

and flower spikes are properly packed in CFB boxes with cushioning material.



Fig.5: Flowering in heliconia (Golden Torch) after one year of planting

Yield and income:

On an average, 600-700 plants of heliconia can be planted in one hectare of coconut plantation as inter crop. Each clump can produce 5-10 flowering suckers/clump in one year. The average price of heliconia flower ranges from Rs.5 to Rs.20 depending upon the variety. Hence a minimum income of around 25,000/ha to maximum of 90,000/ha can be realized depending upon the variety of heliconia planted (Fig.6). In addition to flower, production of sucker is an important income generation activity. The sucker production depends on the variety and it ranges from 15-35 suckers per clump. Even 5-10 suckers per clump has to be periodically removed to maintain the spacing and lighting for plants. Hence, the average price of sucker



Heliconia (Bucky) spikes for packing

is around Rs.20-50 depending upon the variety. An average of Rs.10/sucker can yield up to Rs.50, 000/ha through sale of sucker and it will be an additional income to the farmers (Fig.7).

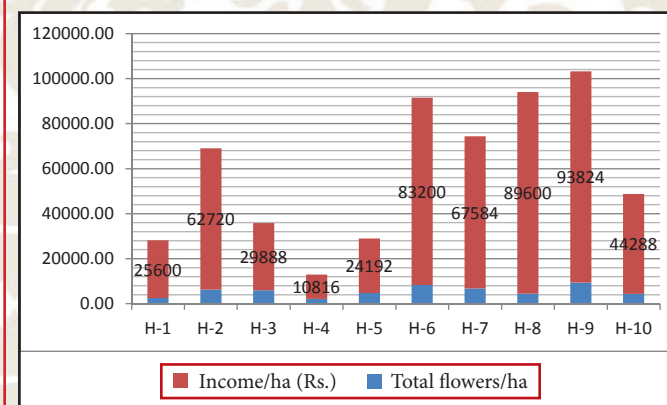


Fig.6: Graph showing flower yield and total income from different heliconia types

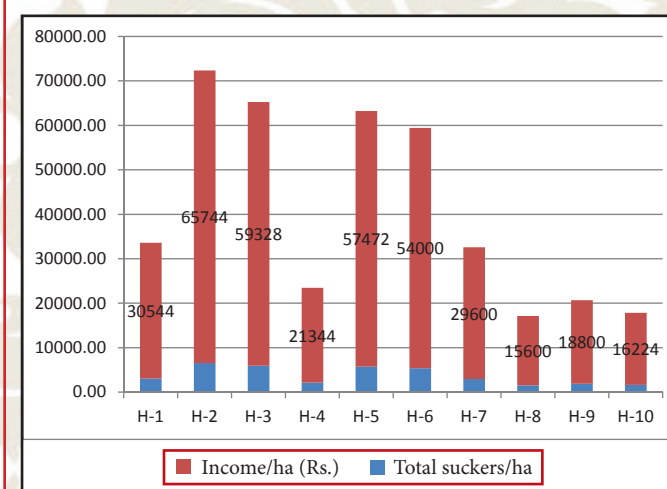


Fig.7: Graph showing sucker yield and total income from different heliconia types



(H-1)
Lobster Claw One

(H-2)
Golden Torch

(H-3)
Lady Di



(H-4)
Rostrata type

(H-5)
Choconiana

(H-6)
Hybrid type



(H-7)
Lobster Claw Two

(H-8)
Sexy Pink

(H-9)
H. wagneriana



(H-10)
Eden Pink

Heliconia under
coconut plantation

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Heliconia- a profitable intercrop in Coconut



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HELICONIAS, which are native to South and Central America, are popular as ornamental plants and cut flowers because of their brilliant colours and exotic appearance. Their enhancing beauty has made them, a best landscape and as a potential cut flower. The heliconias exhibit a wide array of colours led by red, pink, orange, yellow, green combined with different sizes and shapes.



Fig.1 (a-d): Heliconia varieties (a-Bucky, b-Alan Carle, c-Wagneriana, d-Rostrata)

Due to its exotic appearance and brilliant colours, it fetches premium price in the market. Leaves of some varieties of heliconia are also sold as cut leaves for flower decoration. The genus Heliconia (Heliconiaceae) includes a number of species showing potential as commercial cut flower crops. *H. psittacorum* and some of its hybrids (e.g. 'Golden Torch') are particularly promising because of their attractive flowers, long straight clean peduncles, prolific year round flower production, excellent postharvest characteristics, and few pest problems. The inflorescences can be used in a manner similar to those of bird of paradise, but they are less massive and are therefore, easily incorporated into smaller floral arrangements.

In order to exploit the potential of heliconias as an intercrop in the coconut plantations, a study was taken in the 20 year old coconut plantation (Cv. Benaulim) in ICAR Research Complex for Goa, Old Goa. The study includes 25 varieties of heliconias planted as intercrop in the existing coconut plantations. The study was conducted from 2008-2012 for different purpose like cut flower production, cut leaves production, suckering habit, vase life studies *etc.* At the end of the study, it was proven that heliconia is an ideal and profitable cut flower crop in coconut plantations.

Production of heliconia as inter crop in coconut

Planting material:

Heliconias are conveniently multiplied and propagated easily by suckers. Each sucker produces around 20-40 side suckers in one year of planting depending on the variety. Hence, cultivation of heliconia for planting material



Fig.2 (a-c): a-Fresh sucker with sprout, b-Sprouted sucker, c-Planting sprouted sucker

is also profitable since suckers are sold at a cost of ₹. 25 to 250 depending up on the variety. A well grown sucker with sprout is the ideal planting material in Heliconia.

Spacing and planting:

The heliconias are fast growing plants with more number of side suckers there by drawing water and nutrients continuously from the soil. Hence the spacing should be adjusted in a way not to compete with the main crop *i.e.* coconut for water and nutrient. Practically heliconias can be planted in all the inter space of coconut. But for easy management and flowering, it is planted at a spacing of 1.5x1.5m so as to accommodate 16 heliconia plants in interspace of four coconuts planted at 8x8m spacing. Pits of 1.5-2 cubic feet are made and filled with well decomposed organic manure for better rooting. Immediately after planting, the plants are watered thoroughly for better establishment. Generally, it takes about 30-45 days to get the sucker to establish. Hence periodic watering is important.



Fig.3: Planting of heliconia at 1.5x1.5m spacing

Intercultural operations:

Suckering is the important phenomenon of heliconia. Hence nutrition has to be maintained for better suckering and flowering. Generally, NPK at the ratio of 2:1:1 applied at 3kg/m²/year in the basins of heliconia plants gave maximum response for a number of variables including flower weight, leaf area and all vegetative characters. In addition to inorganic fertilizers, application of well decomposed FYM or green manure has beneficial effects on flower and sucker production in heliconia.



Fig.4: Suckering in heliconia after 3 months of planting

Flowering and harvesting:

Generally heliconia starts first flowering at 6-8 months after planting depending on the variety. The performance under coconut plantation indicated that, around 10-15 flowering suckers/clump/year could be produced depending on the variety. The flowers are harvested when 3-4 bracts are already open. The flowers are cut with at least 30-45 cm long stem with leaf. If it is for long distance transport, the leaves are removed