



Tropentag, September 14-16, 2022, hybrid conference

“Can agroecological farming feed the world?  
Farmers’ and academia’s views”

## Farm typology and farming households livelihood: a case study of Osun State, Nigeria

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### Abstract

Agriculture remains the primary source of livelihood for the majority of households in developing countries. However, there exists a diversity of farming systems among farming households, arising from variation in household characteristics and resource endowments. This heterogeneity in farming systems interplays with the livelihood of these households. Therefore, understanding the farming systems practised by different farming households can provide a valuable framework for designing development policies and interventions. Hence, the study examined the relationship between the farm typologies and the livelihood of farming households in Osun State, Nigeria. The present study used the data collected from 120 farming households selected through a three-stage sampling procedure to create 3 farm types using the principal component analysis and cluster analysis. Descriptive statistics was used to describe the characteristics of the households selected for the study. The study also adopted the sustainable rural livelihood index to determine the livelihood status of the farming households and the Pearson’s correlation analysis to determine the relationship between the identified farm types and the livelihood of the farming households. Findings from the study revealed that the majority of the households are smallholders with less than 2 hectares of farmland holding. The cluster analysis result revealed that majority (66.7%) of the farming households practise a rainfed farming system characterised by crop-livestock subsystems with major production of food crops and poultry, 22.5% of the households practise an irrigated farming system dominated by crop production with major production of food crops, and 7.5% of the households practise a rainfed farming system characterised by crop-livestock subsystems, with major production of perennial crops (cash crops) and small ruminants. While the livelihood analysis also revealed that majority (68.3%) of the farming households have average livelihood status, the correlation analysis result revealed that the variables determining farm types including age, total land holding, portion of land cultivated, herd size, area of land under irrigation, commercialisation index, and income source are positively associated with the livelihood status of the farming households. Hence, the study provided a basis for designing multilevel interventions aimed at improving the livelihood of smallholder farming households in the study area.

**Keywords:** Cluster analysis, farm typologies, farming households, livelihood, principal component analysis

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