

Ximenia americana

Collecting partner	Heriel Msanga and L. Uronu National Tree Seed Programme P.O.Box 373, Morogoro Tanzania				
Replicating partner	Ben Fletcher and Hugh Pritchard Royal Botanic Gardens Kew Wakehurst Place, Ardingly, West Sussex RH17 6TN UK				
Collection date	November 1999				
Seed source	Kigwe Forest Reserve				
Initial trials (Tanzania)					
Fruit weight	3.5 g				
Seed weight	0.8 g				
Moisture content before processing	17.7%				
Moisture content after processing	17.7%				
Moisture content (%)	Fruit	Seed coat	Embryo + storage tissue		
	69.0	24.8	12.5		
Initial germination	97%				
Desiccation trial (Tanzania)					
Moisture contents after desiccation (%)	12.3	8.9	6.1	3.2	
Germination after desiccation (%)	94	85	85	80	
Germination of controls (%)	97	96	90	90	
Storage trial (Tanzania)					
Moisture contents (%) before storage	17.7	12.3	8.9	6.1	3.2
Germination (%) after 3 months at 4 °C	41	30	59	68	75
Mc (%) after storage	15.8	11.4	8.1	5.3	2.7
Germination (%) after 6 months at 4 °C	20	33	39	52	68
Mc (%) after storage	13.9	9.2	8.2	5.0	2.9
Germination (%) after 3 months at 16 °C	*	*	73	84	84
Mc (%) after storage	*	*	8.7	5.2	5.2
Germination (%) after 6 months at 16 °C	*	*	*	43	55
Mc (%) after storage	*	*	*	5.2	2.8
Germination (%) after 3 months at 25 °C	*	*	*	76	79
Mc (%) after storage	*	*	*	5.7	2.7
Germination (%) after 6 months at 25 °C	*	*	*	44	53
Mc (%) after storage	*	*	*	5.7	2.6
Initial trials (England)					
Seed measurements ± one SD	Length		Width		
	14.8 ± 1.4 mm		9.5 ± 0.8 mm		
Seed weight ± one SD	0.695 ± 0.14 g				
Initial germination	87%				
Moisture content (%)	Whole seed	Embryo/endosperm	Testa		
	12.6 ± 1.0	9.6 ± 1.0	17.9 ± 0.7		
Desiccation trial (England)					
Moisture contents after desiccation (%)	6.3 – 2.8				
Germination after desiccation (%)	80-88				
Storage trial (England)					
Germination (%) after 6 days at -20°C, mc = 2.8%	80				
Comments and conclusions	Attacks by fungi were a problem for quite a lot of the treatments, but good storage results were obtained at 4°C. An additional trial, made by NTSP, comparing polyethylene, cotton and aluminium bags for storage, showed that problems with fungi can be avoided by using cotton bags. The seeds seem to be neither desiccation nor temperature sensitive. Please note article by Fletcher and Pritchard in Newsletter no 6.				

* the samples were heavily contaminated with fungi