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Title: EFFECT OF PLANT GROWTH REGULATORS ON GROWTH AND YIELD OF TARO [*Colocasia esculenta* var. *antiquorum*(L.)Schott.]

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Abstract: Among the tuber crop produced, colocasia [*Colocasia esculenta* (L.) schott.], a member of family Araceae which is native to south central Asia is one of the important tuber crop particularly grown in Africa and Asia and occupies a very selective and special position. It is also known as Taro, Arvi, Katchu and eddode. Africa ranks first in area and production of colocasia and in India colocasia is favourite among Gujarat, Konkan region of Maharashtra and several other parts of south India. It is mainly cultivated for the edible cormels but the leaves and its young petioles are also cooked and used like spinach. Corms of colocasia are rich in carbohydrate and protein and nearly one and half time more nutritious than potato. Globally, it is among the important food crops in the world after wheat, rice, maize, Irish potato and barley. It ranks second following Irish potato in the world's root and tuber crop production. Though, agronomical practices for taro has been standardized and there is always demand for enhancing its yield from the growers. Hence, the present investigation has been formulated to find out feasibility of increment in yield of taro by means of application of growth regulators on the till date most accepted variety of taro, Muktakeshi by the growers in the state of Jharkhand. It is light brown skin coloured high yielding and itching free choicest variety of farmers of state of Jharkhand. The investigation was conducted in the Horticulture Research unit during Kharif season of 2017 with five plant growth regulators viz. GA3, NAA, IAA, Ethrel and Maleic Hydrazide (MH) in Randomized Block Design replicated thrice. The inference of data revealed that GA3 @ 200 ppm exhibited highest plant height (95.68cm), girth of stem (26.46 cm), number of leaves (6.94) and LAI (1.75). Due to better vegetative growth traits the treatment receiving GA3 @ 200 ppm also showed better Yield attributes and Yield (15.38 t/ha). GA3 @ 100 ppm and IAA @ 25 ppm were emerged as second and third ranker respectively better vegetative traits and Yield attributes and hence marginal return per rupee (B:C ratio) of 2.53:1 and 2.44:1 compared to the best treatment i.e. GA3 @ 200 ppm with B:C ratio of 2.61:1 and control with fetched least B:C ratio of 1.94:1. Hence, on the basis of overall observations GA3 @ 200 ppm has been identified as promising one for profitable cultivation of taro in the state of Jharkhand.

Description: EFFECT OF PLANT GROWTH REGULATORS ON GROWTH AND YIELD OF TARO [*Colocasia esculenta* var. *antiquorum*(L.)Schott.]

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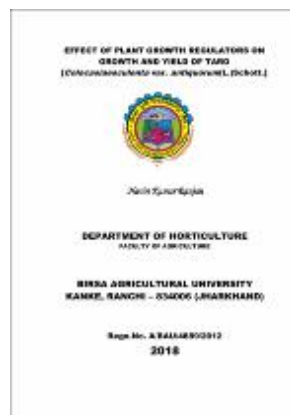
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