

14. Average yield of canes in tons per acre	...	30 tons.
15. Jaggery out-turn in candies of 500 lb.	...	13½ candies.
16. Value of yield at Rs. 42 per candy of jaggery.		Rs. 567 0 0
17. Net gain per acre.		Rs. 240 12 0

The following figures are of interest :—

Cost of production of 1 ton of cane.	...	Rs. 7 15 0
Cost of production of a candy of jaggery.	...	Rs. 23 10 8
Transport charge per candy of jaggery to the market.	Rs. 0 8 0
Cost price of one candy when taken to the market.		Rs. 24 2 8

With the cultivation of the improved varieties of canes and the use of improved implements, it will be possible to reduce the cost of cultivation and increase the yield and thus it will be easy to increase the net income by about Rs. 50 per acre and Rs. 2,50,000 per year for the District of South Canara.

A Note on Arrow Root in the Salur Agency.

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Indian arrow root, *Curcuma angustifolia* Telugu *Palagunda* is a wild plant growing in several parts of the Vizagapatam District. The starch prepared from the mature rhizomes is used for making milk puddings (Pala Munjalu) and it is usually prescribed as a diet for invalids. It is used as a diet during dysentery for its easily digestible qualities. The Agency taluqs of Pottanghi, Padwa, Jeypore and Nowrangapur of the Old Vizagapatam District are the chief places where it is extensively grown. The cultivation of this crop, in the sense of regular planting, interculturing and subsequent harvesting, is not regularly done in these tracts. It grows more or less wild in several blocks of waste jungle land, specially near hill streams. It thrives usually at an elevation of over 1500 feet where the soils are very rich virgin, red sandy loams. Because of its free natural growth in the hills whose elevation is usually about 1500 feet and where annual rainfall exceeds well over 50 inches and because of its abundance near water courses, one has to conclude that it requires a very rich loamy soil with plentiful water supply and a fairly cool atmosphere. Attempts will have to be made to see whether it grows well in the plains where water supply is abundant and the soil is fertile.

Preparation of the produce for the market:— The hill tribes gather the rhizomes and prepare the stuff for the market. When they are full grown, the rhizomes are dug out in the months of January and February and washed well in the streams to remove the soil. The washed rhizomes are then rubbed against pieces of stone and washed at the same time. The washings are collected in pots, filtered and the filtrate allowed to settle in shallow earthen-ware basins. The starch settles to the bottom leaving some supernatant liquid which is drained off after a while. Water is again added and the precipitate mixed well for a second wash and allowed to settle. The

supernatant liquid is again drained off. This process of washing and draining off continues until the starch is fairly white and much of the astringent and bitter taste of the same is lost and then it is allowed to dry in the sun. The dried stuff cracks well and crumbles into small pieces. The stuff is marketed as such in the local shandies. Merchants from Salur attend these shandies and buy it in the season @ 10 to 12 (addas) measures per Rupee and sell the same in the local market at 5 to 6 measures a Rupee. Much of it is exported to Vizianagaram and Vizagapatam markets as well. This is usually adulterated locally with rice starch or maize flour (Maida). These latter are mixed with water to make a thick paste and dried in the sun and broken to pieces to resemble the pure Palagunda. But experienced merchants can find out the difference between the adulterated and pure stuff, by the characteristic flavour of the latter. Palagunda also comes to the market from the Raipur side and this too is invariably adulterated as stated above.

While digging out the rhizomes, a few are left in the soil at each clump, for the next season's growth. With the advent of the monsoon, the crop grows luxuriantly and is again harvested in the months of January & February as stated above. No attempts at manuring the crop or any other cultural operations are made. Under proper cultural practices this should form a paying cottage industry and it is worth while trying to grow it in the plains where conditions permit. Improvements can also be suggested in the matter of preparation of the produce for the market. Instead of rubbing the rhizomes on stones they can be pounded in wooden or stone mortars and the pulp washed in water and filtered, and, the filtered stuff prepared for the market as usual.

SELECTED ARTILCE

Science and the Indian Peasant.

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The main facts of the agricultural situation in India so far as the peasant is concerned are set out in Table I. From this it appears that the population is increasing more than the area of land sown to crops; and, further, there is an increasing tendency to grow more saleable crops and less food crops, i. e., to get money rather than food out of the land.

TABLE I. Areas of Land Cultivated, and Utilisation per Head of Population, British India.

	Area in million acres.				
	1915—16 to 1919—20	1920—21 to 1924—25	1925—26 to 1929—30	1930—31 to 1934—35	1936—37 to Provisional.
Net area sown	220.7	222.0	226.4	229.1	231.9
Irrigated area	47.4	47.0	47.9	49.9	51.7
Food crops	210.6	209.5	208.7	214.7	216.7
Non-food crops	42.6	43.8	49.4	47.6	50.8
Fallow	54.2	51.1	49.6	49.8	48.6