



MORPHOLOGY, GROWTH VARIABILITY AND CHEMICAL COMPOSITION OF INDIAN AND NIGERIAN ACCESSION OF OCIMUM SPECIES GROWN IN INDIA

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ABSTRACT

Demand for medicinal plants is increasing by the day, due to their health benefits. In this study, the morphological attributes, proximate, mineral and phytochemical compositions of Indian accessions of *Ocimum sanctum* and *Ocimum gratissimum* as well as that of *Ocimum gratissimum* (Nigerian accession) grown in India under greenhouse conditions were investigated. *Ocimum* leaves showed significant variations in their morphometric attributes and these attributes increased with increasing days after planting. The leaves were good sources of fibre and relatively low in protein. *O. sanctum* showed superior iron content than the other species. Total phenolic and cardiac glycoside contents of the three leaves were very similar but they showed significant variations in their saponins, tannins, flavonoids and alkaloid contents. PCA revealed that Indian accessions of *O. sanctum* and *O. gratissimum* are distinctly separated and different from Nigerian accession of *O. gratissimum* in morphometric data and phytochemical constituents. Nigerian accession had superior phytochemical contents than the Indian accessions and may be further explored for breeding purposes to complement the Indian accessions for enhanced applications in the pharmaceutical industry in India.
