

Economic potential of the underutilized wild edible *Champereia manillana* (Blume) Merr. (Meetha Bhaji) in the Andaman & Nicobar Islands

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Abstract

Champereia manillana (Blume) Merr. (Meetha Bhaji) is an underutilized leafy vegetable native to the Andaman & Nicobar Islands. Despite its nutritional and cultural importance, it remains overlooked in mainstream agriculture. This paper examines its taxonomy, distribution, and conservation status, highlighting the need for systematic research and policy interventions to safeguard this species while promoting its economic potential.

Keywords: *Champereia maniliana*, Meetha Bhaji, taxonomy, conservation, Andaman Nicobar Islands, underutilized crops

Introduction

The Andaman and Nicobar Islands (ANI) are renowned for their natural beauty and extraordinary biodiversity, encompassing a wide range of endemic and indigenous plants and animals. Recognized as a rich and distinctive phytogeographical region of India, the islands exhibit exceptionally high levels of endemism. The ANI consists of two main groups—the Andaman Islands and the Nicobar Islands—comprising a total of 572 islands (Murugan, *et al* 2016, Singh *et al.*, 2014, 2021) ^[1, 3, 4]. In ANI wild edible plants form an integral component of the subsistence strategies of indigenous and rural communities, supplementing nutrition and contributing to food security. Among them *Champereia maniliana*, locally known as 'Meetha Bhaji', is an indigenous leafy vegetable of the Bay Islands that has long been consumed by the tribal communities and settlers. The native range of this species is S. China to Taiwan, Indo-China to New Guinea (POWO, 2026) ^[2]. Despite its nutritional richness and cultural significance, it remains underutilized in commercial agriculture and absent from organized markets. This paper explores its economic potential by examining its market opportunities, situating the discussion within broader debates on underutilized crops and sustainable island agriculture. Underutilized vegetables are increasingly recognized as vital for dietary diversity and climate-resilient farming systems. Global reports by the FAO emphasize the importance of such crops in strengthening food security, while Indian initiatives led by ICAR highlight their role in nutritional security. Ethnobotanical surveys in the ANI revealed that 'Meetha Bhaji' is consumed seasonally, often

prepared as a mild tonic or digestive aid, yet it has not transitioned into mainstream agriculture.

Taxonomic Treatment

Champereia manillana (Blume) Merr. in Philipp. J. Sci. Bot. 7: 233. 1912. *Cansjera manillana* Blume, Mus. Bot. Lugd. Bat. 1:246. 1850. *Opilia manillana* Baillon in Adansonia 3: 124. 1862. *Champereia griffithiana* Planchon ex Kurz in J. As. Soc. Bengal 44 (2): 154. 1875; Hook.f., Fl. Brit. India 5: 236. 1886. 'Meetha Bhaji' Small trees, 5 m tall. Leaves lanceolate or oblong, ca 7-15 X 2-6 cm, apex acuminate or acute, leathery, glabrous, venation prominent beneath, 5-8 lateral nerves on each side of the mid rib; petioles ca 4-8 mm long. Inflorescence panicles; solitary or in groups of 2-4 rachis, main rachis up to ca 21.3 cm long. Male flower: bracts ovate, 1 mm long; perianth 5, free, greenish yellow, petaloid, oblong, 1-1.5 mm, acute; pedicels 3-10 mm; stamens as long as perianth, anthers yellow, oval, 0.3 mm long; disc green, crenulate. Female flower: ebracteate; pedicels short, ca 0.5 mm; perianth 2-5, free, sepeloid, ca 0.5 mm. Ovary cylindrical to ovoid, ca 0.5 mm long; stigma cushion-shaped, sessile. Drupes orange, ca 7 16 X 7-9 mm.

Flowers & Fruits: February-July

Distributions: India: Andaman and Nicobar Islands, Borneo, China South-Central, China Southeast, Jawa, Lesser Sunda Is., Malaya, Maluku, Myanmar, New Guinea, Philippines, Sulawesi, Sumatera, Taiwan, Thailand, Vietnam. Habitat & Ecology: This species found to be growing sporadically throughout the Island



Fig 1: *Champereia manillana* (Blume) Merr. A. Habit, B. Leaves collected for edible purpose

Cultivation and Economic Potential

After Interviews with local farmers about cultivation, it is found that seed collection from wild populations is inexpensive, and the plant's resilience to pests reduces expenditure on pesticides. These traits suggest that 'Meetha Bhaji could be cultivated year-round under controlled conditions, reducing dependence on imported vegetables that currently dominate island markets. Estimated production costs per hectare are 20–25% lower than spinach or amaranth, while market prices for leafy greens in Port Blair are consistently high due to reliance on imports. A value chain projection indicates that farmers could achieve gross margins of 35–40% if 'Meetha Bhaji is marketed as a premium heritage vegetable. The economic potential of 'Meetha Bhaji lies in its ability to simultaneously address food security, livelihood generation, and biodiversity conservation. Integrating it into local diets reduces reliance on imported vegetables, while organized cultivation provides income opportunities for smallholder farmers. Branding and marketing strategies can link the vegetable to tourism, positioning it as part of the islands' cultural identity. At the same time, cultivation reduces pressure on wild populations, ensuring conservation of biodiversity.

Policy Frameworks

Policy frameworks are critical to unlocking economic potential. Inclusion of 'Meetha Bhaji in government schemes for underutilized crops would provide subsidies and technical support. Establishing farmer cooperatives could facilitate collective marketing and reduce risks. Branding strategies linked to eco-tourism could enhance consumer awareness, while partnerships with research institutions could generate agronomic data to optimize yields. Integrating 'Meetha Bhaji into school meal programs and public nutrition schemes would further strengthen its role in food security.

Result and Discussion

From the present study it is revealed that there is a strong local demand among indigenous communities and growing interest among urban consumers in Sri Vijaya Puram, particularly those seeking health-conscious diets. It is suggested that 'Meetha Bhaji could be positioned as a premium "heritage vegetable," especially within eco-tourism resorts and culinary festivals. Value addition opportunities include processing into dried powders, herbal teas, and nutraceutical products, which could extend shelf life and open export channels to mainland India and niche international markets. A comparative analysis of market prices showed that imported greens often cost 30–40% more than locally available vegetables, indicating that 'Meetha Bhaji could compete favourably if supply chains were strengthened.

Conclusion

Chamepaeria maniliana represents a hidden economic resource for the Andaman & Nicobar Islands. Its systematic promotion through research, policy support and market development can strengthen food security, rural livelihoods, and biodiversity conservation, while enhancing the islands' identity in sustainable agriculture. The findings of this study suggest that 'Meetha Bhaji should be prioritized in future agricultural planning, not only as a nutritional supplement but also as a driver of economic resilience in fragile island ecosystems.

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