

1059 (O-79)**Genetic Variability for Nutritional Traits among Wild Relatives of Pearl Millet Conserved at ICRISAT Genebank****Santosh K. Pattanashetti, Hari D. Upadhyaya, Vinod Kumar and K. Narsimha Reddy**International Crops Research Institute for the Semi-Arid Tropics, Genebank, Patancheru, INDIA
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Pearl millet is an important food and feed crop across the semi-arid tropics of Asia and Africa. Efforts are being made at global level to enhance the pearl millet nutrition including micronutrients to overcome malnutrition. Although enough diversity is noticed for nutritional traits in pearl millet germplasm, the content among open pollinated varieties and hybrids has been moderate. The wild relatives of pearl millet in primary genepool (*Pennisetum violaceum*, *P. mollissimum*) are useful sources for various stresses and for broadening the genetic base of pearl millet. The present study assessed the genetic variability for Fe, Zn, and protein content among 335 accessions of *P. violaceum* conserved at ICRISAT Genebank, Patancheru in an augmented design along with controls during post-rainy 2014-15. The open pollinated seeds were assessed for Fe, Zn (ICP method), and protein contents. Enormous genetic variability was observed among the 318 accessions of *P. violaceum* for nutritional traits like Fe (20-325 ppm), Zn (20-86 ppm), and protein (11-23%) content. Large numbers of accessions had higher levels of Fe (164 accessions), Zn (105 accessions), and protein content (319 accessions) compared to the best controls (Fe 53 ppm; Zn 52 ppm, protein 12%). One hundred and one accessions had combination of all three nutrients higher than the best controls. The present study has identified several accessions with high to very high levels of Fe, Zn, and protein compared to pearl millet. The research is in progress to identify stable sources to develop nutrient dense broad based open pollinated and hybrid cultivars.

Keywords: Genetic Variability, Nutritional Traits, Pearl Millet Wild Relatives**154 (P-447)****Prioritisation *vis-à-vis* Germplasm Collection Status of Crop Wild Relatives in India****K. Pradheep, S.P. Ahlawat, K.C. Bhatt and Anjula Pandey**ICAR-National Bureau of Plant Genetic Resources, Pusa Campus, New Delhi, INDIA
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Crop wild relatives (CWR) are wild taxa closely related to crop plants, including wild progenitors and/ or wild forms of crops, which are the important source of useful traits in crop improvement. Though ICAR-National Bureau of Plant Genetic Resources has reasonably explored the vast area of country and collected diversity in wild species of plant genetic resource importance, systematic CWR collection and conservation efforts have gained momentum only in current decade in the wake of increasing threats to environment. In this regard, major criteria followed for prioritisation includes economic importance of crops *per se*, level of closeness to crops, possessing traits of breeders' interest/ need, extent of distribution/threat and seed storage behaviour. Accordingly, a total of 588 species have been shortlisted as CWR of 168 crops belonging to 14 crop-groups. Collection Database indicates that out of 588 species, only 243 amounting to 10,529 accessions were collected so far; accounting to about 30% of total wild germplasm collected. However, this excludes those accessions involving wild/weedy/semi-wild populations of 142 crop taxa as well as those identified only up to genus level. Significant collections were made in some CWR under crop genera of *Oryza*, *Vigna*, *Sesamum*, *Citrus*, *Abelmoschus*, *Cucumis*, *Momordica*, *Solanum* and *Saccharum*. Analysis revealed the existence of huge gaps in CWR collection in terms of number as well as representative collection, even in crucial crop-groups such as cereals and pulses; in protected areas and fragile ecosystems such as coastal and cold-arid ecosystem.

Keywords: Crop wild relatives, Germplasm collection, Prioritisation, India