

A note on cultivation of 'Kasi Gogu'  
(Pusa Gogu - *Hibiscus sabdariffa* - variety *altissima*)  
In Visakhapatnam District

By

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**General:** Among the dryland crops, grown in Visakhapatnam district, Kasi or Pusa 'Gogu' occupies a prominent place as a commercial crop. Due to its high yield compared to the Bhimlipatam Jute (*Hibiscus cannabinus*) and due to the good price prevailing in the market for jute, the area under this crop is fast increasing, and replacing the local 'Gogu' (Bhimilipatam jute) as well as groundnut, an important dry land crop of this tract. It is largely grown in the taluks of Palakonda, Bobbili, Cheepurapalli, Parvatipuram, Vizianagaram, Srikakulam, Salur and Patapatnam of this district both on wet and drylands. The dryland area is very large compared to that on wet lands. Tekkali and Srungavarukota taluks also grow this crop on a small scale, and it is having a rapid natural spread from one taluk to the other in this district.

**2. Seasons:** It is sown in the months of January - February on wet lands, taking advantage of the available water in the tanks and on dry lands it is sown in the months of May-June with the receipt of the first soaking rains.

The following is the average rainfall in this district for two cropping seasons (from Season and Crop Report 1947-48).

Month	Wet land Cropping	Dry land Cropping
January	0.30"	...
February	0.70"	...
March	0.60"	...
April	1.10"	...
May	2.70"	2.70"
June	4.90"	4.90"
July	5.70"	5.70"
August	6.70"	6.70"
September	...	7.70"
October	...	7.40"
Total	22.70"	35.10"

3. **Distribution:** The area under 'Gogu' crop in the Visakhapatnam district for the year 1947-48 was 19,304 acres as per the Season and Crop Report for 1947-48. Out of this 11,926 acres were under 'Kasi Gogu' and the remaining area was grown to local 'Gogu'. In the year 1948-49, the area under 'Gogu' (both Kasi and local) in this district was estimated at 35,000 acres and during 1949-50 over 50,000 acres were put to this crop in view of the lucrative price it fetched. More than 85% of this area was occupied by 'Kasi Gogu' as shown below.

Name of the Taluk	Area under Kasi gogu Acres	Area under local gogu Acres
Palakonda	13,857	192
Cheepurupalli	8,265	150
Bobbili	8,207	50
Patapatnam	5,000	...
Vizianagaram	3,150	450
Srikakulam	2,990	...
Salur	2,164	...
Parvatipuram	2,006	158
Tekkali	350	550
Total	45,989	,550

The rapid spread of this crop is attributed to the following causes:—

- (1) It gives more yield than the local Gogu. In some cases it has given twice the yield of local 'Gogu'.
- (2) It withstands drought better.
- (3) It is more vigorous in growth. In some cases the crop has attained a height of over fourteen feet.
- (4) The crop is not damaged by cattle.
- (5) The leaf is not stolen and used for culinary purposes.
- (6) When compared to other rotation crops, this crop gives a higher margin of profit.

4. **Soils:** 'Gogu' is grown in all types of soils in this area. It is noted to be coming up better in black soils and loams than in red and sandy soils.

5. **Rotations:** 'Kasi Gogu' is grown on drylands from May to October as first crop and pure horse gram or mixture of horse gram and 'Pacha Jonna' is sown after the removal of 'Gogu'. In the case of wet lands, this is grown in 'Pyru' season after paddy. After the removal of 'Gogu' in August, the land is puddled and paddy is transplanted.

6. **Preparatory Cultivation:** In the case of dry lands, the land is ploughed five to six times after the receipt of summer showers. The wet land area is given four to five ploughings after the harvest of paddy at appropriate intervals in the months of December-January. In either case, land is tilled well and soil pulverised thoroughly before sowings are done.

7. **Manures and Manuring:** 'Kasi Gogu' is an exhaustive crop, and hence heavy manuring is adopted. Tank silt is applied to the drylands at the rate of 40 to 50 cart loads per acre, in addition to sheep-penning. For wetlands, cattle manure is applied at the rate of 20 cartloads per acre and sheep-penning is also done. In some villages application of tank silt at the rate of 100 cartloads per acre is adopted depending on its availability and the distance of the tank from the fields. In the case of sandy soils heavier manuring is done. Cattle manure at the rate of ten cart loads per acre, is applied in addition to the tank silt and sheep penning to such soils according to the availability of cattle manure with the ryot. Application of groundnut cake at 2 bags per acre was also resorted to, by a few ryots in Parvatipuram taluk. The response of the crop to groundnut cake manuring was very good.

8. **Seeds and Sowing:** After the receipt of good showers in May-June, sowing is done on drylands already prepared well. The land is ploughed once, seed is broadcast at the rate of 8 to 10 lbs. per acre and covered by giving a second ploughing. In the case of wet lands, after pulverising the soil well, the field is flooded in the month of January, with tank water. When the field comes to condition, the field is given one ploughing, seed is broadcast and covered by working a plough a second time. Generally sowing is done towards the close of January or the beginning of February. If sufficient water is available in the tanks another flood irrigation is given to the crop after hoeings are completed or a splash irrigation is given, if water is insufficient for a flood irrigation. The plants tide over the summer drought with the available moisture in the soil till the receipt of 'mango showers'.

9. **After Cultivation:** The field is given one or two hoeings before the crop attains one foot height. These operations must be done thoroughly to give a good initial start to the crop.

10. **Harvest:** The crop is pulled out in August from wetlands, by which time it attains an average height of 10 feet. The stalks are tied up into convenient sized bundles and are stoked in the fields for 3 to 4 days. The plants wilt and shed their leaves during this time. In the case of drylands the crops will be ready for harvest by the middle of October.

11. **Retting and Fibre Extraction:** The bundles of stalks are carted from the fields to a nearby tank or pond in which they are stoked, keeping the bottom portion of stalks immersed in water to a depth of about 2' to 2½' because the basal portion of the stalk takes a longer time for retting than the top portion. They are left like that for a minimum period of three days, and later put in the water horizontally for complete retting. They are arranged in layers to form heaps of convenient sizes and weighted down by means of clods of earth to keep them under water. This retting is termed as 'Kavu' locally. In this manner the stalks are

kept in water for a period, ranging from three to four weeks for retting. After 20 days of retting the stalks are tested to find out whether retting is complete or not, by noting the ease with which fibre can be extracted. When the retting is completed the bundles are removed from water and extraction of fibre is done. The fibre is washed thoroughly in clear water when it attains a good white colour and then dried well. The dried fibre is bundled to weigh 28 lbs. or 56 lbs. per bundle and stored.

12. **Yield:** The yield of fibre per acre varies from 800 lbs. to 1200 lbs. The average yield is 1000 lbs. per acre. Kasi 'Gogu' as already mentioned gives more yield than local Gogu. The maximum yield of local 'Gogu' does not exceed 800 lbs. per acre. After the fibre is extracted the stalks are used for fuel purposes.

13. **Quality of Fibre:** To fetch a high price, the colour of the fibre should be white. It should be soft and free from moisture and impurities. The basal portion of the fibre should be soft without even a shade of black colour. If it is stiff due to improper retting and black in colour, the fibre is considered inferior and this is locally termed as 'Peduchu Nara'. If retting and cleaning is done in an insufficient quantity of water, the fibre attains black colour and this is graded as poor quality fibre. To improve the quality, retting should be properly done in abundant water, and proper attention is necessary in cleaning and drying of the fibre. The experience of the ryots is that 'Kasi Gogu' fibre is inferior to that from local gogu in point of 'strength'.

14. **Pests and Diseases:** No major pests and diseases affect this crop. Crinkling of leaves and formation of crinkled leaf clusters, with infestation of mealy bugs are noticed here and there.

15. **Seed Production:** At the time of harvest of the crop from dry lands, the ryots leave a small portion for seed purposes. The crop stands on the field till December - January, by which time the capsules dry up and are ready for harvest. The plants are then cut and dried for collection of seed. The ryots extract fibre from these stalks also and use it for their domestic purposes.

16. **Marketing of Fibre:** The cultivators dispose off their produce by weight in terms of 'Putties' or candies to local merchants who deal in 'Jute'. One 'Putti' weighs 560 lbs. The rate per 'Putti' of fibre varies from Rs. 170/- to 210/- depending on the quality of fibre as well as on the "position of the market". The average rate per 'Putti' is Rs. 190/- during this season. These merchants in their turn dispose off the produce to the agents of big companies stationed at Vizianagaram, the main marketing centre for jute. This year merchants from Calcutta also came and purchased this 'Jute' on a very large scale direct from the producers in different areas.

The following companies are engaged in jute trade at Vizianagaram.

- (1) Gordon Woodroffe & Co., Ltd.,
- (2) Ripley Company Ltd.,
- (3) East India Commercials & Co., (Kistna Jute Mills, Ellore.)
- (4) Bhajarang Jute Mills, Guntur,
- (5) Raighar Jute Mills, Raighar,
- (6) Hindustan General Produce Co., Ltd., (Chittivalasa)
- (7) Ralli Brothers,
- (8) Nellimarla Jute Mills.

The agents of these companies purchase the produce from merchants and get it pressed into bales for transport. For pressing into bales, hand presses as well as power driven presses are used. The weights of pressed bales are generally 330 lbs. or 400 lbs. per bale. Bales of 125 lbs. weight are also pressed by means of small hand presses.

Some portion of this 'jute' is locally utilised by the mills of Nellimarla and Chittivalasa. But a major portion of the produce is exported to Ellore, Guntur, Raighar, Shalimar, Calcutta, and to other places in West Bengal, from important purchasing centres like Vizianagaram, Bobbili, Parvatipuram, Rajam, Ponduru, Gajapathinagaram, Amadalavalsa, and Cheepurupalli. The following is the estimated production of jute fibre in Visakhapatnam District for the past three years.

1947-'48	80,000	candies.
1948-'49	1,25,000	"
1949-'50	2,00,000	"

### 17. Production Costs:

#### Average Cost of Cultivation per Acre. (Dryland Crop)

	Cattle pairs at Rs. 1/-	Men at Rs. 1-0-0	Women at Rs. 0-8-0	Rs.	A.	P.
<b>1. Preparatory Cultivation :</b>						
Six ploughings ...	12	12	...	24	0	0
<b>2. Manures and Manuring :</b>						
Carting 40 cartloads of tank silt ...	5	15	...	20	0	0
Cost of sheep penning ...	...	...	...	15	0	0
Cost of 10 cartloads of Farmyard Manure at Rs. 1-8-0 per cartload ...	...	...	...	15	0	0
Carting and spreading of Manure ...	2	4	...	6	0	0
Covering of manure ...	2	2	...	4	0	0
				60	0	0

	Cattle pairs at Rs. 1/-	Men at Rs. 1-0-0	Women at Rs. 0-8-0	Rs. A. P.
<b>3. Seeds and Sowing:</b>				
Cost of 8 lbs. of seed ...	...	...	25	5 0 0
Sowing of seed and covering ...	3	3		6 0 0
				<u>11 0 0</u>
<b>4. After Cultivation:</b>				
First weeding and hoeing ...	...	...	25	12 8 0
Second weeding and hoeing ...	...	...	25	12 8 0
				<u>25 0 0</u>
<b>5. Harvesting, Retting and Extraction and Fibre:</b>				
Pulling out plants, bundling and stooking ...	...	25	...	25 0 0
Carting to a pond and arranging into heaps for retting ...	2	9	...	11 0 0
Removal of bundles from water extraction of fibre washing and drying ...	...	6	50	31 0 0
Bundling of dried fibre and carting of fibre and stalks to ryots yard ...	2	6	...	8 0 0
				<u>75 0 0</u>
6. Land Kist (Average)				5 0 0
7. Total cost of cultivation per acre				<u>200 0 0</u>
N. B. In the case of wetland cultivation, an amount of Rs. 5/- to be added towards the cost of labour, for flooding the field before sowing and for one irrigation.				
8. Average yield of fibre			1,000 lbs. per acre	
9. Cost of 1,000 lbs. of fibre at Rs. 190/- per 'Putti' of 560 lbs.				Rs. 339 4 0 or
				<u>Rs. 340 0 0</u>
Value of dried stalks fuel purposes				Rs. 20 0 0
				<u>Rs. 360 0 0</u>
10. Profit per acre				Rs. 360 - 200 = Rs. 160/-

18. **Acknowledgement:** I express my thanks to Agricultural Demonstrators, for furnishing the details of acreage under 'Gogu' in their respective taluks.