## INFLUENCE OF INDOL-3-BUTYRIC ACID (IBA) AND VARIOUS TIME ON ROOTING OF GUAVA (*PSIDIUM GUAJAVA* L.) AIR LAYERING

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**Abstract:** An experiment was carried out during 2014-15 at Horticulture research center, Department of Horticulture, Chauras Campus, HNB Garhwal Central University, Srinagar (Garhwal), Uttarakhand India. Four different concentrations of IBA viz., 2000ppm, 3000ppm, 4000ppm, 5000ppm were used in four time of layering (May, June, July and August). Amongst various concentrations of IBA, 5000ppm concentrations of IBA treatment proved best treatment in respect of percent rooted, number of primary roots, root quality. In case of time of layering August month the maximum rooting success.

Keywords: Guava, IBA, Time, Rooting percentage, Survival percentage

## REFERENCES

Akhter, A.A. (2002). Effect of time and methods on the success of layering in Guava, M.Sc. Thesis. Dept. Hort., Bangladesh Agricultural University, Mymensingh.

**Bari** (2002). Annual Report of 2001-02. Fruit Research Station, BARI, Rajshahi. pp. 23.

Bhagat, B.K., Singh, C. and Chaudhary, B.M. (1999). Effect of growth substances on rooting and survival of air-layers of guava (*Psidium guajava* L.) cv. Sardar. *Orissa J. Hort.*, 27(2):72-75.

**Bose, T.K., Mitre, S.K. and Sadhu. M.K.** (1986). Guava. In: Propagation of Tropical and Sub tropical Horticultural Crops. Naya Prokash, Calcutta. pp. 291-301.

Chawla, W., Mehta K. and Chauhan, N. (2011). Influence of plant growth regulators on rooting of litchi (*Litchi chinensis* Sonn.) air layers. *The Asian Journal of Horticulture*. 7(1):160-164.

Cochran, W. G. and Cox, G. M. (1992).

Experimental Designs. John Wiley and Sons, Inc., New York.

**Dhillon, B.S. and Mahajan, B.V.C.** (2000). Effect of different dates on the air layering performance of litchi cultivars in Punjab. *Agril. Sci. Digest*, 20(3): 207-208.

Hossen, S., Kabir, M.S., Uddin, M. B., Rahman, A.K.M.L., and Mamun, M.R.A. (2009). Effect of different extractions of juice on quality and acceptability of guava jelly. *j. innov.dev.strategy*. 3(4): 27-35.

**Kanwar, J.S. and Kahlon, G.S.** (1986). Propagation studies in litchi. J. Res. Punjab Aril. Univ., 23(1): 33-39.

Kumar, R. and Gill, D.S. (1996). Effect of IBA and P. Hydroxy - benzoic acid on rooting behaviour of air layering of baramasi lemon. *Haryana J. Hort. Sci.*, 25 (4): 172-176.

**Mukharjee S.K., Chatterjee, B.K.** (1978). Effect of Etiolation and Bioregulators on air layering of Jackfruit (*Artocorpous heterophillus* Lam.). *Indian J. Hort.*, 35 (1): 1-4.

Nanda, K.K. and Kochhar, V.K. (1985). Vegetative propagation of plants. Kalyani Publishers, New Delhi (India).

National Horticulture Board Data base - 2012 - 13, www.nhb.gov.in.

**Patel, R.K., Bose, U.S. and Tripathi, S.K.** (1996). Effect of growth regulators and wrappers on success and survival of air layering in guava cv. Allahbad safeda. *Crop Research (Hissar).* 12 (1) : 56-60.

**Rymbai, H. and Sathyanarayana Reddy, G.** (2010). Effect of IBA, time of layering and rooting media on air layers and plantlets survival under different growing nursery conditions in guava. *Indian J. Hort.*, 67(spl. issue):99-104.

**Sarkar, A. and Ghosh, B.** (2006). Air layering in guava cv L-49 as affected by plant growth regulators, wrappers and time of operation. *Environment and Ecology*, 24S(Special 3A):820-823.

**Sharfuddin, A.F.M. and Hussain. A.** (1973). Effect of growth regulator, rooting and wrapping materials on the success of air-layering in litchi. *Bangladesh Hort.*, 1(2): 44-51.

Sharma, K.K., Sandhu, A.S., Bajwa, M.S. and Dhillon, B.S. (1975). Effect of IBA and NAA on the rooting of the air layers of guava. *J. Res. P.A.U., Ludhiana*, 1 : 23-25.

Sharma, R.C. and Grewal, G.P.S. (1989). A note on propagation studies in litchi. *Haryana J. Dort. Ski.*, 18: 74-76.

Sharma, R.S., Sharma, T.R. and Sharma, R.C. (1991). Influence of growth regulators and time of operation on rooting of air layering in guava (*Psidium guajava* L.) cv. Allahabad Safeda. *Orissa. J. Hort.*, 19: 41-45.

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Shukla, R.K. and Bajpai, P.N. (1974). Blossom bud differentiation and antogeny in litchi. *Indian J. Hort.*, 31: 226-228.

**Singh, D.K. and Bhuj, B.D.** (2000). Response of air-layering of guava to paclobutrazol and coloured polywrappers. *Agricultural Science Digest*, 20(3):171-173.

Singh, P., Chandrakar, J., Singh, A. K., Jain, V. and Agrawal, S. (2007). Effect on rooting in guava

cv. Lucknow-49 through PGR and organic media under Chhattisgarh condition. *Acta Horticulturae*, (735):197-200.

**Tyagi, S. K. and Patel, R. M.** (2004). Effect of growth regulators on rooting of air layering of guava (*Psidium guajava* L.) cv. Sardar guava. Orissa J. Hort., 32(1): 58-62.