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Crop-Livestock Integration and Food Security among Resource-Poor Rural Farmers in North-Western Nigeria — An Empirical Study from Zamfara State

AJAYI RAPHAEL ADENIYI OMOLEHIN¹, JÖRG STEINBACH², IRENE HOFFMANN³

¹*Justus-Liebig-Universität Giessen, Institute of Agricultural Policy and Market Research, Germany*

²*Justus-Liebig-Universität Giessen, Department of Livestock Ecology, Germany*

³*Food and Agricultural Organisation (FAO), Animal Production Service, Animal Production and Health Division, Italy*

Abstract

Resource-poor rural farmers in north western Nigeria work for multiple goals such as family food security, increased revenues, and production expansion. The most important of these goals to these farmers is the family food security. One major factor that obstructs the attainment of this goal is the maintenance of soils fertility. However, farmers in the study area are generally poor, and unable to afford conventional fertilizers and have thus embraced the local alternative mean of integrating crop and livestock system to enhance the fertility management of their soils. Various forms of integration have been identified based on local peculiarities and practises. One form of integration is a situation in which a farmer combines cropping and animal husbandry under same management while in the other, a farmer involved in cropping exchanges produce with other that specialised in animal husbandry. The first is referred to as closed integration while the second is referred to as segregated integration. This paper describes in detail crop-livestock integration, and shows its capacity to enhance family food security among farmers in the study area. A nine months field survey was conducted in Zamfara reserve in Nigeria from December 2001 to August 2002. Information was collected from the farmers practising various types of integration and those not involved in integration using household level approach on socio-demographic characteristics, resource endowment, production inputs and outputs. Farm budgeting technique was used to determine net farm revenues of farmers. Quantitative analysis of produce consumed and produce sold were also determined. First results shows that farmers with closed integration had average yields of 1953 kg/ha translating to a net income of N 66,262 while farmers with segregated integration had average yields of 1563 kg/ha translating to a net income of N 44,865. On the other hand, farmers that were not involved in integration had the least average yields of 1150 kg/ha translating to a net income of N 22,684. These preliminary results have shown clearly that farmers involved in integration are more food secured, more able to expand outputs and consequently make better returns from their farms.

Keywords: Crop-livestock integration, food security, resource-poor farmers, soil fertility management