

Economic Potentials of Plantain and Fluted Pumpkin Intercropping as a Poverty Reduction Strategy in South-Western Nigeria

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Abstract:

In this study, economic potential of intercropping of fluted pumpkin (*Telfairia occidentalis*, Hook. F) - a short gestation crop, with plantain (*Musa AAB*) a high yielding perennial crop as a poverty reduction strategy is examined. A total of 27, 10m x 12m experimental plots, were cultivated over a two year periods (2006-2007) with nine (9) treatment combinations consisting of *Telfairia* and/or plantain established either without manure application or with 40ton/ha/year or 80ton/ha/year poultry manure application. The plant population consists of 16 stands of plantain (4m x 2.5m apart) and/or 240 stands of *Telfairia* (1m x 0.5m apart in the alleys of plantain). Data collected from each plot include weight of fresh vines of *Telfairia* harvested at 1m height above the ground every 2weeks from the fourth week of planting, number of plantain suckers and weight of fresh fruit harvested and production resource used. The data were analysed by descriptive and budgetary techniques as well as by analysis of variance (ANOVA). The study finds that (a) the gross margin in the first year is significantly higher ($p < 0.05$) on an average plantain- *Telfairia* plot than an average sole plantain plot and not significantly different from what obtains on an average sole *Telfairia* plot; (b) *Telfairia* production is significantly ($p < 0.01$) more labour intensive and characterized with significantly ($p < 0.05$) lower benefit-cost ratio than plantain production; (c) gross margin and benefit cost ratio over the 2-year experimental period are significantly ($p < 0.05$) higher on an average plantain- *Telfairia* plot than what obtain on an average sole *Telfairia* plot, but are in most cases not significantly different from what obtains on an average sole plantain plot; and (d) application of poultry manure significantly ($p < 0.05$) raise returns from both plantain and *Telfairia* production, with the optimum rate of application being 80 ton/ha for sole plantain as well as plantain- *Telfairia* inter crop and 40ton/ha for sole *Telfairia* production.

Keywords

Plantain % *Telfairia occidentalis* % Intercropping % Economic potential % Poverty reduction JEL: Q10 % Q12 % Q18