Bioved, **24**(2) : 169–173, 2013

# *In vitro* response of some elite varieties of *Glycine max* (L.) for clonal propagation

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Received April 11, 2013 and Accepted July 13, 2013

**ABSTRACT :** Soybean (*Glycine max* (L.) Merrill) is a real wonder crop having nutritive, medicinal, agricultural as well as industrial value. The crop gains nutritional value as it contains 42.0 % protein and 20-25 % oil. Soybean also contains isoflavones known to reduce the risk of heart attacks, osteoporosis and kidney stones. As an intercrop, soybean improves the soil status. The conventional breeding of this crop has made some advantages but still needs to be improved to enhance not only the yield but also oil and protein contents and their qualities. Thus clonal propagation proves to be a powerful tool for the multiplication of this cash crop. Studies were conducted on three Indian *Glycine* genotypes TAMS 38, JS-335 and TAMS 98-91 for their *in vitro* responses. Hypocotyls ad shoot tips were cultured on the various concentrations of auxins (IAA, NAA) and cytokinin BAP. Shoot tip showed higher organogenic regeneration potential, whereas response of hypocotyls for shoot formation was nil. Also, in terms of varietal response to *in vitro* culture, TAMS 38 was more responsive to callus induction, shooting as well as rooting. Multiple shoots were obtained at a very fast rate in genotype TAMS 38 on MS media fortified with BAP (4 mg/l) and NAA (0.5 mg/l). The regenerated shoots showed profused rooting when transferred to MS media containing 1.5 mg/l.

**Key Words :** Elite varieties, *Glycine max*, clonal propagation.