

ABSTRACT

Horticultural sector is an important sector in production of food and generation of income. According to Kenya's vision 2030, crop cultivation is one of the main pillars of unlocking the potential of Kenya through increased productivity. The importance of snow peas is increasing greatly due to its high demand especially in Europe. In spite of the benefits associated with the production of snow peas, farmers in Nyandarua county have been withdrawing from its production probably due to low profitability. Profitability can be founded in technical inefficiencies. Studies on technical efficiency of snow peas are limited. This study was aimed at determining the level of efficiency of small scale farmers in Nyandarua County and categorizing them into two categories on the basis of their efficiency. The study also determined the impact of snow peas production by comparing adopters and dis-adopters in terms of their annual income, assets and expenditure. The study was conducted in Kinangop sub-County, Kenya in three wards Engineer, Gathara and Kinangop whose main economic activity is farming. The study utilized multiple stage sampling method where 267 samples were collected. A structured questionnaire was used to solicit information on socio-economic, institution, market and physical factors from small scale snow peas farmers. Stochastic frontier, and tobit regression models and propensity score matching were used to analyse the data. Stata and Statistical Package for Social Sciences (SPSS) software were used for the purpose. Results showed a wide variation between the most efficient farmer and the less efficient farmer. The efficiency scores ranged from 0.3 to 0.9 with a mean of 0.7 which means, farmers can reduce input application by 30% without affecting output. The study found that what characterized farmers in the first cluster of most efficient farmers were; high level of annual income, many years of experience in farming and fewer years in formal education. Again, the study revealed that the most efficient farmers came from Gathara and Engineer wards. It was noted that being in on-farm activities alone as compared to being in both on-farm and off-farm activities increased the level of efficiency of snow peas farming. Receiving extension services and having a higher level of annual income had a positive effect on the level of technical efficiency. In addition, more years in formal education was depicted to have a negative relationship with efficiency. Impact assessment results indicated that participating farmers had high levels of annual income, assets and expenditure compared to non-participating farmers. Due to the role played by snow peas production in improving the welfare of farmers, they should not withdraw from its cultivation but should rather enhance

technical efficiency by forming snow peas farmers group and seek extension services concerning snow peas growing.