

Screening and quality evaluation of Mung bean genotypes for Mung dhal production

E.K.E.C. Nayana*, I.R. Liyanage, R.K.R. Dilhani, T.S. Hewawitharana and A. C. Widanapathirana

Grain Legume and Oil Crop Research and Development Centre, Angunakolapelessa, Sri Lanka

Abstract

Screening of genotypes is a main part of the plant breeding programs. It helps to identify most appropriate characteristics for the particular task which want to be realized. Therefore, this study was carried out to screen mung bean genotypes to identify most suitable genotype/s for mung dhal production. The available 20 local mung bean genotypes were evaluated from 2019 *yala* to 2020 *yala* in the research field at Grain Legume and Oil Crop Research and Development Centre, Angunakolapelessa. Genotypes were screened in row method according to the Randomized Completely Block Design with three replicates. Seed colour, yield, pest and diseases, time taken to cook without soaking, sensory evaluation for uncooked and cooked dehulled splitted mung dhal were recorded. Data were analyzed by using SAS statistical software and means were separated using DMRT. The quality data were analyzed using SPSS software. Field screening data revealed green colour coated MB140, MB120, MB127 and MB48 genotypes had the highest rank in average yield. Among those genotypes MB120 was moderately resistance for sucking pest and MB120 with MB127 were moderately resistance for mung bean yellow mosaic virus. According to the proximate analysis dehulled splitted mung dhal: (MB102, MB120, MB140, MB127 and MB48) samples were shown > 26% of protein content while protein content of red lentil was around 23%. The unsoaked mung dhal samples: (MB127, MB140 and MB48) were taken significantly less time for cooking. According to the sensory evaluation results, the overall acceptability of uncooked mung dhal samples MB129 (4.33) and MB140 (4.05) were significantly highest in preferred. The overall acceptability for cooked mung dhal samples was not significantly different among each other.

Keywords: Mung bean, Mung dhal, Genotypes, Quality evaluation, Screening

***Corresponding Author:** ekecnayana@gmail.com