

Emerging and Indigenous Technologies for Climate Change Adaptation in the Farming Systems of Southwest Nigeria: Issues for Policy Action

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This study is premised on the high incidence of severe weather and the rate of climate change, its consequences and challenges among small-scale farmers. Primary data obtained from 362 farmers, 125 extension officers and 14 researchers from the three agro-ecological zones of southwest Nigeria were used to examine the technological and farming systems adaptation to climate change. The data obtained were organised in Microsoft Excel, cleaned and analysed on the Statistical Package for the Social Sciences (SPSS). Most of the farmers are married, formally educated, male Christians with an average age of about 49 years and a household size of 9 persons. The extension officers are mainly married, male, Christians holding a Higher National Diploma (HND) or a B.Sc. and working about 250 farmers each. Half of the researchers are based in Ibadan where most of the research institutes in southwest Nigeria have their main offices. There is a high level of climate awareness among farmers and extension officers. Only location (agroecological zone) provides a significant insight into the variability in farmers' observation among the variables tested. Most of the farmers (65.75%) opine that farming activities such as bush burning, use of agro-chemicals and deforestation contribute to climate change, and some other farmers (96.6% in the swamp zone, 60.8% in the rainforest and 68.3% in the savanna) opine that the main climate change effect on their personal lives is reduction in personal productivity. In terms of climate change effects on farming enterprises, reduction in crop yields was reported by 60% of the farmers.

The main strategies and technologies promoted by extension officers to assist farmers to cope with the effects of climate change in southwest Nigeria are: tree planting (30%), timely planting of crops (6%) and avoidance of bush burning (6%) in the swamp zone. In the rainforest zone, it is provision of small scale irrigation (25%), mulching (16.7%) especially on yam farms, and avoidance of felling trees (8.3%). In the savanna zone the main coping strategies and technologies are: avoidance of tree felling (25.6%), avoidance of bush burning (23.1), small scale irrigation (5.15) and studying weather condition before planting crops (5.1%). The study concluded that there is a general conviction among farmers, extension officers and researchers that crops and forests management technologies are the main tools for adapting to climate change. It is noteworthy however that adapting to climate change is as much a technology issue as an attitudinal one.