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Abstract

Phenotyping of segregating generations derived from sunflower interspecific crosses (*Helianthus annuus*× *Helianthus argophyllus*)

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Abstract:

Drought is a major production constrained in crop species and crop wild relatives are important source of resistant for biotic and abiotic stresses. A breeding program was initiated to introgress drought tolerance in sunflower through hybridization between the argophyllus and annuus species. Selection was carried out in segregating generation for high cuticular waxes, smaller leaf area, single haeding and high oil contents. The developed F5 breeding lines were compared with non-adapted elite sunflower germplasm under controlled condition. Contrasting water regimes was developed by irrigating 100% of the field capacity, or 75%, 50% and 25% of the total water applied in the control under randomized complete block design. The comparison between the two types of germplasm showed that drought resistant breeding lines showed superior traits such as leaf area, shoot weight and root shoot ratio. Several drought resistant promising lines such as UCA-2, UCA-B-5, UCA-B-27 were identified which showed superior traits such leaf area, root length and root to shoot ratio under high intensity water stress treatment (T3).

Biography:

Muhammad Mubashar Hussain is currently working at Department of Plant Breeding & Genetics, College of Agriculture, University of Sargodha, Sargodha.

Recent Publications:

1. Acquaah, G. et. Al (2007), Wiley-Blackwell, Hoboken.
2. Hussain M.M et. al. Helianthus argophyllus; 2018
3. Hussain M.M et. al; Agronomy and Soil Science;2016

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