

**EVALUATION OF MUNG BEAN INBRED LINES FOR YIELD
AND OTHER AGRONOMIC CHARACTERS**



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Abstract

A preliminary yield trial was conducted to study the performances of eight mung bean promising inbred lines which were developed through hybridization with two check varieties. The trial was designed in randomized complete block design with three replicates and established in Field Crops Research & Development Institute, Mahailuppalama. Yield, agronomic data, and disease incidences were recorded.

This trial was conducted to identify the high- yielding, short- duration, large- seeded mung bean inbred lines with mung bean yellow mosaic virus resistance. These inbred lines were developed by crossing with mung bean yellow mosaic virus-resistant recurrent parents. Therefore, no virus infection was observed. Statistical analysis was done using the SAS computer program to identify high-yielding better-performing lines.

Considering the results of yield and yield-related characters the first, second, and third highest plant heights were observed in lines 18-135(55.06cm), 18-265(54.30cm), and 18-171(53.96) respectively. There is no significant difference in plant height observed in those lines. The largest seed is observed in lines 18-113. It was 68.41g, The highest pods per plant are observed in lines 18-135. It was 9.03. The highest number of seeds per pod is shown in lines 18-163, 18-171, 18-265 and MI-6. It was 11.76, 11.66, 11.63, and 11.76 respectively These lines have nearly 12 seeds per pod and there are no significant differences observed among them. The highest pod length is recorded in 18-265. It was 10.62cm. The highest yield is observed in mungbean lines 18-171 than the other mungbean lines. It was 1.16t/ha. The lines MI 18-135 and MI 18-265 produce the second and fourth highest such as 1.21t/h and 1.01t/h respectively

Though different lines produce the highest values MI 18- 265 and MI 18-135 have comparable significant values of all yield-related characters therefore based on the breeding objectives line MI 18- 265 and MI 18-135 are selected as better lines. But the grain yield and seed weight are highly influenced by environmental factors. Therefore, it is important to conduct this trial further one or two seasons to confirm the data.

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