

Cotton Harvesting in Madras State

by

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Introduction: Cotton is the most important commercial crop of Madras State, occupying an area of eleven lakh acres with a total annual production of 3.6 lakh bales of lint. The cotton crop is grown for its lint, which is spun into yarns and woven into cloth. The *kapas* from which the lint is extracted is contained in the fruits or bolls of the plant. As the bolls on the plant mature at different periods of plant life, the harvesting process extends over a period of eight to ten weeks.

Seasons of harvest: In Madras State, the Irrigated Winter Cambodia Cotton crop starts bursting from January and the harvest is completed by the middle of April. In the Summer Cambodia crop, the harvests commence from June and end by August. In the Unirrigated Cambodia and *Karunganni* Cotton crops, the pickings commence from February and end by May. If there are summer showers in April, a second flush is taken in June-July which in some years is almost as heavy as the main season crop.

Cost of harvest: Cotton harvesting is the most expensive single operation connected with the production of cotton. The cost of harvest per acre ranges from Rs. 35 to Rs. 45/- in the case of irrigated cottons and Rs. 15/- to Rs. 20/- for the unirrigated crop. This works out to 15 to 20% of the total cost of cultivation.

Methods of Cotton picking and payment: Hired labourers are employed for harvesting cotton. A member of the owner's family supervises the harvests to see that all the burst bolls are picked and the produce is not misappropriated or pilfered. The labourers, comprising women and children, pick the *kapas* early in the morning depositing the produce mostly in the folds of their cloth in the lap and occasionally at the back. When a sizable quantity is gathered, they are pooled together and heaped in a room or corner of the house of the cultivator. At the end of the day, the labourers are paid their wages, in cash. This is the common practice prevalent in Madras State.

In some interior villages, payment of wages in kind is insisted upon. In such places, the *kapas* gathered by each labourer is heaped separately in a corner of the field, each labourer leaving an identity

mark to get the proportionate wages at the end, in kind. The proportion of produce shared by the labourers range from one-fourth to one-twelfth the quantity picked depending upon the stage of picking, intensity of bursting and availability of labour. The system of payment on a contract basis is occasionally met with in some villages of Coimbatore District. The system of cash payment is slowly replacing the system of payment in kind.

Harvesting cotton by snapping is common near about urban areas in Coimbatore District. Here, the whole boll including the seed-cotton and bur is snapped by hand. Holding the snapped boll in the left hand, the seed-cotton is pulled out with the right hand and put in to the folds of cloth in the lap. The bur is then thrown away in the field. This method, it is claimed, reduces the strain of bending. Cotton harvesting is a tiresome work. In picking, the labourer has to stoop or bend almost continuously for the greater part of the day for pulling out the locks from the bur retained on the plant. In snapping, the ripe burst boll is snapped as a whole, by stretching the hand and snapping the boll. Once a boll is snapped, the labourer can stand conveniently till the seed-cotton is pulled out from the bur.

The usual practice in South Arcot District is to engage a few labourers who snap all the ripe burst bolls and bring them home. The peasant-proprietors and the labourers sit together in the *pial* or courtyard of the house and pull out the seed-cotton from the bur. This is a convenient method for a small land-holder and the member of the family to work with. The owner and the members of his family go out daily to the cotton fields, snap the burst bolls and bring them home to remove the *kapas* from the bur at their leisure hours.

In parts of Salem District, especially in Tiruchengode taluk, a unique practice is prevalent. The unripe bolls are snapped in the field, brought home, dried in the sun and beaten with sticks to break open the bolls. The bur is then used as a fuel. This method is followed as a measure to guard against pilfering of seed cotton from the fields. The seed-cotton collected in this way, is weak, immature and fetches a low price.

There is also the practice in the interior parts of Salem District, to snap the burst bolls, gather them in a basket, sprinkle water and then extract the seed-cotton. It is claimed that by this procedure, the *kapas* could be extracted as locks and also the extraction of *kapas* is made easy. The *kapas*, thus gathered is usually

sold to the merchants on the same day, with a view to gain weight. This method not only affects the quality of lint, but also the viability of the seed, unless properly dried.

Storage of Kapas: The storage of harvested *kapas* is almost similar throughout Madras State. The daily collection of seed-cotton is heaped loose in a corner of the house over a thin layer of sand to prevent dampness or termite attack. The heap is pressed to hold more quantity. In some cases, when the quantity is small, the *kapas* is stored in gunnies. The petty landlords sell away their produce as and when there is need for money without waiting for the market to rise. Generally, no special containers are used by the growers for storing cotton. The containers are supplied by the buyer at the time of purchase for packing and transport of *kapas*.

Need to improve the methods of Cotton Harvesting: In India, the value which a cotton grower receives for his produce is more or less directly related to the staple length, ginning outturn and cleanliness of the produce. The growers care more for higher lint yield whereas the mill industry is anxious to have better quality lint. The quality of cotton depends up on the grade, staple length and character. The grade of cotton is determined by three factors viz., colour, foreign matter and ginning preparation. Grade is largely influenced by weather conditions prior to harvesting, time and care in harvesting, condition of cotton at the time of ginning and the ginning equipment. The labourers employed for harvesting cotton do not take time to remove the trash from *kapas*, with the result it usually contains dirt, hulls, leaf fragments and other foreign matter which affect the lint quality and thereby the market value.

Undue exposure of cotton *kapas* in the field causes the locks to become discoloured by dust or dirt that is washed or blown into them. The leaf trash also gets collected as leaf-worms feed upon them. Later pickings often produce lower grades of lint than earlier pickings, because of weather and insect damage and the plant leaves being drier and more brittle with more tendency to become entangled with the locks of cotton in the plant. It is, therefore, essential that seed-cotton should be collected and stored separately. It is also necessary that the *kapas* should be harvested in the cool hours of the morning.

In India, pre-cleaning machineries are not installed in many of the ginning factories. The higher foreign matter content causes undue wear and tear of the ginning machinery. Clean picking of

cotton not only reduces the wear and tear of the ginning machinery but also gives a uniform grade of lint. It also effects a definite saving in freight on transport of the trash content which has to be removed for improving the grade. The more free, is the seed-cotton, from impurities the better and easier goes the ginning process and higher are the spinning properties of cotton.

The trash content of the cotton is now removed in blow rooms and even for this, there is an upper limit. The leaf-bits and seed coats which are embedded in the cotton are difficult to remove by repeated blow room treatment. Hence, the remedy for obtaining cleaner yarns lays in clean picking and also in better ginning. The clean cotton also reduces waste losses. The clean harvested seed-cotton lightens the work of the ginner and spinner, besides improvement in grade.

It, therefore, forms a primary requisite that cotton should be harvested clean to get a better grade of cotton and also to fetch a higher value.

Recommendations and Suggestions :

1. It is easier to remove the trash when the material is in a loose state than when it has been compressed. It is, therefore, advisable to pick cotton clean in the field itself.

2. The seed-cotton should be picked in the cool hours of the morning, since this will enable cleaner picking without the leaf bits, burs and other trash attached with the seed-cotton.

The quantity of cotton harvested in a day depends on several factors like the yield and the percentage of burst bolls, the size and kind of bolls, the height of boll from the ground, spacing between plants, the abundance of leaves and other trash, the weather and the ability of the labourer. To get the maximum turn over and to obtain the seed-cotton in a cleaner condition, it is essential to harvest the *kapas* in the cool hours of the morning.

3. After picking, the seed-cotton may be dried in the sun and then stored in rat-proof godowns. Freedom from moisture is important, since the presence of moisture affects lint quality and also the viability of seed.

The usual practice of hiring the labourers from morning till evening and harvesting the *kapas* throughout the day, with an interval of an hour in the midday, is not to the advantage of the growers.

4. It is not uncommon to pile up the seed-cotton in a corner of the field, as the harvest for the day is in progress. The *kapas* get soiled and contaminated with dirt, sand, small stones and twigs. If it is necessary to store cotton temporarily in the field, it may be done in tarpaulins, bamboo mats or gunny pieces stitched together, spread on the ground.

5. In areas where payment in kind is insisted upon, the tendency is to pick whatever comes to hand. Payment in cash should, therefore, be encouraged to aid cleaner picking free from trash and other foreign matter.

6. The practice of harvesting the unburst bolls, drying in the sun and then beating with sticks to extract the *kapas* from the fruit should be given up. Ryots should harvest the *kapas* from the burst boll only.

7. Due to insect pests, especially boll-worms and cotton dusky bugs, the *kapas* gets stained. The good *kapas* and the stained *kapas* should be harvested, stored and marketed separately to get better price for quality produce.

Summary: The various methods of cotton harvesting followed in Madras State, their merits and demerits are discussed with suggestions and recommendations for improving the quality.

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