

EFFECT OF PLANT GROWTH REGULATORS ON QUALITY PARAMETERS OF SWEET POTATO (*IPOMOEA BATATAS* (L.) LAM.)

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Abstract: A field experiment was carried out during *kharif* 2016-17 at Kittur Rani Channamma College of Horticulture, Arabhavi (Karnataka) to study the effect of growth regulators on quality parameters of sweet potato [*Ipomoea batatas* (L.) Lam.]. The maximum beta carotene content (7.65 mg) was recorded in combination of GA₃ @ 100 ppm and CCC @ 250 ppm (T₁₀), followed by single treatment GA₃ @ 100 ppm (T₃) (6.72 mg/100g). significantly maximum reducing sugar content (7.40%) was recorded in treatment combination of GA₃ @ 100 ppm and CCC @ 250 ppm (T₁₀), significantly maximum starch content (22.50%) was recorded in treatment combination of GA₃ @ 100 ppm and CCC @ 250 ppm (T₁₀),

Keywords: *Ipomoea batatas*, Plant growth regulators, Quality parameters

REFERENCES

- Anonymous** (2015), Indian Horticulture Database, National Horticultural Board.
- Chakraborty, S.** (2001), Interactions between growth promoters and retardants on germination, growth, metabolism and yield of ground nut. Ph.D. Thesis, Guwahati University, Assam.
- Dhankhar** (2001), Environment being nutritional security from vegetables, roots and tubers. *Indian Hort.*, **45**(4): 13-17.
- Gizawy, E. A. M., Yazied, A. E. A., Tawfik, A. A. and Kaddour, E. A. A.** (2006), Effect of gibberellic acid (GA₃) on enhancing flowering and fruit setting in selected potato cultivars. *Ann. Agric. Sci.*, **51**(1): 173-179.
- Indira, P., Kurian, T. and Maini S. B.** (1980), Effect of cycocel on yield and quality of *Coleusparviflorus*. *J. Root Crops.*, **6**(1/2): 61-62.
- Kumar, A., Singh, B. P. and Katiyar, H.** (2012), Effect of foliar application of plant growth regulators on potato tubers quality. *Progressive Hort.*, **44**(2): 299-303.
- Mandal, P. N., Singh, K. P., Singh, V. K. and Roy, R. K.** (2012), Effect of production and plant growth regulators on quality and economics of hybrid okra [*Abelmoschus esculentus* (L.) Moench]. *Adv. Res. J. Crop Improv.*, **3**(1) 5-7.
- Muthoo, K., Sunil, A. K. and Maurya, A. N.** (1987), Studies on the effect of foliar application of GA₃, NAA and Molybdenum on growth and yield of cauliflower (*Brasice oleraceae* var. *botryatis*) cv. Snow ball-16. *Haryana J. Hort. Sci.*, **16**(1-2): 115-120.
- Panase, V. G. and Sukhatme, P. V.** (1985), *Statistical methods for agricultural workers*. Indian Council of Agricultural Research, New Delhi, India.
- Rao, G. K., Ashok, P., Swami, D. V. and Sasikala, K.** (2017), Influence of plant growth regulators on growth, root tuber yield and quality of orange flesh sweet potato (*Ipomoea batatas* (L.) Lam.) varieties. *Int. J. Curr. Microbiol. App. Sci.*, **6**(6): 2017-2025.
- Sawant, V. P., Naik, D. M., Barkule, S. R., Bhosale, A. M. and Shinde, S. B.** (2010), Effect of foliar application of growth regulators on growth, yield and quality of cabbage cv. Golden acre. *Asian J. Hort.*, **5**(2): 495-497.
- Singh, D., Singh, P. P., Naruka, I. S., Rathore, S. S. and Shakawat, R. P. S.** (2012), Effect of growth regulators on growth and yield of coriander. *Indian J. Hort.*, **69**(1): 91-93.
- Singh, M., Singh, R. P. and Yadav, H. S.** (1989), Response of growth regulators and their methods of application on yield of radish (*Raphanus sativus* L.). *Bharatiya Krishi Anusandhana Patrika*, **4**(2): 84-88.
- Sinnadurai, S. and Amuti, K.** (1973), The effect of CCC and gibberellic acid on total soluble solids content and reducing sugars of tomato fruit. *Ghana J. Agric. Sci.*, **6**(3): 63-65.
- Villareal, R. L.** (1982), Sweet potato in tropics: Progress and problems in Villareal, R. L. and Griggs, T. D. Proceedings of the 1st international symposium on sweet potato.
- Watson, I. and Dallwitz, M. J.** (2000), The family of flowering plants. Descriptors, identification and information retrieval. Version 14th Dec, 2000. *Wtp: biodiversity*.
- Woolfe, J. A.** (1992), Sweet potato, an untrapped food resource. Cambridge University Press, New York.

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