

Evaluation of chickpea lines/mutants for high growth and yield attributes.

ABSTRACT

A study was undertaken to evaluate the performance of 23 advanced chickpea mutants/lines along with two check varieties Binasola-3 and Binasola-4 at the farmer's field in Godagari under Rajshahi district during 2006-2007. There was a significant genotypic difference with respect to morphological, physiological, phenological characters, and yield and yield components. Seed yield was positively correlated with plant height, primary and secondary branches, total dry matter (TDM) and number of pods per plant but negatively correlated with days to flowering, days to maturity and protein content. Four mutants/lines viz., CPC-814, CPC-830, CPM-825 (gr) and CPM-834 showed early maturity, higher number of pods and seed yield per plant than all the studied entries, which might be selected for further trials. The highest seed yield (6.93 g plant⁻¹) was recorded in CPC-830. The line CPC-814 produced the highest number of filled pods per plant and the mutant CPM-834 took the shortest days to maturity. Only the mutant CPM-825 (gr) had distinct greenish seed coat color, which could be a genetic marker for identification of developed chickpea genotypes. It was evident that taller plants with higher number of branches and TDM per plant produced higher number of pods per plant as well as seed yield.

Keyword: Chickpea; Mutant/lines; Morpho-physiological; Phenological; Yield attributes