



## The Assessment on Propagation Methods and Establishment of *Astragalus podolobus* Species in Arid Rangelands in North of Gonbad-e Qabus

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Received: 24/1/2017

Accepted: 24/6/2017

### Abstract

*Astragalus podolobus* is a native species of Turkmen Sahra and is used in rangelands in arid and semi-arid hilly loess soil located in north of Gonbad-e Qabus. For cultivation and establishment of this species, different propagation methods for the experiments had been used in pastures of Dashli Borun. In this study, 4 treatments for propagation and 6 treatments for establishment of this species were considered. For propagation of this plant, 4 treatments, including NAA and IBA hormones, were applied for cuttings and reproduction of plants by seeds. The experiments were conducted as completely randomized design. SPSS software was used for statistical analysis. The results showed that propagation by seed is the most appropriate method for *A. podolobus* plant. Thirty percent of seedling survived when seeds were used for propagation in plastic pots. In the cultivation and establishment of seedlings in rangeland in March, 91% survival rate was observed and in December, survival rate was recorded as 65%. Growing plants from seedlings cultivated in December showed more vigorous growth than the winter cultivation.

**Keywords:** Turkman-Sahra, Cuttings, Bush, Dashli-Broun.

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