

Astronium graveolens

Collecting partner William Vasquez
CATIE
7170 Turrialba
Costa Rica

Replicating partner Danida Forest Seed Centre
Krogerupvej 21, 3050 Humlebaek
Denmark

Collection date
Dispatch to replicating partner 24 April 2001
Seed source

Initial trials (Costa Rica)

Mc 10%
Initial germination 98%

Initial trials (Denmark)

Arrival date 30 May 2001
Mc at arrival 11.8 %
Germination 82 ? 2.06%
Seed weight 0.027 g

Desiccation trial (Denmark)

Moisture contents after desiccation (%) 6.9 ? 0.6 9.1 ? 0.4
Germination (%) **85 ? 4.9** **88 ? 6.7**

Storage trial (Costa Rica)

Storage at 15?C
Mc after 6 months of storage (%) 7.4 5.3 3.5
Germination after 6 months of storage (%) **88 ? 3.2** **93 ? 6.0** **97 ? 3.8**

Storage at 5?C
Mc after 6 months of storage (%) 8.0 4.4 4.3
Germination after 6 months of storage (%) **81 ? 2.0** **95 ? 2.0** **98 ? 2.3**

Storage at -17?C
Mc after 6 months of storage (%) 7.1 5.7 3.7
Germination after 6 months of storage (%) **72 ? 4.6** **81 ? 2.0** **85 ? 3.8**

Storage trial (Denmark)

Mc before storage (%) Fresh 9.1 6.9

Storage at 15?C
Mc after 3.5 months of storage (%) 9.9 8.8 5.3
Germination after 3.5 months of storage (%) **65.0 ? 3.5** **63.5 ? 14.7** **75.0 ? 3.8**
Mc after 8 months of storage (%) 11.2 8.6 6.1
Germination after 8 months of storage (%) **44.0 ? 7.5** **66.0 ? 4.3** **74.0 ? 2.8**

Storage at 5?C
Mc after 3.5 months of storage (%) 11.6 10.1 6.3
Germination after 3.5 months of storage (%) **13.5 ? 2.5** **58.0 ? 11.2** **76.0 ? 8.6**
Mc after 8 months of storage (%) 20.2 8.7 6.2
Germination after 8 months of storage (%) **8.0 ? 4.9** **55.0 ? 7.4** **80.0 ? 1.6**

Storage at -18?C
Mc after 3.5 months of storage (%) 11.2 9.0 6.3
Germination after 3.5 months of storage (%) **47.0 ? 18.5** **61.5 ? 9.0** **81.5 ? 9.6**
Mc after 8 months of storage (%) 10.9 9.2 7.1
Germination after 8 months of storage (%) **16.0 ? 2.5** **69.0 ? 6.0** **78.0 ? 5.1**

Comments and conclusions

The seed of *Astronium graveolens* are clearly desiccation tolerant but there seems to be a certain degree of temperature sensitivity. In the Costa Rica trial there was a small decline in germination for the seed stored at -17°C even at very low mc. The results from the replication in Denmark indicated temperature sensitivity in seed with mc above 9-10%. which is in accordance with results from the previous year.