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An analysis of technical efficiency in production of mungbean (*Vigna radiata* L. Wilczek.)

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ABSTRACT

A socio-economic survey of farmers cultivating mungbean in summer as well as *kharif* seasons was undertaken in Faridkot (Punjab), Sikar (Rajasthan), Ghaziabad (Uttar Pradesh) and Muzaffarpur (Bihar) districts of India. Two hundred farmers were surveyed during 2003-04 and data on various aspects of mungbean cultivation were elicited in order to examine technical efficiency in production of Mungbean. The results of the study showed that the mean technical efficiency in mungbean production was 56 per cent. This indicated that even with the existing level of production technology yield could be increased substantially by removing inefficiencies. Policy implication stemming from this is that it might be more cost-effective to achieve short run increases in farm output, and thus income, by concentrating on improving efficiency rather than sole dependence on introducing new technology. The technical efficiency could be increased with the help of a number of policy instruments such as improving marketing facilities, creating irrigation infrastructure, better education and providing better access to credit facilities. The present case study has policy implications for increasing the production of other pulses as well, particularly under a background that there is no effective procurement of pulses in the country. Reduction in the unit cost of production through improvement in technical efficiencies will lead to greater income and will be highly effective in encouraging pulses production in the country.

Key words : Mungbean, Survey analysis, Technical Efficiency

INTRODUCTION

Pulses are a major source of protein for an overwhelming proportion of Indian population. They fulfill 20-30 per cent protein requirement of Indians. Among the pulses, mungbean ranks third in production after Bengal gram (33% share) and red gram (21% share) in India. It has 24% easily digestible protein and its iron content is about 6 mg 100 per gram dry seed. Apart from dietary advantages, it also fixes nitrogen in soil. The area under the crop has declined in India from 3.49 million hectares in 1991-92 to only 1.50 million hectares in 2000-01. Production for the same period has declined from 1.42 million tonnes to 0.41 million tonnes. (Grover et. al., 2006). Following the criteria evolved by the Indian Council of Medical Research (ICMR), the annual requirement of pulses is about 18 million tonnes. Thus the availability and supply of Mungbean can have an important bearing on the health and well-being of the people (Sathe and Agrawal, 2004).

Farmers' preference of pulses for unirrigated and poor quality lands is one of the major causes for its low productivity. The other important cause for low productivity is lack of any major technological breakthrough in pulse production technology. However, even at the given level of technology there is 38 per cent of gap between improved practices and average farm practices. This motivates for finding ways to increase the technical efficiency at the farm level by improving the managerial practices and socio-economic policies for the crop.

MATERIALS AND METHODS

Primary data were collected for the study through farm level surveys of four districts of Indo-Gangetic plains, each representing a distinct farming system. A sample of 50 farmers was selected from a cluster of villages from the districts of Faridkot (Punjab), Sikar (Rajasthan), Ghaziabad (Uttar Pradesh) and Muzaffarpur (Bihar), making a total of 200 farm households for detailed survey. Data on the input use and socio-economic characteristics were collected during the agricultural year 2003-04. A summary of the different socio-economic variables used in the analysis is presented in Table 1.

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