ABSTRACT

Technological change ensures avenue for the use and adoption of improved practices for achieving higher productivity. The progress in development of technologies in sericulture in the recent past has lead to diversification and increase of production and greater economic returns to the farmers. Besides the adoption of new robust bivoltine hybrid silk worm races, the use of high yielding mulberry varieties, quality compost/manure, chemical fertilizers, plant protection chemicals, disinfectants in rearing, etc, have been the technology components which have added to productivity in sericulture. However, the adoption of technologies in sericulture at the farmers’ level is affected by a number of field constraints and it still remains uphill task for the diffusion of innovations, primarily due to diversified end users in the field. In addition, efficiency in production assumes vital importance as it involves committed use of some important resources of production. In view of the importance attached to the changes in the level of productivity, income and employment due to level of adoptability of technologies, it necessitates the analysis of the existing farming situation. In this regard the present study focuses on the objective of analysing the impact of technologies in sericulture in Karnataka State.

An attempt has been made in the present study to investigate the constraints in production, and productivity of sericulture. Prevalent inefficiency in production which has lead to yield gaps between the farmers and the research station also has been addressed for a necessary refinement of technologies. Using the production function framework, the structural break in production has been worked out, accounting for the sources of output growth and for evaluating the effects of new technology on factor shares. The decomposition of output growth into the technical change and increased level of inputs used, has been further adopted to workout the returns to investment in research. The analysis of farm specific technical efficiency among the sericulturists in the study area has been done to compare the empirical performance of two popular approaches to estimation of technical efficiency in production: Corrected Ordinary Least Squares Regression (COLS) and Stochastic Frontier Production Function (SFPF). The analysis revealed higher inefficiency rates among the low adopter categories of Cross Breed silkworm rearers than the bivoltine silkworm rearers. An analysis of impact of adoption of technologies in sericulture on level of productivity was analysed using a discriminant function analysis. Further a logit function for the identification of the socio-economic determinants was also fitted.