

MORPHOGENETIC CHARACTERIZATION OF ‘FLOWERING CHINESE CABBAGE (*Brassica rapa* subsp. *chinensis* var. *parachinensis*)’ IN BANGLADESH

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Executive Summary

Flowering Chinese cabbage (*Brassica rapa* subsp. *chinensis* var. *parachinensis*) also called ‘Caixin’ or “Choy sum” is an annual leafy vegetable of the ‘Brassicaceae’ family. An experiment was conducted with seven flowering Chinese cabbage and one mustard (BARI Sharisha-14) genotypes using randomized complete block design with three replications at the experimental farm of Sher-e-Bangla Agricultural University to characterize the various yield contributing traits, assess the genetic variability and interrelationship among the genotypes. The genetic variability analysis revealed that there was a significant variation for different character among the studied flowering Chinese cabbage genotypes. The higher genotypic variance was found in days to maturity, fresh yield per plant, plant height, number of siliqua per plant and seeds per silique indicating the occurrence of high genetic variability for these traits. The high broad heritability with high genetic advance in percentage of mean were observed for fresh vegetative yield (99.87% and 48.88%), number of siliqua per plant (90.19% and 46.31%) and seeds per silique (94.09% and 56.59%) indicating that these traits under additive genetic control and selection would be effective. Fresh yield of flowering Chinese cabbage had a significant positive correlation with leaf length ($r_g = 0.752$; $r_p = 0.693$) and plant height ($r_g = 0.823$; $r_p = 0.760$) at both genotypic and phenotypic level while with days to 50% flowering ($r_p = 0.446$), leaf breadth and number of siliqua per plant, there is a correlation at phenotypic level only. Present findings indicate that phenotypic selection would be effective for these characters. Therefore, Flowering Chinese cabbage G5 performed better for fresh yield and could be used as a leafy vegetable. Furthermore, Genotypes G6 could be selected for future hybridization programs for seed yield. To the best knowledge, this is the first scientific report of flowering Chinese cabbage cultivation in Bangladesh and further research can be performed based on the present findings for the genetic improvement of this crop.

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