

## Water Imbibition and Hard Seed Coatedness of Some Arid Tree Species

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Early germination of seed often can be stimulated by increasing the length of immersion of seeds in water. The seeds having hard seed coat or surrounded by impermeable coat do not swell under favourable conditions. Thus, an attempt has been made to study the water imbibition of hard coated seeds of few arid zone species.

Seeds of *Acacia senegal* (collected from Mandore, Shergarh, Kailana), *Prosopis cineraria* (from CAZRI, Jodhpur) and *Mimosa hamata* (from Mandore and Balesar) were collected for the study. Precise weight of 10 viable seeds was noted and the seeds were kept in distilled water in growth chamber. The intake of water by seeds after 2,4,6,24 and 48 h was measured by weighing.

Imbibition study shows that upto 6 h very slow imbibition takes place among all the species, then there is a sudden increase in *A. senegal* of all the sites, followed by *P. cineraria* and *M. hamata*. *A. senegal* seeds of Kailana showed maximum imbibition upto 24 h followed by Shergarh and Mandore, while after 24 h additional imbibition was observed in the seeds of Shergarh. Seeds of *M. hamata* from Mandore showed more imbibition than from Balesar. However, as compared to other species very little imbibition took place even upto 48 h. During 4 to 6 h maximum imbibition was exhibited by *P. cineraria* (Fig.1)

Present study reveals that the seeds of *A. senegal* showed more water imbibition than *M. hamata* and *P. cineraria* seeds, which advocates the

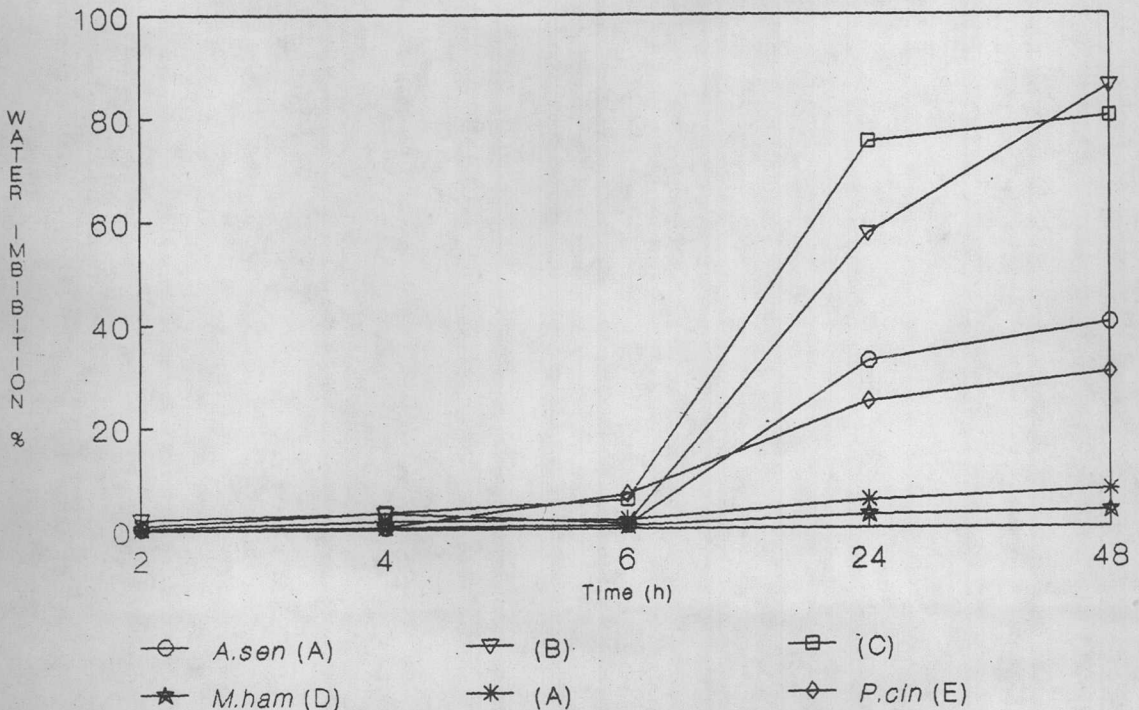


Fig 1 Sites : A Mandore, B shergarh, C Kallana D Balesar, E University campus

presence of more hard seed coatedness in the latter seeds. Different seeds of the same species in *A. senegal* confirm the earlier findings (Sen *et al.* 1968, Prakash 1989).

#### References

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