

# Alpinia 'Jungle King' – A ornamental intercrop in coconut plantation for aesthetics and income

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Coconut (*Cocos nucifera* L.) is the major plantation crop of coastal humid tropics which provides ample scope for inclusion of other compatible enterprises in the system. Landscaping the coconut plantation with traditional and underutilized perennial flower crops is a new trend towards eco-tourism promotion and horticultural therapy. Inclusion of shade loving flower crops with low maintenance and cost of cultivation is a viable option for medium and large farmers for aesthetics and income generation.

Plants from the order zingiberales are already identified as potential income generation from coconut ecosystem which include spices (ginger, turmeric), fruits (banana), and ornamentals (*Heliconias*). Alpinias are another group of plants belonging to ginger families with ornamental (*A. purpurata*) and medicinal (*A. galanga*) properties that can be grown as an under storey crop in coconut plantations.

*Alpinia purpurata* is commonly known as Red gingers producing inflorescences in different hues of red. It is an evergreen tropical ornamental with brightly coloured flower bracts and white inconspicuous flowers. It grows to a height of 90 cm to 4.5m. The plant starts producing flowers from five months after planting.

## Varieties

The popular varieties of Alpinias are Jungle King (dark red globe shaped inflorescence), Jungle queen (light pink), Kimi (dwarf type plants with lavender pink inflorescence), Red ginger (dark red elongate inflorescence), Madikeri (white inflorescence with overlapping bracts). Among them, Var. Jungle King is identified as a commercial variety suitable for growing as an intercrop in the natural habitat of coconut gardens. It is becoming popular among growers and florists for its longer vase life and unique floral characteristics.

## Growing conditions

Red gingers can be grown in varied climatic conditions from tropics to sub tropics. It prefers organic rich moist soils with drainage facility. It can be grown under full sunlight to partial shade. The performance of plants to light intensity varies with variety. Pilot studies conducted at ICAR-CPCRI reveals Alpinia 'Jungle King' as a potential variety which can be grown as a commercial intercrop in coconut plantations.



The studies conducted at ICAR-CPCRI revealed that commonly grown 'Red Ginger' variety prefers full sunlight which can be grown as an ornamental hedge plant or border plants in coconut plantations.

## Planting material

The offshoots or small plantlets developing from the rhizomes or rhizomes along with mature vegetative pseudo stem can be used for planting. The plants developed from offshoots take more than one year for flowering where as the latter flowers in four to six months time.

## Planting

Alpinia rhizomes are planted in pits of size 30cm x 30 cm x 30cm. Planting can be done except during heavy monsoon seasons. However, the ideal time for planting is from August to November. The rhizomes are planted

at 1.25 m spacing leaving an area of 2m around the coconut basins. The pits are filled with top soil mixed with 250g bone meal and 1kg dried cowdung.

#### Irrigation

Alpinias always require moist soil. It needs to be irrigated once in two days during summer. The frequency of irrigation can be reduced to once in four days by providing mulching with coir pith compost (2kg/pit) during February-March.

#### Manuring

The manures and fertilizers are applied at quarterly intervals beginning from three months after planting. Application of vermicompost (dried coconut leaves can be converted to vermicompost using earthworms of *Eudrillus sp.*) along with neemcake (200g and 100 g per clump respectively) and drenching the plant pits with diluted cow dung slurry in the ratio 1:10 at six monthly interval enhances the production of quality inflorescence.

#### Harvesting

Alpinias starts flowering at six to eight months after planting. Harvesting is usually done before 9am in the morning or after 4pm in the evening by cutting the rhizome along with the inflorescence and foliages at ground level. After cutting, the outer leaves are stripped off and the inflorescence is wrapped using the top most leaf blades. The wrapped inflorescences are then packed for marketing. A total of seven layers of inflorescences can be packed inside a box of 120cm x 45cmx45cm size holding 42 inflorescences per box.

#### Marketing

Inflorescences of around one meter length and compact spikes are selected for sale. Smaller inflorescences can be used for value addition such as bouquets and table top arrangements. At least 4 to 5 marketable inflorescences are produced in the first year of planting itself. It produces 12 to 15 inflorescences/clump/year in the subsequent years and needs to be replanted after 3-4 years. The vase life of 'Jungle King' inflorescences is 5 to 7 days where as 'Red Ginger' has a shorter vase life of 3 to 4 days.

#### **Alpinia 'Jungle King' for income generation from coconut ecosystem with coastal sandy soils - Farmer's experience**

Seaside Agri Exports is a leading floriculture exporting agency situated at the outskirts of Thiruvanthapuram district of Kerala state. The firm markets tropical ornamentals for more than three decades which are bloomed in their own coconut garden. Mr. Vinoo, the owner of the firm is a passionate photographer



and florist who travel a lot to gain insights into his passion-driven floriculture business. He always tries to include novelty and uniqueness in his products which constantly creates a curiosity among his customers mainly spread out in Mumbai, Delhi and Bengaluru markets. According to him Alpinias are newly emerging tropical cut flowers which are gaining market demand since last decade. He introduced Alpinias into his coconut plantation during 2006 and started marketing the flowers since 2008. Among the varieties, Alpinia Jungle King is the most preferred variety among the florists due to its unique colour, compactness and longer vase life. The variety thrives well in coastal sandy loam soil under minimum management as an intercrop in coconut plantation. It produces a minimum of 10 to 12 quality inflorescence per pit annually. The inflorescence fetches around ninety rupees in the major markets of India. For commercial cultivation, a minimum of 250 to 300 plants is needed which requires a minimum of 25 cents of coconut plantation. The dedication and involvement of the farmer coupled with the up-to-date knowledge regarding the emerging market trends are the key towards the success of floriculture business.

#### Conclusion

Though wild types of Alpinias are common in our country, commercial cut flower types with unique characters are fetching up higher demand among the florists. Among the varieties Alpinia 'Jungle King' is identified as a potential variety which can be grown under the natural niche of coconut ecosystem. It produces quality inflorescences during cooler seasons (August to February). At present marketing of Alpinias is concentrated in domestic markets of metros which itself is fetching a reasonable profit. A single inflorescence of Alpinia 'Jungle King' with around one meter length and preferred spike characteristics fetches around sixty rupees and is a viable option for medium and large coconut farmers for aesthetics and income generation.