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for a healthy and sustainable future”

Morphological Diversity of *Allanblackia Parviflora* in Ghana

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Abstract

Allanblackia parviflora A. Chev. is an indigenous tree species which is found in the rain forest zones of West Africa. It is an under-utilised fruit tree species that has been targeted for improvement as part of efforts to domesticate high-value indigenous multi-purpose trees for fruits and seeds production in Africa. *Allanblackia* has several benefits which include provision of shade, timber, and medicine, but production of edible oil from the seeds is the economically most important use. The *Allanblackia* seed oil is currently being developed as a new agri-business in Ghana, Nigeria, Cameroon and Tanzania. This rural based enterprise would not only increase livelihood opportunities for farmers but also ensures retention of trees on farms for environmental sustainability. There is limited information on natural variation in the phenotypic characteristics of the species in Ghana. The objective of the study was to evaluate morphological diversity in natural and domestic stands of the species. The study was conducted across four provenances in Ghana: The Wet Evergreen, Moist Evergreen, Moist Semi-deciduous South East and Moist Semi-deciduous North West. Data were collected from a total of 100 individuals of *A. parviflora* from natural and on-farm stands, with adequate representation of male and female species, in each ecological area. Morphological data collected includes tree height, trunk height, crown diameter, DBH, age of tree, length of leaf blade, fruit, and seeds, width of leaf blade, fruit and seeds, weight of fruits and seeds, and number of seeds per fruit.

(Results are currently not available since field work was completed on 30.4.2021. Results would be available for poster preparation and presentation at the conference in September 2021).

Morphological diversity among and within natural and domestic populations will be tested using ANOVA in STATISTICA 12 software. The study is expected to provide understanding on natural variation in phenotypic diversity of *A. parviflora* in the four provenances in Ghana. The knowledge and understanding of morphological diversity will guide effective decision making towards domestication of the species in Agroforestry systems.

Keywords: Agroforestry systems , *Allanblackia parviflora*, diversity, morphology