



**FARMERS' PERCEPTION OF SORGHUM (*SORGHUM bicolor* [L.] Moench)
PRODUCTION CONSTRAINTS AND TRAIT PREFERENCES IN NORTH EASTERN
NIGERIA: IMPLICATIONS FOR STRIGA RESISTANCE BREEDING**

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ABSTRACT

The study was conducted to assess farmers' perception of sorghum (*Sorghum bicolor* [L.] moench) production constraints and trait preferences in north eastern Nigeria: Implications for striga resistance breeding. Sorghum (*Sorghum bicolor* L. Moench), is globally an important cereal crop and a major staple crop in sub-Saharan Africa. However, its production is seriously constrained by myriads of biotic and abiotic problems. Combining pest resistance and good agronomic traits can increase sorghum productivity through systematic breeding programs. A field survey was conducted across three (3) States namely; Adamawa, Gombe and Bauchi selected in North Eastern Nigeria. The research was to determine farmers' preferred traits and production constraints, with special emphasis on *S. hermonthica* and its breeding priorities. A multi-stage cluster sampling technique was employed to interview 156 farmers. Analysis of data revealed that majority (77%) of the respondents was subsistence farmers with a mean farm size of 6 hectares. Farmers identified inadequate capital, infestation due to striga incidence, drought and soil degradation as major sorghum production constraints. Incidence of striga was widespread (78.2%) across the three (3) States. About 83% of the respondents agreed that land degradation was the main cause of striga infestation. Majority of farmers (41%) considered yield as the most preferred trait in sorghum followed by early crop maturity (32.6%); and the most popular striga control measure was physical methods. To improve sorghum productivity, farmers preferred traits and production constraints need to be integrated into future breeding programs in order to improve level of adoption of new varieties.

Keywords: Plant breeding, Production constraints, Sorghum, Striga, Trait preference.