

## **Variation of Hard Seed Percentage in Local Mung Bean (*Vigna radiata* L.) Varieties between Cultivating Areas in Sri Lanka**

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Hardseededness is a major problem in local Mung bean (*Vigna radiata* L.) varieties which is mainly governed by both genetic and environmental factors. The objective of this study was to check whether the growing area effects the occurrence of hard seeds in Ari, MI5, MI6, and MI7 Mung bean varieties. The experiment was conducted as a randomized complete block design (nested within location) in three replicates in Gannoruwa, Mahalluppallama and Bataatha post control units, Department of Agriculture, during early September to late November, 2022. Hard seeds were counted at seven different soaking times (8h-T1, 12h-T2, 16h-T3, 24h-T4, 48h-T5, 72h-T6 and, 96h-T7) treatments. Then hard seed percentages (HSP) were calculated. According to the results, MI6 grown in Gannoruwa showed the highest HSP (78%) while MI5 showed the lowest (10%). In Bataatha, the variety Ari had highest HSP (40%) and MI6 had the lowest (2%). In Mahalluppallama, MI6 and MI7 showed highest and lowest HSP respectively as 30% and 18%. As per the location wise comparison, Gannoruwa showed the highest HSP compared to other two locations while Mahalluppallama was having the lowest. To check the hard seed occurrence in consumers' perspective, seeds grown in Gannoruwa were boiled after 8h soaking. There, the variety MI6 showed the highest HSP which was however lower than the HSP at 96h soaking. From the results of this study, it can be concluded that, the HSP of the same Mung bean variety varies depending on the growing area as well as, the HSP varies between varieties within a single location. Also, boiling can reduce the HSP but cannot eliminate.

**Keywords:** Hard seed percentage, Hard seeds, Mung bean

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