

**SELECTION OF HIGHER YIELDING YELLOW SEEDED POPULATIONS
OF *Brassica Rapa* FROM BACKCROSS -2F₃ (BC₂F₃) POPULATIONS FOR
TWO OR THREE- CROPPED CROPPING PATTERNS**

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Executive Summary

A research was conducted in the departmental farm of Sher-e-Bangla Agricultural University, by using twenty BC₂F₃ generation of *Brassica rapa* obtained through advancing generation of different inter-varietal crosses and grown in Randomized Complete Block Design with three replications at the experimental fields of Sher-e-Bangla Agricultural University (SAU), Dhaka during December 2021 to February 2022. The purpose of the experiment is to study the variability, heritability, genetic advance, correlation and direct and indirect effect of different characters on seed yield. The characters visualized significant variations among the genotypes. Phenotypic variance was higher than the genotypic variance for every character. Minimum difference between phenotypic and genotypic variance was seen in number of secondary branches per plant, siliqua length, days to 50% flowering, days to 80% maturity, thousand seed weight and seed yield per plant. Moderate heritability with low genetic advance and high genetic advance in percentage of mean was found in number of secondary branches per plant while high heritability with moderately high genetic advance in percentage of mean was observed in number of primary branches per plant, number of seeds per siliqua, siliqua length. Significant positive association with seed yield per plant was observed in plant height, number of siliqua per plant and seeds per siliqua. On the other hand significant negative correlation was found in number of secondary branches per plant. Path coefficient analysis revealed that all the characters had positive direct effect on seed yield per plant except number of secondary branches per plant, siliqua length and seeds per siliqua. From this comparative study two BC₂ populations G20 and G17 were selected based on their better performance in respect of number of siliqua per plant, siliqua length, thousand seed weight and seed yield per plant to proceed for further evaluation.

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