

RATES OF THE LOCALITY.

1 pair and 1 driver	...	...	Rs. 1-4-0 per day.
1 man	...	...	" 0-4-0 "
1 woman	...	...	" 0-3-0 "
1 Boy	...	...	" 0-2-0 "

N.B.—Excepting for cotton, labour is always paid in kind and the corresponding money equivalents are given in all the above cases.

NOTES ON SUGARCANE CULTIVATION IN HOSPET

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Introductory.—On account of the rapid and continued fall in prices of almost all commodities any suggestion which aims at a reduction in the cost of production of the crops should be welcome to the ryot. In the following lines an attempt is made to describe the cultivation of sugarcane, an important crop in the Hospet taluk on simple yet scientific lines, and also to indicate how an appreciable saving could be effected in the initial stages.

In the Hospet taluk under the Tungabhadra channels ryots leave a portion of their sugarcane crop unharvested as 'stand-overs' for seed purposes, as the tendency of the ryot there, is to repeat a crop year after year on the same land. It is known that the top portions of canes, which are usually removed and thrown into the manure pit or fed to cattle, make excellent material for seed purposes. Generally the ryot experiences difficulty in getting all his cane crushed in time, to prepare his land for the next crop, be it the same crop or a different one. If he would only preserve the top portions from each of which two setts are easily got, then this difficulty is overcome.

Method of preservation of tops.—The tops should be spread in two or three layers under the shade of a tree on a bedding of wet paddy straw or cane trash and carefully covered over with the same material. The covering should be kept moist by sprinkling water on it once or twice during the day. At the end of a week or ten days these tops are ready for planting. The interval of 10 to 12 days during which these cane tops retain their vitality should be enough for the ryot to complete the crushing of his canes and devote his attention to the raising of nurseries therefrom.

Method of raising nurseries.—The land intended for raising nurseries should be forked well and beds of 3' x 4' with alternate channels should be formed and a dose of cattle manure applied. As sugarcane is a twelve-month crop and responds best to a liberal application of manure and a copious supply of water, the latter helped by good drainage, 50 cartloads of well-rotten cattle manure should be applied per acre. Then the setts are spread in the beds so that they touch one another and when the bed is full water is to be sprinkled liberally and the setts covered with about 2 inches of earth which should be made moist by sprinkling water over it gently but liberally. After two days, the field should be irrigated by allowing water to

flow into the beds very slowly but at the same time taking care that it permeates every bit of the bed. The second irrigation may be given after the next 6 days after which the field should be irrigated regularly once a week. Germination is perceptible from a week to a fortnight and the seedlings should be transplanted within three months. This period is about the maximum period during which seedlings should be transplanted; because experience has shown that the longer the seedlings are kept in the nurseries the greater are the percentages of loss in the field. The best period for transplanting seedling is between the ages of one and two months.

Method of transplanting.—Just before transplanting commences, furrows should be formed on the land just sufficient to accommodate the setts. Before the plants are removed the nursery should be well irrigated, so that the hold of the soil on the roots of the plants may be slackened, all the leaves, except the top young involute leaf, should be clipped with scissors or secateurs leaving about 1 to 1½ inches of leaf surface on the plant. Then the plants should be removed from the nurseries carefully with a trowel, and packed in baskets. Transplanting should be done with care and with the least injury possible to the roots. After inserting the plants into the furrows which received irrigation previously they should be covered with earth. Then another slow irrigation should be given to the furrows to help the plants to keep in position.

The second irrigation which should be liberal is given on the third day after transplantation and subsequent irrigations may be given regularly once every week. In about 10 days the plants will establish themselves. Generally there will be 5 to 10 % failures, depending on the care bestowed on the job. Under the conditions prevailing at Hospet 10 cents of land could be transplanted with seedlings raised on a cent of nursery. Needless to say that the nearer the field is to the nursery the greater will be the saving in labour and loss.

The other improvements recommended are:—

(i) *Use of trench system to plant canes.*—The canes are generally planted in shallow trenches and as the canes grow the trenches are obliterated; otherwise when the plant grows tall and heavy it will not have enough anchorage to stand erect. After every irrigation or rain the plant will have a tendency either to topple over completely or to lean on one side due to heavy weight at the top unless it is propped. In so doing some of the roots will be broken and the growth is arrested or at any rate interfered with to some extent. On account of this, during the later stages such plants will vary in maturity and thus the quality of jaggery is impaired.

(ii) *Use of labour-saving implements.*—In Hospet taluk there is no regular hoeing and weeding. In the early stages, only partial weeding is done and people do not pay any attention to hoeing. By hoeing and weeding they can at least increase their crop by 10 per cent. For want of hoeing and weeding many of the cane plants die during the early stages especially in places where there is scarcity of water. In addition hoeing results in saving in the number of irrigations. For hoeing their crops they can use the Planet Junior hand-hoe and weeder if they are to work the implement from the beginning of the crop. With this implement, if the

soil conditions are favourable an active man can finish hoeing of about 80 cents in an 8-hour day without much trouble.

The last but not the least suggestion is to improve the method of making jaggery. The improvements suggested are (1) milling of fresh mature canes to extract juice, (2) boiling of juice as quickly as possible without further addition of fresh juice to half-boiled juice, (3) removal of scum to purify the jaggery and to get good colour and (4) boiling in level-bottomed pans instead of the usual round bottomed pans in use.

SUNN-HEMP

IN THE NORTHERN TALUKS OF GANJAM

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Introductory.—Sunn-hemp (*Crotalaria juncea*) has been under cultivation in the northern taluks of Ganjam from very early times. There is a considerable export of the fibre to foreign countries under the name Gopalpur hemp. The cultivation of this crop is in the hands of 'kevtus' or fishermen, other castes being prohibited by custom from growing it, though when the prices were tempting, others also occasionally took to its cultivation. Ghumsur, Aska and Chatrapur taluks and the estates of Kallikota and Atagada are the chief growing centres, the first of these being known to supply fibre of the best quality.

Varieties.—Two varieties are commonly grown, viz., 'sanno choni,' a local variety of 2½ months duration, and 'boddo choni', a Sambalpur variety of 3 to 3½ months' duration. The fibre of the latter is longer and whiter than that of the former, though coarser and weaker. The outturn, however, is larger.

Soil.—Light and well-drained soils in both dry and wet lands are sown to the crop but during years of high prices and good demand heavier soils are also sown. The produce of the lighter soil is fine, white and strong while that of the heavier soils is coarse, dull white and less strong.

Rotation.—On dry lands, sunn-hemp (usually sown in June), is followed by ragi, chillies or sweet-potatoes. On wet lands it is followed by paddy, which is itself followed by a pulse crop. The sowing is usually done earlier on wet lands, the local variety being usually chosen to facilitate an early harvest. Where transplanting of paddy is in vogue, as in parts of the Chatrapur taluk, but under a precarious irrigation source, and where the crop is liable to the grasshopper pest, the introduction of this crop will help the ryot in mitigating his losses.

Preparation of the land.—Two ploughings are usually given between March and May. Good surface tilth is considered sufficient, deep ploughing being deemed unsuitable. The H. M. Guntaka No. 1 will be therefore a suitable implement for preparing the land for this crop.

Manuring.—Eight to ten cartloads of cattle manure are usually applied. Heavier manuring is considered detrimental as it may induce rank growth and lodging.