

tract is flooded with the strain. At the same time a seed farm area of five acres will be continued in each of the 'central villages' year after year to meet any possible demand for the variety elsewhere in the tract. The project proposed thus envisages a rapid spread of the improved strain over the entire *cumbu* area of the tract in over 170,000 acres in the course of three or four years.

The millets section at Koilpatti had evolved a high yielding strain of *cumbu* about eight years ago, but due to the protogynous nature of the crop the strain could not maintain its purity and its performance was not as impressive as in the first year of its introduction. As soon as I joined duty at Tinnevely as District Agricultural Officer, I was also confronted with the same problem of maintaining its purity. After serious study of the problem, I arrived at a practical solution and workable plan of getting over this difficulty. I drew up a scheme for the black soil area of the Tinnevely District on the lines indicated above.

There are extensive areas of black soils in other parts of this and other provinces where similar strains suited to those areas could also be raised, their purity maintained and quantity multiplied.

My thanks are due to the Collector of Tinnevely, Mr. V. S. Hejmadi, I. C. S. and to Mr. S. Sundaram, M. Sc., Senior Cotton Assistant at Koilpatti Research Station for the help rendered in this connection.

Grading of Sathukudi Oranges.

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The growers of *Sathukudi* oranges of Rajampet Taluk. used to send their fruits to Madras, from where The Madras Provincial Co-operative Marketing Society and other commission agents at Madras used to send the fruits to all mufussil stations. The Provincial Society grades the oranges as per size, viz. $3\frac{1}{2}''$, $3\frac{1}{4}''$, $3''$, $2\frac{3}{4}''$ and $2\frac{1}{2}''$, while other commission agents consign only the ungraded fruits to Southern districts.

It was more logical and economical to grade the fruits at the place of production and consign such graded fruits directly to the consuming areas. By this method one more handling at Madras would be saved, fruits would reach the consumer in a shorter period and consequently in a more fresh condition and it would be cheaper to get fruits directly from the production area. The aforesaid peculiarities drove the Kodur Fruit Growers' Co-operative Society to take up the grading of oranges in Rajampet taluk itself. With the co-operation of the Provincial Marketing Officer and the Registrar of Co-operative Societies, an Orange Grading Station was opened at Kodur on 1st September 1941 by Mr. S. Ranganathan, O. B. E., I. C. S., Collector

of Cuddapah. Since its inception the grading station had shown rapid progress and the following figures relate to its working:—

No. of months of working.	No. of oranges graded.					Total no. of fruits graded	Value of fruits graded. Rs.
	3½"	3¼"	3"	2¾"	2½"		
10	44716	146590	243675	111900	14891	501772	50486

With the steady increase in demand for graded oranges by all the mofussil co-operative institutions, merchants and individuals, it was found necessary to open two more grading stations, with the result that from 1st August 1942 three grading stations are working at Kodur, Reddipalle and Rajampet which form the important fruit growing areas and the following arrangement was made for the distribution of fruits:—

Orange Grading Station.

Kodur.
Reddipalle
Rajampet

Districts supplied.

Madura District
Trichy and Coimbatore Districts
All other districts

The orchardists of different areas find it easier now to get their fruits graded as the three grading stations are located within their easy reach. From their experience the growers have realised the benefits of grading. They have come to know that graded fruits fetch a better price than a mixed lot, that fruits of higher grade (bigger size) command a higher price and that there can be no cheating as fruits are graded in their presence. If better returns are to be expected from the orchards steps should be taken to get a yield of uniformly big size fruits. This can be achieved only by proper manurial and irrigation practices. Prior to the introduction of the grading scheme, the wholesalers at Madras had a scope to make enormous deductions under the following heads, viz., undersized fruits, diseased and damaged fruits and shortage in transit, whereas now the producers have a clear and definite claim over the quality, size and the actual number of fruits. Incidentally it is interesting to note the proportion of different grades of fruits supplied from Rajampet Taluk. The averages for the past ten months given in the tabular form above, work out to 3½"—10%, 3¼"—31.5%, 3"—45%, 2¾"—15% and 2½"—2%.

Grading stations have also helped to regulate the prices. The rates are fixed according to demand and supply, with equal advantages to both the producers and consumers. Even the wholesalers at Madras have necessarily to follow the rates of the production area. The prevailing rates are easily disseminated amongst the growers. Every grower knows the favourable market conditions. Besides, even the growers who sell their standing crops in dire need of money are inclined to dispose of their fruits at a fairly reasonable price since they know the value of their crop judging from their knowledge of grading and the existing rates. Many of the growers were

till now ignorant and were not taking part in the actual marketing of their fruits since they were lacking in marketing technique and had no news about market conditions, and therefore were content to sell their fruits on the trees. Now the growers have come to know that marketing after all is not difficult. Only they have to get their fruits to the nearest Grading Station, and the Society grades their fruits and pays the value. Even the fruit not selected, either because they were not of required size or because were of inferior quality are again sent to proper markets and the growers get the value for such fruits also. But complete success will be achieved only when the entire produce of the taluk is marketed through the Society. The Society has now captured more than one-fourth of the total Madras city and Southern districts markets and has marketed Rs. 1,47,112 worth of oranges during the year 1941—42. This is not a small measure of achievement considering that the Society has functioned only for five years since its inception. This augurs a bright future for the successful working of the Society.

So much for the advantages to the producers. The consumers have also equal benefits. They need not know the seller personally. They know that a particular grade approximates to a particular size. The buyer from a long distance places an indent on the producer by merely quoting the grade specification and he knows the nature of fruits he is going to receive.

The grading machine prepared by the Agricultural Research Engineer, Agricultural College, Coimbatore, is found to be cheap, simple and efficient, and helps to grade about six thousand fruits per hour without any damage to fruits. After grading the different grades are kept separately. From each heap selection is again made taking care to select only nice and thin-skinned fruits. The above two qualities are more or less an indication of good quality fruits. The selected fruits in each size of various members are pooled and then packed and despatched by order to various consuming centres under "AGMARK" labels.

Grading by size alone cannot be said to sort the fruits by quality or by merit. For, size alone is not always an indication of quality, as there are instances where big size fruits are insipid. It therefore follows that there are greater possibilities of grading the fruits to a reasonable extent, by quality after analysing for sugar and acid values. This will mean a high level of quality, purity and quantity, and therefore a better value for the money. So for the prosperity and happiness of all the ideal of "BUY AGMARK" will be followed. The society will readily adopt quality grading as soon as a practical scheme is evolved.

The railway authorities have been kind to grant special concessional rates throughout South India for oranges from this taluk. The concessions given are quarter parcel rate over 300 miles and one-third parcel rate up to 300 miles.

The Society is an example to show that co-operation always pays the agriculturists. The growers are able to solve various difficult problems by adopting co-operative operating methods.