and dealer S.

Organic farming groups

Table 3 describes the four organic farming groups surveyed. The Indonesian government introduced the Farmers’ Field School (FFS) within the framework of one of the main IPM projects in the late 1980s. The members of groups A, C, and D studied farm ecosystems at FFS. The distribution channel of organic rice from these farmers’ groups does not include only dealer S but also covers direct sale to consumers.

Presently, around 20% of the farmers in group A and group D are engaged in organic farming (hereafter referred to as “organic farmers”), and the other farmers are trying to develop organic farming techniques.

Table 1 Price and monthly sales of organic rice from dealer S

<table>
<thead>
<tr>
<th>Variety</th>
<th>Price (Rp/kg)</th>
<th>Sales (kg/month)</th>
<th>Sales (Rp/month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rojole</td>
<td>2,500</td>
<td>375</td>
<td>937,500</td>
</tr>
<tr>
<td>Mentik</td>
<td>1,900</td>
<td>125</td>
<td>237,500</td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rojole</td>
<td>5,500</td>
<td>1,500</td>
<td>8,250,000</td>
</tr>
<tr>
<td>Mentik</td>
<td>4,000</td>
<td>2,000</td>
<td>8,000,000</td>
</tr>
<tr>
<td>Pandanwangi</td>
<td>4,200</td>
<td>500</td>
<td>2,100,000</td>
</tr>
<tr>
<td>Berasmerah</td>
<td>4,500</td>
<td>1,000</td>
<td>4,500,000</td>
</tr>
</tbody>
</table>

Source: Field Survey
The average prices of conventional rice were Rp 2700/kg for IR-64, and Rp 2850/kg for Cisadane in 2003.

Table 2 Monthly sales and destinations of organic rice from dealer S

<table>
<thead>
<tr>
<th>Destination</th>
<th>Sales (kg/month)</th>
<th>Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yogyakarta</td>
<td>3,000</td>
<td>Supermarkets, individual consumers</td>
</tr>
<tr>
<td>Jakarta</td>
<td>1,500</td>
<td>NGO, dealers</td>
</tr>
<tr>
<td>Bandung</td>
<td>350</td>
<td>Dealers</td>
</tr>
<tr>
<td>Bogor</td>
<td>100</td>
<td>One dealer</td>
</tr>
<tr>
<td>Surabaya</td>
<td>50</td>
<td>One dealer</td>
</tr>
</tbody>
</table>

Source: Field Survey
Table 3 Organic farming groups surveyed in Central Java

<table>
<thead>
<tr>
<th>Group</th>
<th>Year established</th>
<th>Number of members</th>
<th>Farmers' training provided by</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1986</td>
<td>134</td>
<td>government</td>
</tr>
<tr>
<td>B</td>
<td>1992</td>
<td>20</td>
<td>(not provided)</td>
</tr>
<tr>
<td>C</td>
<td>1995</td>
<td>9</td>
<td>NGO</td>
</tr>
<tr>
<td>D</td>
<td>2001</td>
<td>30</td>
<td>government</td>
</tr>
</tbody>
</table>

Source: Field Survey

shift from conventional farming to organic farming (semi-organic farming). Organic farmers produce organic fertilizers and botanical pesticides by themselves. Although farmers engaged in semi-organic farming try to use only organic fertilizers, they need to use chemical fertilizers as a supplement. The fact that they cannot conduct pure-organic farming is due to the limitation of materials for the production of organic fertilizers.

According to the leader of group A, most farmers want to produce organic crops because organic farming is more profitable than conventional farming: the income of the producers is 30% to 40% higher for organic rice than that for conventional rice. However, only around 20% of the farmers can practice organic farming because of the limited supply of organic materials. They obtain mushroom wastes to produce their organic fertilizers from three mushroom producers living at a distance of around 15 km away.

The members of group D lost approximately 60% of their products through pest attacks in the late 1990s. Therefore they attended the FFS to improve the farming methods. After attending the FFS and holding discussions with another organic farming group, they decided to begin organic farming in 2001. At the onset, they purchased seed from another organic farmers' group, and also introduced group-sharing of livestock to obtain manure in order to produce organic fertilizers.

Almost all the members of group B and group C are engaged in organic farming. The leader of group B started organic farming in 1970. The area where he lives has an abundance of water resources. In the late 1960s, he had participated in the Green Revolution and used chemical fertilizers and pesticides in his fields. However, the fish that he raised as an additional activity in his rice paddies were killed. Thus, he lost the income from fish culture. He also became ill after pesticide applications because endrine was used at that time. As a result, he stopped using pesticides, and decided to become independent of the industrial sector for farming. Since then, he has tried to improve organic farming technology by himself. Group B was established in 1992 to share information about the market for organic rice. One-third of the produce is sold to dealer S or directly to consumers, one-third is used for self-consumption, and the rest is kept as seed for the next cropping.

Some members of group C attended an FFS provided by an NGO, and they established the group in 1995. The group leader started organic farming with the support of the same NGO, and realized that farmers could produce fertilizers and pesticides by themselves. Group C tries to avoid the use of chemical fertilizers or chemical pesticides. The leader opened a shop for organic farmers in 2003, supplying original commodities for organic farming. The shop is accessible not only to the members of group C but also to other farmers who want to practice organic farming.

Benefit of organic rice farming

The leader of group D cultivates both organic rice and conventional rice. The yield of organic Menthik is 2t/ha lower than that of conventional IR-64, but the producer price of Menthik is more than twice that of IR-64 (Table 4). For selling organic rice, the farmers have to mill rice by themselves and the cost of organic rice milling is Rp 125/kg, which is higher than the cost of Rp 100/kg for conventional rice. Although organic rice farming has an advantage over conventional rice farming in terms of product price, it is necessary to obtain a sufficient amount of organic materials to produce organic fertilizers for successful organic farming.

Discussion

Organic farming in Central Java

Some farmers have recognized the dangers of pesticide use through the damage to their health and fish farming since around 1970. The other farmers who are becoming engaged in organic farming have learned the importance of ecosystems through the FFS since 1989. It is suggested that the FFS has played an important role in introducing organic farming in Central Java. In addition, the distribution channel of organic rice has been established and the demand for organic products is increasing although the
certification system has not yet been implemented. The higher price for organic products is a major incentive for farmers to switch to organic farming. Some farmers have also noted that organic farming provides an opportunity to become independent of the industrial sector.

Future research
Although Indonesia is not self-sufficient in rice, the country has discontinued subsidies for agricultural inputs. It is natural for farmers to shift to the cultivation of more profitable crops, even though the yield of organic rice is lower than that of conventional rice. Since the organic movement in Central Java depends on the upper middle class customers who continue only ask for organic products, higher prices can be maintained. Therefore, the sustainability of organic rice farming should be considered, and a more extensive economic analysis of organic farming should be conducted.

On the other hand, certification for organic agricultural products is important in developed countries. Consumers in Yogyakarta trust dealer S and organic farmers without the need for certification. Although presently the customers do not appear to be concerned about the certification of organic products, it is important to continue analyzing the consumers’ behavior toward the organic farm products.

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Endnotes
a) Rice is the major staple food in Indonesia. The organic rice farming movement was initially launched in Yogyakarta and spread throughout Central Java. Yogyakarta is considered to be the most progressive area toward the organic movement compared with other regions in Indonesia.

Future research
b) The main objective of the NGO is to alleviate poverty. They supported dealer S to establish an organic rice distribution channel independent of the commercial sector.
c) The logo is printed on the package of rice as a trademark. A description of rice as “organic rice, pesticide-free, healthy” is given underneath the logo.
d) Farmers are trying to produce pesticides from ash, neem leaves, neem oil, garlic, tobacco, and coconut oil.
e) Endrin is an insecticide which was used mainly for field crops such as rice, sugarcane, and maize. The nervous system is its main target of toxic action. In humans it can cause excitability and convulsions within a few hours of exposure. Endrin is also very toxic to fish. Once widely used in Japan, its sale and use for agricultural purposes were prohibited in 1971.

References