

Abstract

Strong gradients of decreasing soil fertility are found with increasing distance from the homestead within smallholder farms in Vihiga-Kenya. Nutrient use efficiency varies strongly between fields along these gradients of soil fertility. There is continuous accumulation of nutrients in areas around the homestead at the expense of nutrient depletion in further and larger fields. Unequal distribution of nutrients on the farm causes differences in yield with more yields being obtained in some areas on the farm than others. This has affected the overall crop yield and general wellbeing of the households on the smallholder farm. This study therefore undertook an evaluation of the economic benefits of the various fields belonging to smallholder farmers. This was an effort to recommend strategies aimed at improving soil fertility levels to nutrient deficient fields. The objective of the study was to determine Economic Net Benefits across the fields on smallholder farms in Jinja and Vihiga. A division of the smallholder land into three farm portions of Near House (NH), Mid Farm (MF) and Far Farm positions with respect to distance from the homestead was done. An onion design layout was adopted to refer to these reference points. A household survey was administered to 76 households from in Vihiga. Using data on the gross margins collected from farmers, the Economic Net Benefits of various fields found on smallholder farms were calculated. Data was analysed using SPSS version 14. T test analysis showed a high significant difference of $P \leq 0.001$ in Economic Net Benefits between the (NH and MF) and (MF and FF) positions. Differences in Economic Net Benefits across the farm as a result of differences in soil fertility occasioned by unequal resource allocation might have implications in the economic as well as nutritional wellbeing of the household members. Appropriate intervention therefore need be instituted.