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## Adoption of climate-smart agriculture practices and maize yield among rural farmers in guinea savannah Nigeria

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### Abstract

Adoption of climate-smart agriculture practices like drought-tolerant seeds and conservation tillage boosts maize yield significantly in Nigeria's changing climate conditions significantly. A total of 180 respondents were selected using multistage sampling procedure to investigate adoption of CSAPs and maize yield among rural maize farmers in guinea savannah Nigeria, using copies of well structured questionnaire to access and collect cross-sectional data from the maize farmers. The tools of analysis employed to analyse the stated specific objectives were descriptive statistics, probit model, regression with endogenous treatment effect model and likert scale in analysing the socioeconomic characteristics of the respondents, identifying the adopted prevalent climate-smart Agriculture practices, determination of factors influencing the adoption of climate smart agriculture practices, analyse the impact of climate-smart agriculture practices adoption on maize yield and examining challenges to adoption of climate smart agriculture practice. The socioeconomic results indicates that 75.4% of the farmers are male, majority(79.5%) had primary education, average seasonal extension (7 contacts) and the highest of 63.5% are primarily farmers. Planting of drought-tolerant seed, delayed planting, mulching and the likes were identified as climate-smart agriculture practices commonly used by the farmers. Seasonal extension contacts, experience, education, association membership among others were found to significantly and positively associate with adoption of climate-smart agriculture practices and maize yield in the study area. Insufficient seasonal extension contacts was scored highest among the challenges hindering climate-smart agriculture practices adoption. It was concluded that farmers should be exposed to climate-smart agriculture practices that are locally available and adoptable. It is recommended that more extension education should be made available.

**Keywords:** Climate-smart, guinea savannah, maize yield, probit model