

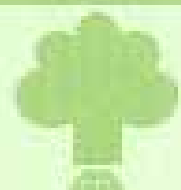
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**LONGEVITY OF  
HARCOATED SEED  
AFTER SCARIFICATION**

*by*

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Longevity of harcoated seed after scarification

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# 1. Introduction

The following investigation was carried out to see whether scarified seed should be sown immediately after scarification or whether it may be safely transported or stored. - As the duration of international transport of seed from dispatch to receipt generally is up to two months, the storage time in this investigation was fixed at two months.

## 2. Methods

Seeds of the two species *Acacia farnesiana* and *Prosopis cineraria* were scarified using the 'Seed Gun' or the 'Glow Burner' as described in DFSC Technical Note No. 27.

Unscarified and scarified seeds were placed in storage for two months under the following conditions:

- Open at 30°C and a relative humidity of 80%.
- Airtight at 0°C to 4°C

The open storage under the above conditions should simulate transport conditions.

After storage, the unscarified seeds were scarified either by burning or in the seed gun. Then the germination of all seed lots were tested.

### 3. Results

Table 1 shows the most important figures: scarification **after** storage in **cold** store compared with scarification **before** storage in the **open** at high temperature and humidity.

Germination of seed scarified before storage equals that of seed treated immediately before sowing.

We may thus conclude that seed of *Prosopis cineraria* and *Acacia farnesiana* may safely be scarified at a central seed centre before being packed and shipped to the nursery without any special precautions.

At this state, it is recommended that not longer than two months should pass from scarification till sowing.

Table 1. Germination of seed stored as scarified for 2 months in the open at 30°C and 80% RH is compared with unscarified seed stored airtight at 0-4°C.

Species	State of Seed in Storage	Scarification method	
		Seed Gun	Glow Burner
<i>Acacia farnesiana</i>	unscarified 0-4°C	51% (+/- 11%)	98% (+/- 2%)
	scarified 30oC and 80% RH	47% (+/- 11%)	97% (+/- 3%)
<i>Prosopis cineraria</i>	unscarified 0-4°C	75% (+/- 3%)	94% (+/- 5%)
	scarified 30oC and 80% RH	78% (+/- 5%)	90% (+/- 5%)

The results conform with results obtained elsewhere. For example:

- In Malaysia, seed of *Acacia mangium* is pretreated with hot water and may be kept up to one year in cold-store (personal communication from the Tree Breeder, Sabah softwoods, Tawau, Sabah).
- In France, seed of *Acacia albida* is treated with sulphuric acid and may be kept in cold and dry conditions for a few months (Officer in Charge, Division Matériel Végétal, Centre Technique Forestier Tropical, Paris).