

学位論文要旨 Dissertation Abstract

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学位論文題目 : Production Efficiency and Marketing System of Vegetables in Bangladesh
(バングラデシュにおける野菜の生産効率とマーケティングシステム)

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This study aims to provide an in-depth understanding of vegetable production efficiency and marketing system in Bangladesh. Specifically, the study is composed of six main chapters; providing for two areas: vegetable production efficiency and vegetable marketing system in Bangladesh.

The first chapter examined the farmer's production efficiency of bean and cauliflower in three districts namely, Mymensingh, Cumilla, and Rajshahi of Bangladesh. Primary data were collected from farmers by using a pretested semi-structured questionnaire. Results showed that cauliflower and bean productions were profitable in the case study areas. Low price of vegetables and lack of capital were the major problems of farmers. Correlation analysis indicated that farmer's age, education, number of agricultural training, numbers of extension contacts, and farmer's homestead area were significantly and negatively correlated with problem confrontation.

The second chapter addressed farmer's production efficiency of brinjal in three districts namely Mymensingh, Rajshahi, and Cumilla of Bangladesh. Primary data were collected from brinjal producing farmers by using a pretested semi-structured questionnaire. The study found that brinjal production was profitable. Correlation analysis indicated that farmer's education, total family member, homestead area, vegetable cultivation area, no. of agricultural training, no. of extension contacts, and farming experience were significantly and negatively correlated with problem confrontation. Low prices of

vegetables were the first ranked order problem and lack of capital ranked second in the study areas. Department of Agricultural Extension (DAE) should provide hands-on training on diseases, insects, and pests management for increasing production.

The third chapter studied farmer's production efficiency of tomato in three districts namely Mymensingh, Rajshahi, and Cumilla of Bangladesh. Primary data were collected from tomato producing farmers by using a pretested semi-structured questionnaire. The result showed that tomato production was profitable though farmers faced different problems.

The fourth chapter outlined farmer's production efficiency of bottle gourd production in three districts namely Mymensingh, Rajshahi, and Cumilla of Bangladesh. The study also highlighted input use efficiency and farmer's problems. Primary data were collected from bottle gourd producing farmers using a pretested semi-structured questionnaire. Results showed that bottle gourd productions were profitable in the three districts. Per hectare yield of bottle gourd was significantly influenced by the use of urea, Triple Super Phosphate (TSP), Muriate of Potash (MoP), Zinc, cow dung, and pesticides. Low prices of bottle gourd ranked the first problem for all areas.

The fifth chapter detailed about profitability and technical efficiency of bean, brinjal, and tomato production in Bangladesh. Primary data were collected through a field survey of 213 vegetable producing farmers selected by multi-stage random sampling technique in three districts namely Mymensingh, Rajshahi, and Cumilla of Bangladesh. The study found that bean, brinjal, and tomato production were profitable in the study areas. The results showed that agricultural training and the number of adult households reduced the vegetable producers' inefficiency. Overall technical efficiency was 87.3 % and there was an opportunity for increasing technical efficiency by taking different management practices. Lack of capital and low prices of vegetables were the major problem of farmers.

Lastly, the sixth chapter studied the vegetable marketing system and roles of middlemen in Bangladesh. The study investigated major marketing channels, identified market actors and their function. Data were collected primary sources from 354 farmers and 129 middlemen by using a pretested semi-structured questionnaire. The results showed that farmers, Faria, Bepari, Aratdar, and retailers were the major market actors in the study areas. Middlemen were followed different payment methods, price fixation procedures and they graded and stored their vegetables. Most of the intermediaries bought vegetables from farmhouses and village markets and sold them mostly in the urban markets. Among the market intermediaries, net margin was highest for Bepari and lowest for retailer. Middlemen used different sources of market information in their marketing activities and mobile phone was very popular for collecting price information.