

Multiple *Spicata* Coconut (MSC): A Rare Type of Coconut in Andaman Islands

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Commentary

Coconut is a unique plantation crop of Andaman and Nicobar Islands and has been associated with socio cultural facts of people of these islands. Coconut is an important subsistence crop of the humid tropical zones and is a life-supporting species in fragile island and coastal ecosystems. Coconut is believed to have originated in the Indo-Malayan region (Indonesia, Malaysia and the Philippines) from where it was dispersed, mainly via oceanic currents, to sandy and coralline tropical coasts where it got established. In India, cultivation of coconut is in practice since time immemorial and grown in an area of 2.039 million hectares with the production of 21892 million nuts. During the last two decades in A&N Islands, the area has been increased to 21800 ha with a production of 113 million nuts and the productivity is 5184 nuts/ha against the national productivity of 10736 nuts/ha. India holds the world's largest repository of coconut germplasm with 411 accessions of which 285 are indigenous and 126 are exotic. Among 285 indigenous accessions, about 87 accessions are from A&N Islands. The diversity of coconut in the A&N Islands is exceptional and unique. Coconut accessions having horned fruits, beaked fruits, palms with persistent petiole and inflorescence, soft endosperm (macapuno types), fused leaflets (plicata) and unbranched inflorescence (*spicata*) are found in these islands [1]. The coconut is a monoecious crop which bears both male and females in the same rachis of the inflorescence. The total number of female flowers per inflorescence in a tall palm usually varies between 20-40 as compared to the dwarf which carries large number of female flowers in one spadix. But, there is a great variability in this character, which apart from being determined genetically, is also strongly influenced by growing conditions. Young palms just starting to flower usually have fewer female flowers per inflorescence than mature palms. Palms with large number of female flowers cannot carry many nuts on one spadix or bunch as there is no room for them to grow.

There are about five different coconut varieties under "*nucifera*" species and nine different forms with in the "*typica*" variety only. The *C. nucifera* var. *Spicata*, are tall palms with unbranched inflorescence or inflorescence with one or two small spikes. The natural progenies from *spicata* showed 50 per cent true to type of the mother palm. Such character is not suitable for seedling production and distribution for cultivation [2]. As the palm has no male flowers or only few, it can hardly reproduce itself true to type. There are two main groups of coconuts, the "*Niu Kafa*" that evolved naturally and the "*Niu Vai*" that arose under cultivation [3]. Ayiramkachi, a dwarf palm found on the East Coast of Tamil Nadu, India, have very small fruits and the shape is mostly oblong, rarely round. The nuts are green and copra of good quality. The important character of this variety is high female flower production but fruit setting is low and it is an alternate bearer. In all coconut growing regions, palms with unbranched inflorescences appear very rarely. Some palms have inflorescence with one or two small rachis/branches. The inflorescence of *spicata* palm carries only female flower and few male flowers. Subsequently, the occurrence of *spicata* coconuts were also reported from Indonesia and India [4,5]. Generally, fruit set and shedding percentage of immature fruits is high but fruit retention is low which is inevitable as there is just not

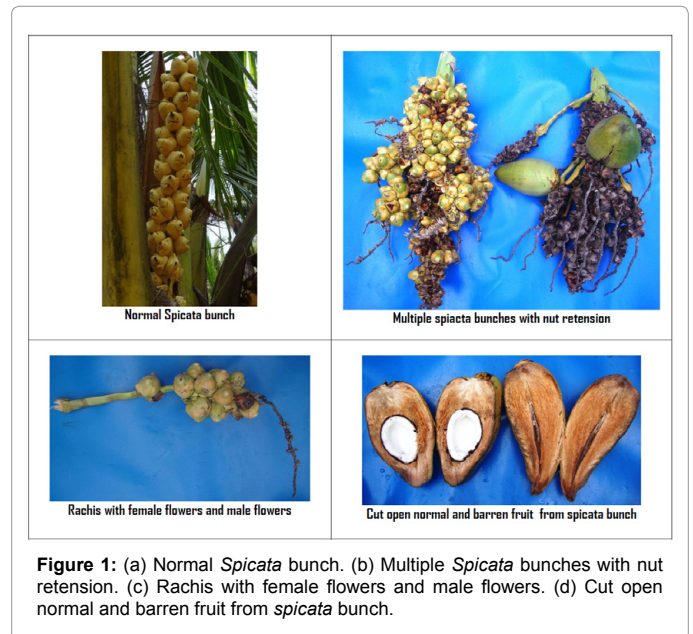


Figure 1: (a) Normal *Spicata* bunch. (b) Multiple *Spicata* bunches with nut retention. (c) Rachis with female flowers and male flowers. (d) Cut open normal and barren fruit from *spicata* bunch.

enough room for so many nuts on the spadix, unless palms bears very small nuts. The present survey in South Andaman has resulted in identification of a rare form of multiple *spicata* from Chouldari village. Unlike normal *spicata*, this peculiar palm produces 10-15 no rachillae of 30-32 cm length with 23-26 female flowers in each spikelet/rachillae. On an average, each inflorescence produces 330-345 female flowers with higher setting percentage and button shedding which in turn bears 1-2 nuts per bunch. This palm is different from normal *spicata* and Ayiramkachi type as identified by earlier workers. This rare form of multiple *spicata* coconut could be a potential source for future coconut breeding programmes in the Country (Figure 1a-1d).

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