

**ALLIUM ROYLEI STEARN – A PROMISING MINOR CROP SPECIES.****Beetika Kohli\* and Veenu Kaul***Department of Botany, University of Jammu 180006**Email: kohlibeetika@gmail.com**Received-29.06.2015, Revised-10.07.2015*

**Abstracts:** Recently Gopal (2014) in the meeting report on National Workshop on “Onion Improvement and Seed Production” laid emphasis on the prevention of onion shortage through genetic improvement. A number of bottlenecks brought to the fore included susceptibility to diseases, weather vagaries and non – availability of quality seeds. Among various remedial measures proposed to solve these problems; genetic improvement for better seed supply of onion was the most pronounced. Numerous gene transfer methods and breeding programmes were conducted and many are underway. The wild relatives of crop plants constitute important resource for improving agricultural production and also for maintaining sustainable agro-ecosystems. This, in turn, will ensure food security for the new millennium.

**Keywords:** Crop, Disease, Species, Onion

**REFERENCES**

- Chuda, A. and Adamus, A.** (2009). Aspects of interspecific hybridization within edible Alliaceae. *Acta. Physiol. Plant.* **31**, 223-227.
- Dar, G. H. and Naqshi, A. R.** (2001). Threatened flowering plants of the Kashmir Himalaya – A checklist. *Oriental Science*, **6(1)**, 23-53.
- de Vries, J. N., Wietsma, W. A. and Jongerius, M. C.** (1992). Introgression of characters from *Allium roylei* Stearn into *A. cepa* L. In Hanelt, P., Hammer, K. and Knüpfner, H. (eds). *The Genus Allium – Taxonomic Problems and Genetic Resources*. Gatersleben, Germany. pp. 321-325.
- Galvan, G. A. et al.** (1997). Screening for resistance to anthracnose (*Colletotrichum gloeosporioides* Penz.) in, *Allium cepa* and its relatives. *Euphytica*, **95(2)**, 173-178.
- Gopal, J.** (2014). A step towards prevention of onion shortage. *Current Science*, **106(9)**, 1176-1177.
- Hajra, P. K.** (1983). Plants of north – western Himalayas with restricted distribution – A census. In SK Jain and RR Rao edited, *An assessment of threatened plants of India*, B. S. I. Botanic garden Howrah.
- Khrustaleva, L. I. and Kik, C.** (2000). Introgression of *A. fistulosum* into *A. cepa* mediated by *A. roylei*. *Theor. Appl. Genet.*, **100**, 17-26.
- Kohli, B. and Gohil, R. N.** (2009). Chromosomal heteromorphism in a population of *Allium roylei* Stearn. *the nucleus*, **52(1, 2)**, 1-8.
- Kohli, B. and Gohil, R. N.** (2011). Is *Allium roylei* Stearn still evolving through multiple interchanges? *the nucleus*, **54 (1)**, 19-23.
- Kohli, B. and Gohil, R. N.** (2009). Need to conserve *Allium roylei* Stearn: a potential gene reservoir. *Genet. Resour. Crop Evol.*, **56**, 891-893.
- Kohli, B.** (2007) Cytological studies in three collections of *Allium roylei* Stearn. M. Phil. Dissertation submitted to University of Jammu, pp. 1-74.
- Kohli, B.** (2013) Studies on chromosomal repatterning in *Allium roylei* Stearn. Ph. D. Thesis. Submitted to University of Jammu, pp. 1-135.
- Mc Collum, D. G.** (1982). Experimental hybrids between *Allium fistulosum* and *A. roylei*. *Bot. Gaz.*, **143(2)**, 238-242.
- Nasir, E.** (1975). Flora of West Pakistan. No. 83 Alliaceae. *Stewart Herbarium, Gordon College, Rawalpindi*.
- Pandey, A. et al.** (2008). Realizing value of genetic resources of *Allium* in India. *Genet. Resour. Crop Evol.*, **55**, 985-994.
- Pandita, M. L.** (1994). Status of *Allium* production and research in India. International Symposium on Alliums for the tropics. ISHS Acta Horticulturae:358
- Scholten, O. E. et al.** (2007). The long and winding road leading to the successful introgression of downy mildew resistance into onion. *Euphytica*, **156(3)**, 345-353.
- Sharma, G. and Gohil, R. N.** (2008). Intrapopulation karyotypic variability in *Allium roylei* Stearn – a threatened species. *Botanical Journal of the Linnean Society*, **158**, 242-248.
- Simon, P. W.** (2005). Realizing value from Central Asian *Allium* Germplasm collections. *Hort. Science*, **40(2)**, 309-310.
- van der Meer, Q. P. and de Vries, J. N.** (1990). An interspecific cross between *Allium roylei* Stearn and *Allium cepa* L., and its backcross to *A. cepa*. *Euphytica*, **47**, 29-31.
- Vu, H. Q. et al.** (2012). Alien genes introgression and development of alien monosomic addition lines from a threatened species, *Allium roylei* Stearn, to *Allium cepa* L. *Theor Appl Genet.* **124(7)**, 1241-57.
- Vu, H. Q. et al.** (2011) Production of novel alloplasmic male sterile lines in *Allium cepa* harbouring the cytoplasm from *Allium roylei*. *Plant Breeding*, **130(4)**, 469-475.
- Walter, K. S. and Gillet, H. J.** (1998). IUCN Red List of Threatened Plants. *Compiled by The World Conservation Monitoring Centre*.

\*Corresponding Author