Farmer Knowledge, Awareness and Attitudes towards Organic Paddy Farming in the Kurunegala District

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Abstract

The increasing demand for organically grown food products and the increase of awareness of the need of protecting land resources against the long-term impacts of non-organic farming have led many farmer groups in the paddy producing areas to convert into organic paddy farming. This study was carried out with the aim of examining the level of knowledge and awareness and the attitudes towards organic paddy farming in the Kurunegala District. The data were collected primarily from a questionnaire based survey by means of face-to-face interviews from a sample of sixty paddy farmers of six Divisional Secretariat Divisions in the district. Farmer were well aware about the conventional organic farming practices even though they have less knowledge about the concepts of organic farming and the technical aspects of the practices. Mean scores were calculated from the responses given by the farmers to the attitudinal statements which was ranging from one to five. The results revealed that the farmer attitudes are positive towards organic paddy farming with the view of extended benefits and health impacts. However, farmers were not satisfied about the performances of organic product output with compared to non-organic product performances. The study suggests that mainstreaming of available agricultural policies that enhance the organic paddy farming in order to meet both local and international demand for green products is a timely need.

Key words: Attitudes, Awareness, Knowledge, Organic farming

Introduction

Organic farming is gaining popularity in all over the world today as it can diversify agricultural production system toward attaining improved productivity, farm income and food safety and seen as a sustainable alternative to chemical-based agricultural systems. International Federation of Organic Agriculture Movements (IFOAM) has defined organic agriculture as "a process that develops a viable and sustainable agro ecosystem" (IFOAM, 2000). Organic methods have been adopted more rapidly in many industrialized countries than in the third world (Lampkin and Padel, 1994). Interest in organically produced food is increasing throughout the world in response to concerns about intensive agricultural practices and their potential effect on human health as well as on the environment. Organic farming is not widespread in Sri Lanka though there is a growing interest for organic products. The increasing environmental awareness and the health concern among the people however, have led to increase the farmers engage in organic cultivation though the number is very low. There are many non-governmental organizations trying to promote this type of farming (Smith, 2002). According to IFOAM and FiBL (2006), the number of farmers engaged in organic agriculture in Sri Lanka during the year 2006 is 3,300 occupying 15,215 hectares which is only 0.65% of total cultivated land.

In Sri Lanka, rice is not only the staple food, but also a main source of income providing jobs for most villagers. From the very ancient days, increasing rice production has been one of the priorities of the Sri Lankan agricultural development. It is not only to meet the growing demand of rice, but also to improve farmer income and to support food security. Like other rice producing countries, planting high yielding varieties and adding more mineral fertilizers are widely

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implemented to elevate rice and land productivities. In this light, the specific objectives of this study were to assess the level of knowledge and awareness on organic paddy farming in farmers in Kurunegala District and to evaluate their knowledge, awareness and attitudes towards organic paddy farming.

Materials and Methods

The data collection was limited only to six randomly selected DS Divisions in Kurunegala District due to the time constraints of the study. Data were collected from ten randomly selected paddy farmers from each DS Division (n=60), during March to April 2013. A pre-tested structured questionnaire was administered to gather the data from the respondents via face-to-face interviews. The questionnaire was consisted of three main question categories including; (1) general information of the farmers, (2) knowledge and awareness on organic paddy farming and (3) attitudes towards organic farming. The knowledge on organic paddy farming was investigated through simple-dichotomy statements (*i.e.* True/ False) whereas the attitude was measured by using five-point Likert scale statements ranging from strongly disagree to strongly agree. The data were analyzed by employing descriptive measures such as means, percentages etc. Using the scores provided by the respondents to the given statements mean scores (*i.e.* ranging from 1-5) were calculated and used to compare between the statements.

Results and Discussion

The knowledge on organic farming was investigated through ten simple-dichotomy statements (*i.e.* True/ False). The percentage of "True" answer for each statement was calculated and the statements along with their responses are ranked as follows: (1) Use chemical fertilizers to increase plant growth (98.3%); (2) Use chemical insecticides to control insect pest (98.3%); (3) Use chemical herbicides to control weed (96.7%); (4) Do not control weed manually as it will only waste time (93.3%); (5) Use kitchen wastes, plant wastes and animal wastes to fertile soil (83.3%); (6) Any sort of prior knowledge has been gained on organic paddy farming methods (43.3%); (7) Do composting to improve soil fertility and water conservation (33.3%); (8) Rotate crops to control weed, pest and also to improve soil fertility (16.7%); (9) Limit the use of chemical pesticides to control pests (5.0%) and (10) Choose resistant paddy varieties to reduce damage to plants (3.3%). As per the results, majority of the respondents (98%), aware only about the inorganic fertilizers and pest control measures as they are commonly available, easy to use and generate quick results. Ninety three percent of the farmers stated that, they perceive organic methods such as manual weeding are effective but time consuming compared to chemical controls such as the use of herbicides. Interestingly, 83% of the farmers aware that they can use kitchen wastes, plant/animal wastes to increase the fertility level of the soil and, a considerable percentage (33%) was aware about the use of compost to improve the soil structure and fertility. Indicating highest percentages for inorganic or chemical cultivation systems reveals that farmers in Kurunegala District are not well aware on the organic paddy farming practices.

The data on the attitudes towards organic farming were gathered on eight attitudinal statements prepared based on various aspects of organic farming. Respondents were asked to indicate their score from one to five based on the level they accept the particular statement. The statements were: (1) Organic farming will decrease the production cost by reducing the input purchases (S_1), (2) Chemical pesticides are more suitable to control pests (S_2), (3) Chemical herbicides are more suitable to control weeds (S_3), (4) Organic farming will only troublesome the farmers as it needs

more attention (S_4), (5) Organic farming is difficult to implement due to difficulties in obtaining organic matters (S_5), (6) Organic farming will only be benefiting the consumers not the producers (S_6), (7) Organic farming is effective in increasing the texture and fertility of soil (S_7) and (8) Organic farming can increase the income of farmers (S_8). The mean scores were calculated for separate statements to evaluate the attitudes of average respondent with respect to each statement (Figure 1).

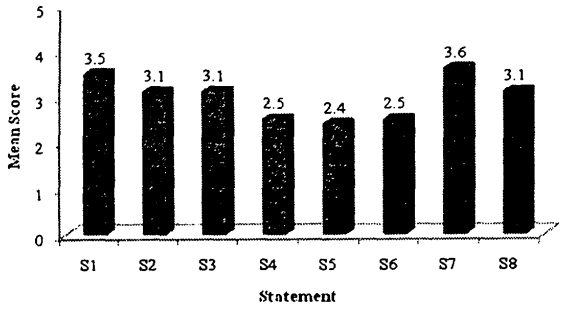

Figure 1. Attitudes towards organic paddy farming

The majority of the respondents agreed on the effectiveness of organic farming systems on improving soil texture and fertility with a mean score of 3.6. Farmers also agreed on the ability of organic farming to reduce the cost of production by reducing the input cost with a mean score of 3.5. Famers were in an indifferent situation with the suitability of using organic products to control weeds and pests compared to non-organic products. Also, they disagreed on the statements (*i.e.* S_4, S_5 and S_6) which reflect the barriers of adapting organic farming systems and disadvantages of it with mean scores of 2.5, 2.4 and 2.5, respectively (Figure 1).

The results suggest that farmers are having positive attitudes towards organic farming and its' extended benefits as majority of them were agreed on positive statements which reflect the advantages of organic paddy farming by getting a mean score of more than three. But, still they were indifferent about the effectiveness of organic farming systems with respect to non-organic systems especially in the situations where they demand immediate results.

This study explored the knowledge and awareness of paddy farmers about organic farming systems and how they perceive the importance of shifting into organic farming while concerning its extended benefits. The outcome of the study suggested that farmers are aware on most common practices of organic paddy farming but still, not knowledgeable enough on technical aspects which help them to understand the concept and the practices of organic farming. However, majority of the farmers are aware on general concepts of organic farming. The outcome of the study, as a result, highlights the importance of augmenting the awareness of farmers on more technical aspects of organic paddy farming. The Rice Research and Development Institute of Sri Lanka can take the lead of this initiative as they already possess a separate division for organic farming. It is also recommended to strengthen the available agricultural policies introduced by the government related to organic paddy cultivation in order to encourage the farmer involvement.

References

IFOAM, 2000. IFOAM Basic Standards. International Federation of Organic Movements, Tholey-Theley, Germany.

IFOAM and FiBL, 2006. The World of Organic Agriculture. Statistics and Emerging Trends 2006. International Federation of Organic Agriculture Movements (IFOAM), Bonn and Research Institute of Organic Agriculture FiBL, Frick. pp. 108-117.

Lampkin, N.H. and Padel, S. 1994. The Economics of organic farming: An international perspective. CAB International, Wallingford, UK.

Smith, R.T. 2002. Organic farming sustaining earth and people. Centre for Organic Agridevelopment in association with Environmental Economics and Global Affairs Division of the Ministry of Environment and Natural Resources. pp. 68.