

ABSTRACT

Small farmer commercialization was an indispensable pathway towards sustainable food security based on production specialization of food crops. The common staple food crops in Mwala and Yatta sub-counties which are the main semi-arid areas in Machakos County were green grams and pigeon peas. However, the factors affecting productivity and the resultant output for commercialization are not fully understood. The main objectives were therefore to assess the extent and determinants of the levels of commercialization, estimate the factors affecting productivity of green gram and pigeon pea, determine the effects of productivity and output retention on size of marketed surplus of green gram and pigeon production and assess the factors affecting market performance. A survey method was used during data collection where 364 households and 110 grain traders were sampled. Results shown by the descriptive statistics indicated that, the percentages of subsistence and commercial oriented households, focusing on green gram were 79.1% and 20.9%, respectively. The percentages of subsistence and commercial oriented households, focusing on pigeon pea production were 87.9% and 12.1%, respectively. The mean productivity of green gram in the subsistence, semi-commercial and fully commercial farms were 11.581, 104.474 and 204.439 kilograms per hectare, respectively. Pigeon pea mean productivity was 43.334, 48.25 and 13.708 kilograms per hectare in subsistence, semi-commercial and fully commercial farms. Marketed surplus of green gram was determined by the size of landholding (4.422***), yield of green gram (0.056***), retention for seed and given away (1.027**) and production systems in agro-ecological zones (43.613***). Significant increase in pigeon pea marketed surplus was due to household's retention for seed (2.064***) and market price of output (1.641***). In terms of market degree of competition, results showed that, few large traders of green gram, about 8.26 % accounted for 78.40% of the total volume purchased. Few large traders of pigeon pea, about 8.27 %, accounted for 72.13%. Therefore, this study concluded that, subsistence level dominated in green gram and pigeon pea production. This could have been influenced by low productivity of green gram and pigeon pea, low household marketed surplus and low market competition. Based on the results, various policy concerns were recommended for transforming subsistence-oriented production into market-oriented production focusing on green gram and pigeon pea food crops.

Keywords

Green Grams and Pigeon Peas in Machakos