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SHORT COMMUNICATION



UNEXPECTED ROOTING IN SHOOT-TIP CUTTINGS OF PONYTAIL PALM (BEUCARNEA RECURVATA)

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ABSTRACT

Cutting has mentioned one of *Beaucarnea*'s propagation methods in some scientific references, but it is hard-to-root plant. This experiment carried out to try rooting of shoot cutting of this species. For this purpose, Ponytail palm tip shoot cuttings were treated by 4 concentrations of Indole butyric acid (IBA) including: 0, 1000, 2000 and 4000 mg/l. The rooted cutting of *Beaucarnea recurvata* was treated by 4000 mg/l IBA.

KEYWORDS

IBA, Nolina, rooting, foliage

Based on a study, ponytail palm (*Beaucarnea recurvata* Lem.) is one of the important foliage pot plants. It is endemic to America and it is commercially propagated by seed [1]. According to research, all 10 species of *Beaucarnea* are in the list of endangered plants [2]. Currently, commercial production of Ponytail palm is mainly conducted by seed and this method results in intensification of *Beaucarnea* extinction. Cutting propagation is a desirable option to deal with this dilemma. Based on research, the main advantage of asexual propagation is offspring plants genetically identical to the parent [3]. Some researchers suggested micropropagation protocol for *Beaucarnea* [3,4]. Cutting is an important method for propagating of ornamental trees and shrubs [5].

According to a research, cutting has mentioned one of *Beaucarnea*'s propagation methods in some scientific references (Brickell, 1994), but it is hard-to-root plant [6]. Auxins have the greatest effect on root formation in cuttings. Plants produce natural auxin (IAA) in their branches and leaves, but exogenous auxin needs to be applied for improved rooting [7]. A researcher said that the maximum success was achieved in plants such as kiwifruits, figs and apples through IBA treatment, which is necessary for hardwood and softwood cuttings [8].

The objective of our investigation was to try rooting of shoot cutting of this species. For this purpose, Ponytail palm tip shoot cuttings were treated by 4 concentrations of Indole butyric acid (IBA) including: 0, 1000, 2000 and 4000 mg/l. This trial carried out in sand medium for six months. Unfortunately, the experiment was not successful after six months. But we continued experiment for 9 months and only two rooted cuttings were obtained (Figure 1).



Figure 1: Rooting of shoot cutting of *Beaucarnea recurvata* with 4000 mg/l IBA

The rooted cutting of *Beaucarnea recurvata* was treated by 4000 mg/l IBA. Since none of the producers have a reasonable report on the rooting of *Beaucarnea*, this report could be interesting and useful for propagators. It is recommended that trials be conducted with higher IBA concentrations and other hormonal substances such as NAA.

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