



Deutscher Tropentag, October 8-10, 2003, Göttingen

“Technological and Institutional Innovations
for Sustainable Rural Development”

Agro-Ecological Zones, Diversity on Farm Systems Level and Technological Changes — The Case of Northern Malawi

JOHANNES PESCHKE

Humboldt-Universität zu Berlin, Development Planning and Project Management, Germany

Abstract

The presented study postulates that farm households achieve an optimal diversity in order to address the needs of subsistence, income and security depending on the agro-ecological environments. Technological changes by either introducing new technologies or changes in the production line do not have significant effects on the agricultural diversity on farm system's level.

In the presented study 200 semi-randomly selected households were interviewed about their activities in order to measure the diversity of the activities per household in four agro-ecological zones in Northern Malawi. The total number of the activities among all households in each sample area defines the universe for each agro-ecological zone. The total number of activities in each household divided by the activities in the particular universe measures the diversity of the activities within the special farm household.

The total number of activities does not increase from the arid to the humid sample areas. Comparing the total number of activities in the sample areas, it is found that the maximum number of activities is measured in the semi-humid and semi-arid sample areas while the arid and humid areas show less but similar numbers of activities. The diversity is similar among all particular universes. The introduction of new technologies does not have any significant effect on the diversity.

Opposite to biodiversity, agricultural diversity is higher in tropical zones where climatic conditions are more moderate and allow more flexibility to the rural households. The rural household achieves an optimum in the number of activities carried out. The diversifying effects of introducing a new technology are limited. Changes in the production line do not have any effect on the agricultural diversity.

Keywords: Agricultural diversity, agroecological zones, Malawi, small-scale farm