

## Growth and Morphological Characterization in Two Accessions of Sesame Plant

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**Abstract :** Sesamum indicum is an erect, herbaceous, branched, and warm-season annual crop. It differs in growth habit, form and shape, seed size and color, composition, size, and color of flowers. The experiments were performed by collecting two accessions of Sesamum indicum (white and black varieties). The morphological parameters like plant height and leaf size were measured using a ruler, while stem girth was observed using a vernier caliper. Germinability assessments were conducted by placing 100 seeds from each of the two sesame varieties and presoaked in 5 per cent sodium hypochlorite for 15 min., followed by rinse with distilled water. Germinability was assessed by placing the seeds in moist conditions and analyzing the outcome accordingly. The results from the experiments showed that the plant height (41.98 cm), stem girth (3.23 cm), and size of leaves (13.89 cm<sup>2</sup>) were higher in the white sesame variety when compared to the sesame black variety where 34.30 cm, 2.68 cm, and 7.47 cm<sup>2</sup>, respectively were obtained. But, from the black sesame variety, the number of leaves and the number of branches high values (105.06 cm) and (10.41), respectively were discovered. And significant differences were recorded in all the analyzed morphological parameters between the two sesame accessions, except stem girth. More so, the white variety of the sesame plant has demonstrated a good reproductive capability with the number of flowers (7.18), number of capsules (17.44), 100 seeds weight (1.67 g), and 1000 seeds weight (16.67 g). However, none of the analyzed reproductive parameters was observed from the black sesame variety. The white sesame variety was observed to have a higher number of Trichomes per microscopic view by almost 7 folds when compared to the black variety. But, improved size of stomata was detected in the black sesame variety by over 1.5 folds compared to the white variety. The germinability analysis had shown that from the sesame white variety, 98 seeds out of the 100 seeds sown were able to germinate, which signifies 98 percent germinability. Whereas 86 seeds out of the 100 seeds sown have germinated in petri dishes from the black sesame variety, which suggests 86 per cent germinability. Therefore, this research obviously showed that the white sesame variety displayed remarkable morphological qualities and, accordingly could be employed for farming purposes.

**Keywords :** accessions of sesame plant, characterization, growth, morphology

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