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Among the legumes, pulses are of special significance since they are high protein crops and play a key role in human nutrition especially in developing countries. A preliminary survey in germplasm characteristics of Vigna Mungo and Macroptilium lathyroides (naturalized) in the tribe phaseolae was conducted with the intention of identifying desirable traits for crop improvement.

Phenotypic traits were studied according to the guidelines developed at Plant Genetic Resources Center, Sri Lanka. Seeds of M. Lathyroides were biochemically analyzed for protein, soluble sugars and soluble starch content. Percentage seed germination, percentage seedling emergence, shoot growth and enzymatic activity including amylase and protease constitute seed characteristics studied. with the data were compared with

similar information from *V.mungo*. Seed proteins were resolved through gel electrophoresis and the similarity index was calculated.

When compared with *V. mungo* the seeds of *M. lathyrodes* possessed 224.68 mg g^{-1} protein and 92.78 mg g^{-1} sugar which were significantly higher. Starch quantity and seed characters were almost similar in both species. The similarity index was 60 5 Phenotypic traits compared between the species were contrasting exemplifying their genotype specificity. Among those, average number of seeds per pod in V. mungo and M. lathyroides was 10 and 15 respectively. *V. Mungo* recorded 40 g as 1000-seed weight and it was remarkably higher than that of chena lands) *M. lathyroiides* (21.7g) and the time taken for pod maturity was 110 and 195 days, respectively. The high nutritive value promote M. lathyroides as a potential germplasm resource which may be utilized in crop improvement.