

6. Smith, Elton M. 1975. Quackgrass, chickweed and dock control in nursery plantings. Nursery Notes Vol. VIII, No. 1.

Tuesday Afternoon. December 2, 1975

The afternoon session convened at 1:30 pm with Mr. Ed Bunker serving as moderator for a special presentation by the group of visiting Australian members. The second portion of the afternoon program was moderated by Mrs. Judith L. Shirley.

GERMINATING PALM SEEDS

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Linnaeus said "Man dwells naturally within the tropics and lives on the fruit of the palm tree. He exists in other parts of the world and there makes shift to feed on corn and flesh." I am sure in everyone's mind a picture of the tropics conjures up palm trees swaying in the balmy breeze.

In the realm of economically important plants, palms stand second to grain-yielding grasses. The world's first sealed milk bottle — the coconut palm; it also gives us copra and coir for mats and roofing of homes. Dates — the staff of life; we have palm cabbage; arrack — a potent alcoholic drink; leaves for thatch and brooms, cabinet wood and veneers. Fruit, such as *bactris*, the peach palm, are very nutritious; sago palm; betel nuts chewed by over 400,000,000 people; palm oils — and the list goes on and on. In Southeast Asia, *Borassus flabellifer* has over 800 uses to the native people there.

In our western civilization the palm has become important for its decorative and durable capabilities. It is with these so called decorative palms that we are involved. In propagation some palms can be increased by division and a few can be air-layered, but seed propagation is by far the most important means of increasing stocks.

The special issue of *The American Horticultural Magazine*, Jan., 1961 lists palms as to their viability and length of time they hold this trait. Germination times are also listed in this fine book and I would recommend it to you.

This report is about some tests we are carrying out with planting palm seed, either cleaned or with the fruit pulp attached. I believe in many cases the fruit acids are beneficial to germination, hasten it and also give much higher germination results. The palms we have tested and the results are shown in Table 1. Germination was recorded as having occurred when the first seedling appeared. All seed were collected from the same plant within each species and planted in peat-perlite, 1:1, over variable heat between 75 and 82° F.

We have had our best success in most cases by planting the seed enclosed in the ripe pulp. A lot of work still needs to be done on some varieties and we are continuing our trials. With *Arecastrum romanzoffianum* and *Livistonia chinensis* we have better results in open ground beds using ripe seed with the fruit attached.

McCurrack lists many species and gives cultural information which is very helpful. Palms have been cultivated for at least 5,500 years and I am sure in 5,500 years more we will still be learning about this marvelous family of plants, without which the world would be an infinitely poorer place.

Table 1. Germination of palm seed sown as mature-green or ripe seed with fruit attached, or as cleaned seed planted immediately, or after being stored one month.

Palm species	Fruit attached to seed			Cleaned seed	
	Mature-green	Ripe		Not stored	Stored 1 mon.
<i>Archontophoenix cunninghamiana</i>	100 ^a , 63 ^b , 71 ^c	100 ^a , 98 ^b , 24 ^c		100 ^a , 82 ^b , 43 ^c	100 ^a , 61 ^b , 59 ^c
<i>Archontophoenix alexandrae</i>	100, 41, 62	100, 97, 29		100, 71, 43	100, 49, 63
<i>Areca cathecu</i>	10, —, —	10, 7, 71		10, 8, 69	10, 5, 67
<i>Arecastrum romanzoffianum</i>	100, 6, 56	100, 4, 61		100, 46, 59	100, 42, 63
<i>Bactris monostachya</i>	5, —, —	5, 5, 123		5, 3, 140	5, —, —
<i>Borassus flabellifer</i>	10, —, —	10, 10, 148		10, 6, 142	10, —, —
<i>Calamus spp.</i>	70, —, —	70, 46, 34		70, —, —	70, —, —
<i>Caryota urens</i>	10, —, —	10, —, —		10, —, —	10, 2, 82
<i>Caryota mitis</i>	10, —, —	10, —, —		10, 6, 80	10, 1, 97
<i>Chamaedorea erumpens</i>	100, 74, 48	100, 98, 35		100, 82, 164	100, 41, 178
<i>Chamaedorea elegans</i>	10, 2, 56	10, 10, 29		10, 8, 34	10, 6, 44
<i>Chamaerops humilis</i>	—, —, —	100, 92, 53		100, 74, 43	100, 31, 49
<i>Chrysalidocarpus (Areca) lutescens</i>	100, 2, 42	100, 83, 30		100, 74, 38	100, 57, 36
<i>Dictyosperma album</i>	10, 2, 81	10, 10, 63		10, 7, 54	10, 2, 78
<i>Hedyscepe canterburyana</i>	—, —, —	10, 7, 198		10, 7, 181	10, 6, 193
<i>Howea belmoreana</i>	100, 42, 223	100, 61, 212		100, 65, 197	100, 62, 202
<i>Howea fosteriana</i>	100, 20, 242	100, 53, 202		100, 41, 200	100, 34, 197
<i>Livistonia australis</i>	100, 76, 28	100, 99, 21		100, 72, 34	100, 21, 41
<i>Livistonia chinensis</i>	100, —, —	100, —, —		100, 6, 34	100, 18, 37
<i>Phoenix roebelenii</i>	100, 37, 45	100, 92, 31		100, 81, 42	100, 53, 49
<i>Phoenix rupicola</i>	10, 3, 31	10, 10, 27		10, 6, 29	10, 7, 41
<i>Phoenix sylvestris</i>	10, —, —	10, 9, 31		10, 7, 34	10, 6, 36
<i>Roystonea regia</i>	100, 71, 27	100, 94, 26		100, 78, 23	100, 21, 43
<i>Syagrus weddelliana</i>	4, 4, 56	4, 3, 47		4, 1, 49	4, —, —
<i>Washingtonia robusta</i>	100, 62, 21	100, 100, 16		100, 92, 22	100, 81, 34

^a Number of seed planted.

^b Number germinated.

^c Number of days until first germination.

REFERENCES

1. Amer. Hort. Mag., Special Issue, Jan. 1961.
2. Braun, August. 1968. Cultivated palms of Venezuela. *Principes* 12 (2, 3, 4).
3. McCurrack, J. C. 1960. Palms of the World.
4. Moore, H. E. Jr. 1973. The major groups of palms and their distribution. *Gentes Herbarium* 11:27-141.
5. *Principes, Quarterly J. of the Palm Soc.* Vols. 14 (1) to 19 (3).