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## Regeneration of *Vigna* subgenus *ceratotropis* Collections in Thailand

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### Abstract

The implementation of this project was carried to regenerate and safety duplicate 656 accessions of *Vigna* species in 2009–2010. Mungbean (*Vigna radiata*), blackgram (*V. mungo*) and wild *Vigna* spp. were regenerated. Morphological characteristics, preliminary evaluation data, agronomic evaluation data and photographs were recorded.

The results showed that, given the differences in their own genetics, *in situ* conservation sites, soil type, microclimate and imposed threats, the morphological characteristics and agronomic traits of 374 accessions of mungbean varied dramatically. The number of pods per plant was from 3 to 36 pods, the number of seed per pod varied between 7–19. Seed size of mungbean varied between 25.0–89.5 g per 1000 seeds. Seed weight per plant varied between 2.1–41.3 g plant<sup>-1</sup> while the total seed yield was from 0.01–2.93 kg per 20 m<sup>2</sup>. For 100 accessions of blackgram, it was found that seed yield per plant was 4.7–37.9 g. Seed size of blackgram varied from 30–57 g per 1000 seeds. Plant height ranged from 63–162 cm and the number of pods per plant was 17–103 pods. The number of seed per pod was 6–8 seeds. For wild *Vigna* species a total of 94 accessions from 19 species were grown in 2009, and 88 accessions from 7 species were grown in 2010, the number of seed per pod varied between 3–14 seeds. Seed size varied between 5–82 g. Seed weight per plant varied between 0.5–96.1 g plant<sup>-1</sup>. Seed size varied between 8.8–108 g per 1,000 seeds. The morphological characteristics and agronomic traits were then recorded in a database for a sustainable and efficient use in breeding programme. In summary for two years, 656 accessions could obtain the seed for further research and safety duplication. All accessions were already deposited at the Thai-Department of Agriculture genebank.

**Keywords:** Blackgram, genebank, genetic resources, mungbean, wild *Vigna*