

Internation Research Journal of Agricultural Economics and Statistics Volume 4 | Issue 1 | March, 2013 | 73-78



Research Paper

Factors influencing the efficiency of cotton farmers in Tamil Nadu

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Paper History:

Received: 24.12.2012; Revised: 07.02.2013; Accepted: 08.03.2013 ABSTRACT: The study estimates the efficiencies of cotton farmers in Tamil Nadu state using primary data obtained from six districts that were mostly involved in cotton production. Results showed that farmers' technical efficiencies varied across the districts and across the various farm size categories. While the general mean efficiency was 59 per cent, it was 66 per cent for marginal farmers; 87 per cent for small farmers and 55 per cent for large farmers. The results implied there was a considerable scope for improvement in production. Generally, fertilizers usage has significant positive effect on yield, insecticides usage showed significant negative effect under marginal farmers, while labour expenditure has significant positive impact on efficiency. It was also observed that higher educated farmers were less inefficient, older marginal and small farmers were less efficient while large farmers became more efficient with increasing farm size and longer years of experience. Based on the analysis results, it is suggested that policies should be formulated in view of the underlying constraints peculiar to the districts and farm size categories. Farmers should be provided with means to employ adequate labour for farm activities and there should be significant investments in production technologies that can improve fertilizers and insecticides usage in order to improve production efficiency and to meet increasing population demand for cotton.

KEY WORDS: Efficiency, Cotton, Translog

HOW TO CITE THIS PAPER: Efe-Omojevwe, Zelda (2013). Factors influencing the efficiency of cotton farmers in Tamil Nadu, *Internat. Res. J. agric. Eco. & Stat.*, 4 (1): 73-78.

Introduction

Cotton is very important to the Indian economy because it provides gainful employment for millions of people as well as source of foreign exchange for the country. Cotton fibre is an important raw material requirement of the Indian textile industry. Although India has the largest area under cotton; the average productivity of Indian cotton is the lowest in the world; much lower for the vast production area and this is a cause for concern because millions of people depend on cotton cultivation for their economic wellbeing (Ramasundaram and Gajbhiye, 2001).

Tamil Nadu state has a geographical area of 130 lakh hectares of which 48.92 lakh hectares was net cultivated area during 2009-10 and about 91 per cent of the total land holdings in the state belong to small and marginal farmers. Cotton is an important commercial crop of the state and about 71 per cent of the cultivated cotton is grown under rain-fed conditions. Cotton

cultivation has acquired more and more significance due to the continued increase in the requirement of cotton to meet the needs of an ever-growing population (Balasubramami *et al.*, 2000).

Production efficiency is the capacity to produce at minimum costs. That is, maximizing output while minimizing the use of inputs. The objective of this study is to measure the efficiencies of cotton farmers in Tamil Nadu and to determine the factors influencing their technical efficiencies in order to make informed recommendations.

In Adhikari and Bjorndal (2012) analysis of the technical efficiency of Nepalese agriculture using stochastic distance function (SDF), a high degree of technical inefficiency was observed; indicating a substantial prospect of increasing agricultural productivity by using the existing level of inputs and resources more efficiently. Yusuf and Malomo (2007) examined the efficiency of poultry farming in Nigeria using DEA and identified that most of the farmers were on the