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Climate Smart Agricultural Practices Among Maize Farmers: Evidence from Osun State, Nigeria

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Abstract

Background: Given the threat of climate change on agricultural productivity and livelihood of farmers, this study examined the impacts of climate change, perception of climate smart agricultural practices (CSAPs), CSAPs adopted by maize farmers and constraints that limit the adoption in Osun State, Nigeria.

Method: A multistage sampling procedure was employed to select 180 maize farmers from across the State. Structured interview schedule was used to collect quantitative data and analysed using percentage, mean, standard deviation, Chi-square and Pearson Product Moment correlation analyses.

Results: The result showed that the mean age of maize farmers was 49.31 ± 10.47 years, the majority were male (80.6%), married (78.9%), with a mean household size of 7 ± 3 members. 87.2% indicated that climate change negatively affected their maize production. Majority (82.2%) had moderate perception about climate smart agriculture practices. Crop Rotation (mean =2.4), planting of disease resistant varieties (mean = 2.34), and crop diversification (mean = 2.28) were the Key CSA practices adopted by maize farmers. Lack of access to credit facilities (mean = 1.81), and high cost of farm input and resources (mean = 1.80) were the major barriers limiting adoption of CSA practices. Occupation (χ^2= 22.750) were significantly associated with adoption of CSA practices, while household size (r = 0.54), farm size (r = 0.31), perception (r = 0.24), and effect of climate change (r = 0.46) had significant correlation with adoption of CSA practices.

Conclusions: The study concluded that majority of maize farmers employed multiple CSA practices at high level, and recommended that government and relevant stakeholders should subsidize farm inputs and provide functional loans and credit facilities to enhance sustainable maize production in Nigeria.

Keywords: *Climate change impact, Maize production, Climate Smart agricultural practices, Demographic influence, Constraints to climate smart agricultural practices, Maize farmers*