



Research Paper

Study on cotton productivity with application of DEA in Maharashtra

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ABSTRACT : In western Maharashtra's agriculture, comparatively the farmers have a low literacy rate and there are poor extension services and inadequate physical infrastructures and hence farmers face difficulty in understanding new technologies. Therefore, they fail to fully exploit any given technology. In the light of the above facts, an increase in agricultural production can come from an increase in the production efficiency. Hence, it is essential to know how well the resources are being used and what possibilities exist for improving the efficiency of cash crops production. In this context, the present investigation has been undertaken to estimate the technical, allocative and economic efficiency and subsequently to investigate the determinants of technical, allocative and economic inefficiency of cotton in western Maharashtra. The extent of reduction in input cost for small cotton farms for the year 2006-07 has been found to be Rs. 4117.92. Similarly, total cost reduction of Rs. 4773.64 and Rs. 4482.71 for the years 2007-08 and 2008-09, respectively. In case of medium farmers for the year 2006-07 it was Rs. 1150.72 and it was Rs. 2891.78 and Rs. 1721.49 for the years 2007-08 and 2008-09, respectively. The large farms could minimize the cost upto Rs. 1837.55. Similarly, total cost reduction of Rs. 2888.36 and Rs. 1006.23 for the years 2007-08 and 2008-09, respectively by using a new cost efficient input mix. Increasing land holding and farm size has substantial benefits for efficiency improvement as the allocative efficiency in production of crops is influenced by land holding *i.e.* cash availability. The policy implications from the study suggested that there is a need to reduce the gap in the use levels of manure and fertilizers and optimum use. Optimum utilization of all other resources by the farmers will have to be ensured for higher production by passing on the crop production technologies to them by using the effective extension measures like regional extension centers, district extension centers, Agri- clinic centers etc coupled with effective purchasing power through certain economic measures like credit supply, subsidy, etc.

KEY WORDS : Application, DEA, Cotton productivity

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