

Short Communication

Range Mgmt. & Agroforestry 37 (1) : 104-107, 2016

ISSN 0971-2070



Effect of pre-sowing treatments on *Prosopis pallida* seed germination attributes

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Received: 28th December, 2015

Accepted: 9th May, 2016

Abstract

Synchronized and rapid seed germination is advantageous for tree species management and promotion of their cultivation in agro-forestry. Early and synchronized seed germination in largely accepted agroforestry tree species is important to enhance mass production and distribution of seedlings in short rain spell areas. Thus, *Prosopis pallida* seeds were subjected to sulphuric acid (H₂SO₄) scarification treatments at 20%, 30% and 40% concentration for 10 minutes along with soaking in boiled water (80°C) for ten minutes and in cow-dung slurry for 24 hours. Scarification with 30% H₂SO₄ resulted in synchronized germination with 66% germinability, 6.4 day of mean germination time (\bar{t}) and mean germination rate (\bar{v}) of 0.16 day⁻¹ whereas soaking in boiled water recorded lower germinability.

which could be rehabilitated by planting with multipurpose trees (Bhojvaid *et al.*, 1996). Development of forests and cropping system, for the restoration of such degraded sodic lands, are important in India for mitigation of adverse effect of climate change (Pandey *et al.*, 2011; Singh *et al.*, 2012). *P. pallida* and its natural hybrids are gaining importance for cultivation on farmlands in India because of their thorn-less trait (Ratha Krishnan *et al.*, 2012). *P. pallida*, a suitable leaf and pod fodder species of arid environment and survive due to the adaptation and suitability to grow in agroforestry systems of resource scare regions. *P. pallida* pods and seed are nutritious fodder. The pods contain 9 per cent protein and seeds 34 per cent, one of the highest levels for any legume.

Keywords: Germinability, *Prosopis pallida*, Seed treatments, Synchrony of germination.

Natural regeneration of the species through seeds is good enough to colonize new sites however seeds that are passed through the digestive system of herbivores germinate effectively (Lynes and Campbell, 2000). Even