

PLANTS REGENERATION THROUGH CALLUS TISSUE OF OKRA (*ABELMOSCHUS ESCULENTUS* L. MOENCH.)

Rahul Tomar, B.S. Dahiya, Arun Malik, Neeraj Kumar

Department of Botany, Janta Vadic College, Baraut-250611 (Baghpat) Uttar Pardesh, India

Abstract: The explants (hypocotyl, cotyledonary node & cotyledonary leaf or leaf segments) were excised from aseptically grown Okra (*Abelmoschus esculentus*) seedling. The explants were cultured on Murashige & Skoog basal nutrient medium, which supplemented with auxin or cytokinin or in combination of auxin-cytokinin and auxin with AgNO₃ and Casian hydrolysate in various concentrations. The callus formation from explants was occurred in a medium containing auxin (NAA, IAA, 2, 4-D) or cytokinin (BAP, KN, Z) or auxin - cytokinin combinations. But the shoots development was observed on medium containing BAP & BAP-combinations (BAP+NAA, or BAP+IAA, or BAP+AgNO₃+casian hydrolysate). No shoots developed in MS medium contained KN or Z. The regenerated shoots were successfully rooted on MS medium containing NAA or IAA. The regenerated rooted shoots were successfully established in soil.

Keyword: Regeneration, Callus, Okra

REFERENCES

- Mangat, B. S. and Ray, M.K. (1986). *Plant Science*, **47**:57 – 61.
- Mehta, D.R, Dhaduk, L.K. and Patel, K.D. (2006). *Agric. Sci. Digest*, **26**(1): 15-18.
- Murashige, T. and Skoog, F. (1962). *Physiol Plant*, **15**:59.
- Gunay, A. L. and Rao, P.S. (1978). *Plant Science Lett.* **11**:365.
- Murashige, T. (1978). *Annual Rev. Plant Physiol.* **25**:365.
- George, E. F. and Sherrington, P. D. (1984). *Esstern Press, Reading* U. K. 387.
- Pradip, K.; Akotkar, D.K. and Pal, A.K. (2010). *Electro.J. Plant Breeding*, **1**(4):393-398.
- Rao, P. S.; W. Handro and Harada, H. (1973). *Physiol Plant*, **28**:458.
- Beyer, E. M. (1976). *Physiol Plant*, **58**:268.
- Yang, S. F. and N. E. (1984) *Annual Rew. Physiol Plant*. **35**:155.
- Evaldsson, I. (1985) *Swed J. Agricultural Rew.*, **5**:119.
- Gu, Z. (1987) *Annual Bot.*, **60**:309.
- Ali, M.; Hossain, M.Z. and Sarkar, N.C. (2000). *Euphytica*, **111**: 205-209.
- Purnhauser, L.; P. Medgyesy, M. Czako, P. J. Dix and Marton, L. (1987). *Plant Cell Report*, **6**:01.
- Tisseret, B. and Murassige, T. (1977). *Physiol .Plant*, **60**:437
- Ganesan, M.; Chandrasekar, R.; Kumari, B.D.R. and Jayabalan, N. (2007). *Biol. Plant*, **51**: 414-420.
- Beyer, E. M. (1976). *Physiol Plant*, **58**:268.
- Pal, B. P.; H.B. Singh and Swarup (1952). *Bot. Goz*, **113**:455.
- Gadual, V. R.; A. B. Joshi, R. D. (1968). *Indian J. Genet*, **28**:269.
- Anisuzzaman, M.; Jarin, S.; Naher, K.; Akhtar, M.M.; Alam, M.J.; Khalekuzzaman, M.; Alam, I. and Alam, M.F. (2008). *Asian J. Plant Science*, **7**(7): 677-681.

Joshi, Gadual V. R, Hardas, Hutchinson, J. B. (1974). Cambridge, 99.

Kartha, K. K.; Gamborg, O. L. and Constabel, F. (1974). *Physiol Plant*, **31**:217.

Dhankhar, B.S. and Dhankhar, S.K. (2002). *Veg. Sci.*, **29**(1): 63-65.