



Influence of Provenance Variation on Seedling Characteristics of *Celtis australis* in Nursery Environment

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Abstract: *Celtis australis* L. is a fast growing multipurpose tree species which is largely utilized for fodder, fuelwood, fruit and timber in the Himalaya. Therefore, in this study, the eleven provenances of *C. australis* were selected and tested in nursery environment to identify suitable seed source for plantation programme. The seed morphological parameters evaluated which showed that the seed length (8.80mm) in Kathua, and seed diameter (7.72mm) and 100 seed weight (21.06g) in Chamba provenance was greater compared to other provenances. Germination percentage was significantly higher in Chakarata provenance (68%) compared to other provenance and the lesser germination was in Shimla provenance (20%). In nursery environment, height (131cm) and collar diameter (12.80mm) growth was higher in Chakrata provenance and the minimum height (90cm) and collar diameter (5.46mm) growth was in Chamba and Shimla provenance. The total biomass production was higher (63.78g) in Chakrata and the lower (33.39g) in Shimla provenance. The overall Sum Rank Index confirmed the superiority of Chakrata provenance over other provenances in nursery environment. Therefore, provenance selection and testing have great potential to improve different characteristics of *C. australis* for higher growth and productivity.

Keywords: *Celtis australis*, Provenance, Germination, Seed, Growth, Biomass