

Estimation of Economic Viability of Scientifically Advanced Cultivars of Apple through Bootstrap Inferences and Propensity Score Matching Methods in Kashmir Valley

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Abstract

Scientifically advanced apple cultivars have been introduced in the union territory of Jammu and Kashmir with a view to make optimal utilization of available land resources to maximize production and productivity of apple especially superior grade. The new cultivars came into bearing after 3-4 years of its planting. The traditional plantation system with a long gestation period of the plantation (8-9 yrs.) yielded too low per unit of land besides it involved hectic and cumbersome management practices. Scientifically advanced cultivars are different from traditional plantations in plant density, productivity, gestation lag, management practices etc. The study employs propensity score matching for making reliability of the ex-post analysis and results revealed that productivity of apple increased which intern yield high returns to the farmers up to Rs. 1200000/ha⁻¹. The study further reveals that despite high establishment costs, new cultivars benefited apple growers through early fruit bearing, higher productivity and employment generation in the region.

Key words: Propensity score, ex-post, cultivars, productivity, fruit bearing.

1. Introduction

Kashmir is home to temperate fruits like apple, pear, peach, plum etc. owing to its soil, climate and environment. Grown on an area of 3.31 lakh hectares (2018-19)

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