

Hancornia speciosa (1998 – collection)

<i>Collecting partner</i>	Antonieta Nassif Salomão. CENARGEN, S.A.I.N. Parc Rural C.P. C.P. 02372. CEP 70770 Brasilia DF, Brazil					
<i>Collection date</i>	November 1998					
<i>Seed source</i>	Near Mutuca Farm, 60 km from São João da Alianca Municipality, State of Goiás					
Initial trials						
<i>Fruit weight</i>	42.19 ± 18.19 g					
<i>Seed weight</i>	0.18 – 0.22 g (two seed lots)					
<i>Mc before processing</i>						
<i>Mc after processing</i>	50.63 – 53.74 % (four seed lots)					
<i>Mc of the embryo</i>	77.53 – 78.08 % (two seed lots)					
<i>Mc of endosperm</i>	45.57 – 48.68 % (two seed lots)					
<i>Initial germination (%)</i>	100					
Desiccation trial						
<i>Moisture contents (%) after desiccation (seed lot 1)</i>	51.53			8.84		
<i>Germination (%) after desiccation</i>	100			0		
<i>Moisture contents (%) after desiccation (seed lot 2)</i>	53.75			11.20		
<i>Germination (%) after desiccation</i>	80			32		
<i>Mc range after desiccation</i>	55.69 – 4.97% (seed lot 4)					
<i>Mc (%)</i>	55.69 – 33.03	27.23	11.83	5.92	4.97	
<i>Germination (%) after desiccation</i>	80 - 95	82	54	0	0	
<i>Mc range after desiccation</i>	50.63 – 5.87 % (seed lot 5)					
<i>Mc (%)</i>	51 - 33	26	19	19	9	7
<i>Germination (%) after desiccation</i>	80 - 93	75	62	70	23	0
<i>Controls</i>	Generally no decrease in germination percentage					
Storage trial						
<i>5 and 10°C, 2, 6 and 12 months</i>						
<i>Mc (%) before storage</i>	52.54		51.12		47.69	
<i>Germ. (%) after 2 months at 5°C</i>	40		58		36	
<i>Germ. (%) after 6 months at 5°C</i>	0		0		0	
<i>Mc (%) after 6 months' storage at 5 °C</i>	9.52		9.52		39.55	
<i>Mc (%) before storage</i>	48.99			38.46		
<i>Germ. (%) after 2 months at 10°C</i>	90			73		
<i>Germ. (%) after 6 months at 10°C</i>	5			0		
<i>Mc (%) after 6 months' storage at 10 °C</i>	46.27			40.29		
<i>Germ. (%) after 12 months at 10°C</i>	0			0		
<i>Mc (%) after 12 months' storage at 10°C</i>	45.46			40.76		
<i>Comments and conclusions</i>	See under 1999 collection					

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<i>Replicating partner</i>	William Vasquez Banco de Semillas Forestales, CATIE, 7170 Turrialba, Costa Rica				
<i>Collection date</i>	November 1999				
<i>Seed source</i>	Mozondo Farm, between District Federal and the State of Goiás.				
<i>Initial trials – (Costa Rica)</i>					
<i>Mc after arrival</i>	38.6				
<i>Initial germination (%)</i>	85.5 ± 1.9				
<i>Desiccation trial – replicating partner</i>					
<i>Mc range after desiccation</i>	38.6 – 16.3 %				
<i>Mc (%) after desiccation</i>	38.6	29.8	23.5	23.5	16.3
<i>Germination (%) after desiccation</i>	85.5	79	70	75	38
<i>Storage trial – (Costa Rica)</i>					
<i>5 and 15°C; 3 and 6 months; 29.8, 23.5 and 16.3% mc</i>	Initiated, results not yet ready				
<i>Storage trial – (Brazil)</i>					
<i>10°C, 2 to 12 months, 47.3 and 27.8% mc</i>	Initiated, results not yet ready				
<i>Comments and conclusions</i>	Minimum safe moisture content seems to be around 30%. The first storage results are not very promising, it will therefore be exciting to see the results of the storage trial initiated in 1999.				

Hancornia speciosa (2000 – collection)

<i>Collecting partner</i>	Antonieta Nassif Salomão. CENARGEN, S.A.I.N. Parc Rural C.P. C.P. 02372. CEP 70770 Brasilia DF, Brazil						
<i>Replicating partner</i>	William Vasquez Banco de Semillas Forestales, CATIE, 7170 Turrialba, Costa Rica						
<i>Collection date</i>	November 2000						
<i>Seed source</i>	Veredas Farm, Planaltina de Goiás Municipality, State of Goiás (seedlot 1) BW 4517 (voucher), State of Goiás (seedlot 2)						
Initial trials – (Brazil)							
<i>Mc before processing</i>	64.5 ± 1.4						
<i>Mc after processing</i>	55.3 ± 3.3						
<i>Initial germination (%)</i>	83						
Desiccation trial (Brazil)							
<i>Seedlot 1</i>							
<i>Mc (%) after desiccation</i>	45.6	45.4	44.9	46.2	17.5	9.9	8.7
<i>Germination (%) after desiccation</i>	92	83	86	90	55	2	0
<i>Seedlot 2</i>							
<i>Mc (%) after desiccation</i>	38.3	36.0	31.4	33.9	7.8	6.2	6.3
<i>Germination (%) after desiccation</i>	87	83	85	70	41	0	0
Storage trial – (Brazil)							
<i>Mc before storage (%)</i>	55.3	46.6	42.2				
<i>Germination before storage (%)</i>	83	89	91				
<i>Storage at room temperature (25 ± 2°C)</i>							
<i>Mc after 1 month of storage (%)</i>	41.6	29.5	30.9				
<i>Germination after 1 month of storage (%)</i>	83	77	32				
<i>Mc after 3 months of storage (%)</i>	35.7	26.7	31.3				
<i>Germination after 3 months of storage (%)</i>	53	45	75				
<i>Mc after 6 months of storage (%)</i>	10.2	16.5	8.9				
<i>Germination after 6 months of storage (%)</i>	0	0	0				
<i>Storage at 20°C</i>							
<i>Mc after 1 month of storage (%)</i>	41.9	37.2	32.5				
<i>Germination after 1 month of storage (%)</i>	44	70	88				
<i>Mc after 3 months of storage (%)</i>	44.1	40.2	35.1				
<i>Germination after 3 months of storage (%)</i>	67	76	48				
<i>Mc after 6 months of storage (%)</i>	-	30.9	42.3				
<i>Germination after 6 months of storage (%)</i>	0	49	63				
<i>Storage at 15°C</i>							
<i>Mc after 1 month of storage (%)</i>	48.6	39.2	33.9				
<i>Germination after 1 month of storage (%)</i>	70	84	81				
<i>Mc after 3 months of storage (%)</i>	45.3	41.1	35.8				
<i>Germination after 3 months of storage (%)</i>	54	82	61				
<i>Mc after 6 months of storage (%)</i>	-	45.9	31.5				
<i>Germination after 6 months of storage (%)</i>	0	57	4				

Storage trial – (Costa Rica)			
<i>Mc before storage (%)</i>	46.4	40.0	
<i>Germination before storage (%)</i>	74 ± 5.2	21 ± 2.0	
<i>Storage at room temperature</i>			
<i>Mc after 1 month of storage (%)</i>	42	32.8	
<i>Germination after 1 month of storage (%)</i>	54 ± 10	63 ± 3.8	
<i>Mc after 3 months of storage (%)</i>	41.1	30.2	
<i>Germination after 3 months of storage (%)</i>	47 ± 8.2	23 ± 3.8	
<i>Mc after 9 months of storage (%)</i>	-	-	
<i>Germination after 9 months of storage (%)</i>	-	-	
<i>Storage at 15°C</i>			
<i>Mc after 1 month of storage (%)</i>	39.4	31.2	
<i>Germination after 1 month of storage (%)</i>	52 ± 4.6	41 ± 2.0	
<i>Mc after 3 months of storage (%)</i>	38.4	30.4	
<i>Germination after 3 months of storage (%)</i>	51 ± 2.0	30 ± 7.7	
<i>Mc after 9 months of storage (%)</i>	-	-	
<i>Germination after 9 months of storage (%)</i>	-	-	
<i>Storage at 5°C</i>			
<i>Mc after 1 month of storage (%)</i>	39.1	27.9	
<i>Germination after 1 month of storage (%)</i>	26 ± 4.0	15 ± 6.0	
<i>Mc after 3 months of storage (%)</i>	38.7	27.9	
<i>Germination after 3 months of storage (%)</i>	39 ± 10.8	24 ± 5.7	
<i>Mc after 9 months of storage (%)</i>	-	-	
<i>Germination after 9 months of storage (%)</i>	-	-	
Comments and conclusions	The results above are from the third trial performed on this species. The first two desiccation trials showed a critical moisture content around 30% which is confirmed by this report. The results from the previous trials were inconclusive but with this report it can be concluded that the seed of <i>Han-cornia speciosa</i> can be stored for up to 3 months and that the optimal mc for storage is 35-40%. The results from Costa Rica show that storage temperature should be above 5°C.		