Morphometric and agronomic characterization of 56 ginger landraces in Burkina Faso

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ABSTRACT

Objective: This study aims to characterize and assess the variability within the ginger accessions growing in Burkina Faso for morphometric and agronomic traits in order to identify appropriate strategies for the future breeding program.
Methodology and Results: The experiment was conducted with 56 accessions in Randomized Complete Block Design with four replications. Moderate diversity was observed for morphometric and agronomic characters. The linear Pearson's correlations between rhizome yield and rhizome weight per plant were significantly positives with the other characters, except days taken to maturity, which were negatives. Plant height was strongly associated with number of leaves, leaf length and rhizome width. The accessions gathering into two groups is not made according to their origin, but mainly on the basis of the characters such as rhizome yield, rhizome weight per plant, rhizome length, and plant height.
Conclusion and application: The ginger germplasm characterization is useful and has made it possible to understand the basic information for development of a scientific strategy for the efficient conservation of ginger. Strong associations between yield components and plant seize are important selection indices of rhizome yield and may be emphasized in the breeding programs for genetic improvement. Moreover, the model of clustering of the accessions can be used as a base for the choice of genotypes with interesting agro-morphological characteristics for the improvement of ginger productivity.
Keywords: *Zingiber officinale* Rosc, evaluation, variability, rhizome