

VEGETATIVE PROPAGATION OF *TRIBULUS TERRESTRIS* L. AND *PEDALIUM MUREX* L.

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ABSTRACT

The present paper deals with the influence of different concentrations of growth regulator (IBA) on sprouting of *Tribulus terrestris* and *Pedaliium murex*. From the observations it is concluded that, in both the plants stem cuttings treated with IBA (15 ppm) exhibited high rate of sprouting and survival percentage.

Key words : *Tribulus terrestris*, *Pedaliium murex*, Indol Butyric Acid (IBA).

Tribulus terrestris L. and *Pedaliium murex* L. are medicinal plants used as diuretic, antispasmodic, anti-inflammatory and sex enhancer (Warrier et. al, 1994). They grow as a weed during rainy season and get propagated through seeds (Bhandari, 1978). However, the seeds germinate during next rainy season, during which the seed coat is softened by the soil microflora. Therefore, it is essential to evaluate other methods of propagation; stem cutting is one of them and it has been proved to be successful, particularly unde the influence of growth regulators like IBA in case of ornamental, vegetable and fruit plants (Balakrishnamurthi et al., 1989, Sengupta et al., 1997 and Bose et al., 1973).

Keeping this view in mind the present study was undertaken to examine the response of both *Tribulus terrestris* L. and *Pedaliium murex* L. stem cuttings at different concentrations of Indol Butyric Acid (IBA). The explants (stem cuttings) were harvested from the wild population of plants growing in botanical garden Department of Botany, Shivaji University, Kolhapur. The stem cuttings with 5-6 nodes each and 6-7 inches long were sterilized with 0.1% HgCl₂ for five minutes and then rinsed repeatedly with sterile distilled

water to remove last traces of HgCl₂. The basal end of stem was cut 2-4 mm away from the node. The cut ends were treated with IBA (05, 10, 15 and 20 ppm) for a period of 30 min. The cut ends were dipped in Bavistin and planted in plastic pots containing soil and manure (1:1). The pots with stem cuttings were covered with plastic bags. The experiments were repeated thrice with 20 cuttings per set. The untreated stem cuttings were treated as control. The samples were collected at 24 hour intervals, by observing the uprooted stem cuttings at 24 hour interval. The number of days required for formation of roots and survival rate for each set (00, 05, 10, 15 and 20 ppm IBA) was calculated.

The influence of growth regulator (IBA) on sprouting of *Tribulus* and *Pedaliium* is represented in Table 1. It is evident that in both the plants stem cuttings treated with IBA (15 ppm) exhibited high rate of sprouting and survival percentage while in the remaining concentrations of IBA the sprouting and survival percentage was found to be less. From the above result it is indicated that, change in concentration of IBA alters the rate of sprouting and survival percentage of stem cuttings. Similar type of observations were reported by Shirgave and Chavan (2008) in

Jatropha. The sprouted plantlets can be used successfully for propagation.

IBA (ppm)	<i>Tribulus terrestris</i>		<i>Pedaliium murex</i>	
	Days for rooting	Survival %	Days for rooting	Survival %
00	5.78	72.50	6.12	67.00
05	4.90	75.50	361	87.50
10	4.80	77.00	2.44	92.50
15	3.14	90.50	2.10	97.50
20	4.45	83.50	3.18	74.50

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