

A SHORT NOTE ON ONION CULTIVATION IN THE ANAKAPALLE AREA

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Onion is an important crop on the Anakapalle area, being a short duration money crop either preceding or succeeding paddy in wet lands or grown in rotation with a variety of crops in garden and dry-lands. Beyond the personal labour of the ryot it does not require much cash expenditure in its cultivation, and generally fetches decent returns. There are three seasons for onions: (1) January to March, during which a *Paira* crop is raised from seedlings; (2) May to July, during which a *punasa* crop is raised from bulbs from the *paira* crop; and (3) September to December, during which a rainy weather crop is raised from bulbs of the *Punasa* crop. A brief account of the onion cultivation of the crop in the three seasons is given below.

THE PAIRA SEASON—JANUARY TO MARCH

Nurseries. For this crop seeds are sown towards the end of November in small beds of loamy soil, well prepared after a sufficient quantity of cattle manure is added. One *Kuncham* or 7 lbs. of seed is sown for an acre of transplanted area. The seed-beds are watered thrice, during the first fortnight (once in 5 days) by which time the seeds germinate. Thereafter, the seedlings are watered once in 10 days for about 1½ months by which time they will be ready for transplanting in the fields prepared for the purpose. This crop is raised both in wet and garden lands.

Planting. The planting is done in thoroughly ploughed and well manured fields in the beginning of January. The fields are thoroughly irrigated and seedlings transplanted at a distance of 4 to 6 inches.

Ten days after the planting the crop gets a top dressing of finely powdered cattle manure followed by a hoeing and irrigation. After this, two irrigations are given at an interval of 15 days. Ten days later, the crop gets another irrigation, and with this the bulbs begin to form. Thereafter two or three more irrigations follow once in 8 days by which time the bulbs develop fully. No further irrigations are given, the crop being left to wither for about 20 days and then harvested.

Harvest. After the crop is fully ripe all the bulbs with the leaves are pulled and heaped. The next day the leaves are cut and the bulbs separated. Drying is done in a well ventilated shady place like a *pandal*. For seed purposes medium sized bulbs are selected, the leaves are left intact, tied into bundles, and hung under *pandals*. If in larger quantities seed bulbs are thinly spread in a dry and shady place like a ceiling floor. The yield per acre will generally be about 8,000 to 10,000 lbs.

The bulbs of this crop are small in size, round, heavy and pungent. These are mainly utilised for 'seed' for the *punasa* crop. The leaves and trash cut off are generally spread in the field to act as manure. It is worth noting that seed for next year is never collected from this crop, but only from a special crop raised for the purpose from bulbs. Bulbs from the *punasa* crop are planted in small plots at about the same time as the sowing of nursery for the *paira* crop, and the crop treated in the usual way, but it is allowed to run to flower without any interference, irrigations being cut off after the completion of flowering. By the end of February the flower stalks are harvested with about 4 inches of the stalk, dried in the sun for 4 or 5 days and seeds separated. After further drying for some days the seed is tied up in a piece of cloth, and hung in the kitchen to avert damage by insects and dampness.

THE PUNASA SEASON—MAY TO JULY

Preparation of field and selection of seed:— During this season onions are planted mostly on wetlands. The heavier soils are generally selected for this crop on account of their water-retaining capacity during the months when rains will generally be scanty. The field intended for planting onions is thoroughly ploughed up and a good dose of cattle manure is given. Sometimes sheep are also penned. The selection of seed bulbs for planting in the season holds out a distinct promise, especially in wet land areas, where a certain amount of uniformity is desired to ensure an early harvest, so that planting of paddy can be done at the right time. The seed material generally used for planting contains an equal number of small and medium bulbs. The other cultivation details are the same as for the *paira* crop excepting that the rains help the ryot in reducing the number of irrigations. This crop gives inflorescences, but they are not so important and so they will be removed from time to time so that the food material may be retained for the development of the bulbs. The yield will be about 7,500 lb. per acre.

THE RAINY SEASON—SEPTEMBER TO NOVEMBER

For this crop onions will have to be planted in garden lands, planting, irrigation and other operations being done as in the case of the *punasa* crop. But this crop flowers profusely and the ryots, make some money out of the inflorescences. The crop is harvested in November—December and the average yield will be about 6,000 lbs.

Pests:— The Onion crop often suffers from the depredations of leaf-eating caterpillars and thrips. The leaf-eating caterpillars may attack all the three crops but thrips cause serious harm only to the *Paira* crop. The leaf-eating caterpillars which badly defoliate the crop by getting inside the hollow shoot can be controlled by flooding the field when the caterpillars gnaw the tissue from inside and the shoot lodges to the ground.

Details of cost cultivation on Onion Crop raised from Bulbs.

Items.	Estimated expenditure.	Items that can be considered as positive cash expenditure.
<i>Preparatory cultivation.</i>		
Ploughing 6 times with country plough—9 pairs of cattle at 12 as. and 9 men at 4 annas. ...	9-0-0	
Levelling and forming bunds. 8 men at 4 annas. ...	2-0-0	
<i>Manure and Manuring.</i>		
Cost of Manure 20 cart loads. ...	10-0-0	
Carting Manure and spreading. 2 pairs of cattle 2 men and 4 women. ...	2-8-0	
Sheep penning. ...	15-0-0	15-0-0
<i>Seed and Sowing.</i>		
Cost of 1,500 lbs. of bulbs. ...	20-0-0	30-0-0
Planting bulbs 30 women @ 2 annas each. ...	3-12-0	
<i>After cultivation.</i>		
2 hoeings and weedings, 30 women per acre at 2 annas each. ...	3-12-0	
<i>Irrigation.</i>		
Irrigations with <i>Picotak</i> at 12 men per acre—6 irrigations at 4 as. a head per irrigation. ...	18-0-0	
<i>Harvesting.</i>		
Digging, lifting, carrying and cleaning—10 men and 60 women. ...	12-0-0	
Miscellaneous expenditure such as drying, storing etc. ...	4-0-0	
Total Rs. ...	110-0-0	45-0-0

Receipts. By sale of 9,000 lb. of bulbs at 50 lb. per rupee Rs. 180-0-0. Profits realised thereby is Rs. 70 if the labour etc. of the ryot, his family and his cattle are taken into account and Rs. 155 if only cash expenditure is taken into account.

Note. 50 lb. per rupee can be taken as normal one. But at times the price goes down to even 100 lbs. per rupee; when the ryot, can realise a net profit of Rs. 45/- per acre if only cash expenditure is taken into consideration.

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SOME USEFUL EXPERIENCES REGARDING SUGARCANE CULTIVATION & MANUFACTURE OF WHITE SUGAR AT PALUR AGRICULTURAL RESEARCH STATION

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The only factory manufacturing white crystalline sugar south of Madras is at Nellikuppam owned by the East India Distilleries and Sugar Factories Ltd., which is managed by Messrs. Parry & Co.