Farming Systems and Policy Options for Food Security in Southwestern Nigeria

Eunice Obamiro[1], Werner Doppler[2], Patrick Kormawa[3]

[1] *International Institute of Tropical Agriculture (IITA), Social Science Lab, Nigeria*

[2] *University of Hohenheim, Institute of Agricultural Economics and Social Sciences in the Tropics and Subtropics, Germany*

[3] *International Institute of Tropical Agriculture (IITA), Department of Economics, United Kingdom*

Abstract

Farming systems analysis is a holistic approach to the understanding of total livelihood and food security of farm families. A sound knowledge of the prevailing farming systems in an agro-ecological zone is pertinent to the generation of agricultural and food security policies for farming families. This ensures that innovations to be developed are suitable to meet the economic needs of the various homogenous groups and have a high probability of being accepted by the farm families.

An earlier study identified seven factors as some of the proxy variables representing the pillars of food security in rural Nigeria. The study was carried out among 150 farm families in rural areas of Osun state. This present study classified the same set of farm families into two farming systems from the same set of data (perennial and permanent rain fed farming systems). The classification is necessary to determine if there are differences in the factors discriminating between the food secure and insecure between each of the farming systems. Perennial specializes in the cultivation of crops designated as both food and cash crops, while permanent rain fed cultivates only food crops.

Data from the same set of families were utilized along with the backward stepwise discriminant analysis. 19 proxy variables representing the three pillars of food security were captured. Results show that there are both similarities and differences in factors determining food security of families between the homogenous groups of farming systems, which is a reflection of the peculiar features of each system. For the perennial farming systems, 5 variables: household size, farm size, percentage off farm income, number of days loss to illness and per capita income per day are significant. For the permanent rain fed farming systems, 4 variables: accessibility to the market, number of days loss to illness, per capita income per day and amount spent on illness are significant (ranked in the decreasing order of their relative contribution to household food security for each system).

Keywords: Discriminant analysis, food security, farming systems, perennial, permanent rain fed

Contact Address: Eunice Obamiro, International Institute of Tropical Agriculture (IITA), Social Science Lab, Oyo Road, Idi Ose, 200001 Ibadan, Nigeria, e-mail: e.obamiro@cgiar.org