



RESEARCH ARTICLE

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Germination and *ex-situ* conservation of *Terminalia arjuna* (Roxb.) Wight and Arn. seeds

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ABSTRACT : *Terminalia arjuna* is an important medicinal plant, the bark of which is useful for treatment of various diseases including fractures, ulcers and hypertension. This study involved: I) the effect of seed pretreatments for betterment of germination immediately after harvest and II) to evaluate the conditions for *ex-situ* conservation of arjuna seeds. Pretreatments tested to stimulate germination were: control, cold water, hot water, potassium nitrate solution, plant growth regulators and sulfuric acid. Germination response was highest by use IAA at the dose of 500 ppm, probably because of the hormonal nature of the dormancy in this species. Seeds were dried to 4.5 per cent, 8.2 per cent and 12.8 per cent moisture contents and stored at -20°C, 5°C, 15°C and 40°C for three years. Sampling for assessment of viability and moisture content was done at regular intervals. The seeds are tolerant upto 4.5 per cent moisture content, hence suggesting orthodox nature of the seed. The best results were obtained when the seeds were dried to 4.5 to 8.2 per cent moisture content prior to storage and stored in air-tight containers in 15 to -20°C. Use of these storage conditions may allow arjuna seeds to be stored for at least 3 years without a significant loss in viability and will help in conservation of this valuable species.

KEY WORDS : *Terminalia arjuna*, Pretreatment, Seed germination, Seed storage

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