water, obpyriform, base rounded, papilla hemispherical, 25–70(48)×15–40(25) μm, length-breadth ratio 1·3:1 and caducous with a slender stalk 11–16 μm long and chlamydospores absent. The isolates were found to be heterothallic and produced oospores in dual cultures with the compatible mating type (A^2). Antheridia—amphigynous and 12×13 μm, Oogonia—spherical to pyriform and 26–45 μm, Oospore—aplerotic, 15–40 μm and wall 2–4 μm.

The above descriptions of sporangia, chlamydospores and oospores of *Phytophthora* isolates of arecanut resemble the descriptions given for *P. meadii* McRae in the tabular key[8]. The identity of the isolates is in conformity with that of the Commonwealth Mycological Institute, Kew, England. One of the arecanut *Phytophthora* isolates (PM 1) has been deposited at CMI (Herb. IMI 255066).

The present identification of Koleroga fungus from arecanut as *P. meadii* differs from its earlier identification as *P. arecae*.

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SPANISH GROUNDNUT STRAINS WITH FRESH-SEED DORMANCY

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DORMANCY of seeds in groundnut (*Arachis hypogaea* L) is not found in Spanish and Valencia groups (subspecies *fastigiata* Waldron) in contrast to Virginia group (subspecies *hypogaea* Krap. et Rig.) where it is generally present. Lack of dormancy in the Spanish (bunch) group is a problem causing *in situ* germination and poor storability of seeds in pods. Although some Spanish cultigens were reported to possess a degree of fresh-seed dormancy[1,2], these have not been released for general cultivation so far except the variety TG-17 which was reported to possess a short dormancy of about 15 days[3]. A major breakthrough in this aspect was the development of a Spanish cultigen, CGS 1–19 (derived from a cross between Spanish J-11 and Virginia bunch Robut 33–1) which possesses a fresh-seed dormancy period of five weeks[4]. This cultigen has a good yield potential and is already entered in the All India Coordinated Trials as CGC-7. The present report concerns further gain in dormancy period of CGC-7 to a level hitherto not reported in Spanish groundnut.

The progeny in F_8 generation of the selection CGC-7 was planted for pre-release seed multiplication during the summer of 1984 at NRCG, Junagadh. The population exhibited differential germination. Some seeds germinated belatedly thereby indicating a difference in the period of dormancy. The late-germinating and normal plants were harvested and bulked separately. To break the dormancy, the seeds were sprayed with ethrel (2-chloroethylphosphonic acid) solution (500 ppm), sealed in polythene bags to avoid escape of ethylene gas and kept overnight. After a thorough washing, the seeds were sown in the field during the rainy season of 1985. Both the bulks were harvested during the second week of November 1985 and subsequently planted separately on 27 June 1986.

The normal bulk exhibited uniform and complete germination within 10 days after planting. In the selected bulk, however, the germination was staggered resulting in four categories of seedlings (table 1). In category A, the population germinated normally similar to that in the unselected bulk

Table 1 *Differential fresh-seed dormancy in sister-strains of CGC-7 groundnut*

Category of sister strain	No. of segregants selected	% of population selected	Days after sowing taken for emergence*	Dormancy (days)
CGC-7 A	565	21.6	10	<230
CGC-7 B	605	23.1	25	245
CGC-7 C	607	23.2	40	270
CGC-7 D	842	32.1	55	285
		Mean	32.5	257.5
		S.E.	9·7	12·3

* Sowings were effected after a seed-storage duration of 230 days.

showing moderate dormancy. In categories B, C and D, the germination was progressively delayed by about a fortnight from one category to the immediate next one. The dormancy in the latter three categories was, thus, longer than the normal bulk and ranged from 240 to as high as 285 days which is unique and so far not reported in the Spanish groundnut.

Isolation of these highly dormant Spanish strains clearly shows that the magnitude of fresh seed dormancy can be manipulated through selection in the population and the scope exists to breed a Spanish bunch variety with a desired level of dormancy. Evolution of these strains amply flays the fallacy of non-availability of seed-dormancy in Spanish groundnut.

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IDENTITY AND TAXONOMY OF *SAPINDUS TRIFOLIATUS* LINN

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THE ambiguities existing in the names of certain economic crops often impede the proper utilization of the plants. *Sapindus trifoliatus* Linn, the source of soapnut, is such a plant, the identity and nomenclature of which are understood variously by taxonomists. It was Hiern[1] who recognized two different forms of *Sapindus trifoliatus* Linn, one with acuminate glabrous leaves and the other with emarginate leaves pubescent beneath. Vahl[2] raised these two forms to distinct species *S. laurifolius* Vahl and *S. emarginatus* Vahl. *S. laurifolius* has longer (up to 30 cm) obliquely ovate lanceolate leaves, petals softly woolly on the inner surface and velvetty round drupes combined almost completely, whereas *S. emarginatus* possesses shorter (up to 17 cm) broadly oblong leaves, petals glabrous on the inner surface but with two woolly scales and glabrous wrinkled drupes combined half way up. This concept was accepted by Trimen[3], Gamble[4], Haines[5], Santapau[6] and Abdulla[7]. Radlkofer[8] considered *S. laurifolius* as a synonym of *S. trifoliatus* and had reduced *S. emarginatus* to a variety of *S. trifoliatus* viz *S. trifoliatus* Linn var *emarginatus* (Vahl) Radlk. Cooke[9] treated *S. emarginatus* as a variety of *S. laurifolius*. Brandis[10], Prain[11], Duthie[12] and Saldanha and Nicolson[13] considered *S. trifoliatus*, *S. laurifolius* and *S. emarginatus* as synonyms. There is still another view that *S. trifoliatus* Linn is a *nomen ambiguum* and *S. laurifolius* Vahl is the correct name of the plant[3].

To evaluate the taxonomic status, the leaves of both *S. laurifolius* and *S. emarginatus* were subjected to a chemotaxonomic treatment involving chemical characters such as flavonoids, phenolic acids, alkaloids, saponins, tannins and iridoids using standard procedures[14,15], the results of which are tabulated in table 1. Both the plants contained flavones, glycoflavones, proanthocyanins and various phenolic acids in the leaves. The flavones encountered were apigenin and its 7,4′-dimethoxylated derivative in *S. emarginatus* and 4′-methoxy