

EXPERIENCES OF AN EDUCATIONAL OFFICER IN FRUIT FARMING

By

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(Sri. R. M. Savur on his retirement from the Indian Educational Service about six years ago, took to commercial fruit growing. He chose for his venture a sandy soil belt on the west coast where fruits had never been grown commercially before. Although the department cannot agree with his views on the excellence of the site chosen by him, his success in the fruit-growing field is indeed a tribute to his intelligent and all-absorbing interest. He has selected most of the varieties for his orchards in consultation with the fruit section of the department. His experiences are sure to be read with great interest by the readers as they show the great success an interested and educated person can achieve in the fruit farming line in spite of some natural handicaps such as adverse soil and climatic conditions-(Editor)

After three years of work on my soils, I am fully confirmed in the opinion with which I started that this sandy coastal belt of the West Coast ought to grow plants for more valuable than cashew, casuarina and cocoanut. It is, par excellence an ideal land for fruits. My farm is now a little bit of California. The whole coastal belt from Baindur to Ponnani could be made into a California. When I started people fell over one another to sell their land to me because they thought that no other fool would buy this land, even at the price which I was willing to pay viz., Rs. 30/- to Rs. 50/- an acre. To-day it is just the reverse. The same people after seeing my farm and my lemons want to buy a few acres but cannot. No body is willing to sell even to me.

The period (1945—46) was characterised by the extraordinary and prolonged drought from the second week of September till the end of April 1946. Owing to the failure of the North-East monsoon there was not even one drop of rain during this period with the result that the water-table went much lower than it had done in any previous year. In spite of this there were negligibly few casualties viz., only 13 mango plants, mostly under two-years old. Probably this drought was a blessing in disguise as it must have resulted in the roots going deeper in a shorter time than they would otherwise have done.

The orchard now contains

Graft mango plants	322	
Citrus varieties	652	including 225 lemon layers planted this June-July.
Sapota	48	
Guava	25	
Custard apple	84	

Mango plants :

The cost of maintenance of the now three-year mango plants works out to Rs 4—1—0 per plant excluding the price of the plant.

Over Rs. 50/- worth of mango fruits were borne during the year 1945 and as there is no apparent difference in growth and vigour between the bearers and non-bearers I expect a greatly increased output during the next bearing season. I propose therefore, in the case of the three-year old plants to debit to the "revenue account" all future expenditure. All varieties including Pairi have fruited. The fruits were of excellent quality and size.

Lemons :

All the varieties excepting the ones with very long spines (Eureka) have been bearing. In the last 15 months the sales of lemons amounted to Rs. 150/- excluding several hundreds consumed at home and presented to friends. All these sales were local and none were sent even to Mangalore as the local demand far exceeded the production. Owing to the low standard of earnings of the public, Malta lemons, particularly the smaller ones, were mostly in demand. The large lemons like Nepali are in less demand chiefly because the fruits are too large and each large fruit is more than the family could consume in a day. I am glad in more ways than one that I have such a large proportion of Malta lemon plants for I am able, to however small an extent, to meet the poor man's demand for a small and cheap lemon.

Bearing :

The larger varieties, Nepali etc., averaged 3 or 4 to a pound while the Malta lemons averaged twice that number to the pound. Upto the present the Malta lemon plants are undoubtedly superior in bearing both by count and by weight to the varieties supplied from Kodur of which one variety, long spined, has not yet come to bearing.

I have not made any statistical study but judging merely from two to three seasons of bearing, I fail to see any difference in the number of fruits borne or in their size between budded plants and layers (suckers).

During the summer months I made Gooty layers of mature-flowering branches of Nepali and other varieties and planted them out in June. I was hoping that such layers made from branches which had developed the necessary food material and hormones for flowering would bear earlier than just natural suckers or cuttings. I find that my hope has been justified because the layers that received the least shock of transplanting started flowering within a month or two of being planted out.

Manuring :

I had feared that owing to the soil being so porous and poor, there may be too limited vegetative growth owing to the early exhaustion of the minute traces of food material in the soil. Experience has proved that I am right. Bearing has been early and good. But after the excellent growth of the past 12 to 18 months deficiency symptoms began to appear and rapidly assumed alarming proportions. It was obvious that the symptoms were due to deficiency in more than one element. As it was more my business to save the plants I did not waste time in trying one element after another but made up mixtures supplying all deficiencies including calcium and the minor elements. This had a remarkable effect and excepting about six plants, all the others revived and are now doing very well. The limiting factor was still potash, but this year I have been able to secure a good supply of potassium nitrate and Kainit. I now no longer depend upon the limited quantities of ash of very doubtful quality that is the only potassic manure available in the locality.

Among the mangoes Pairi and Kalapadi were the most susceptible and suffered the most. I can understand the Pairi being susceptible to deficiency diseases owing to its rapid growth and its being a bigger tree; but the susceptibility of the Kalapadi is surprising. The Alphonso showed scarcely any trace of being affected.

Similarly the lemons were affected and recovered with the same mixture. The order of susceptibility from most to least was Sathgudi, Eureka (long-spined), Nepali and Lucknow. Malta lemon did not show any signs of deficiency and has proved very hardy and fruitful.



Sathgudi :

Unfortunately the idea of a deficiency disease did not enter my head until other plants began to show them eighteen months after their first appearance on Sathgudis. By that time most of the Sathgudi plants had suffered beyond the limit of recovery. A few revived remarkably with the complete mixture and made more growth in three months than they had done in the previous thirty months. The recovered ones are maintaining their health now.

Some time back I had suggested the budding of Sathgudi on Malta lemon stock for the West Coast, because, while the Sathgudi from Kodur failed badly, the malta lemon was thriving very well. As my budding did not succeed I grafted some of my moribund Sathgudi on Malta lemon stock. These were planted out some six months ago in various locations. Some were not manured at all; the others got only a small dose of cattle manure. Yet all are so far thriving and showing no sign of deficiency or die-back as the original Sathgudi did.

All these experiences point to one and only one thing, the need for controlled manurial experiments on Indian fruit trees to discover what are the limiting factors other than the usual N. P. K. deficiencies. Undoubtedly my observation goes to prove that the plant needs calcium and magnesium; boron; iron and sulphur have been completely neglected.

Another pointer indicates the need for separate studies on stock suitable for S. W. monsoon conditions for fruits like Sathgudi which are native to the East Coast if they are to succeed in the West Coast.

Miscellaneous Fruits :

Sapotas are doing well and bearing well. So are the guavas. Lichi bushes are progressing.

Grapefruit plants are thriving, all except the one that died during transit. As these were given the complete mixture from the start nothing can be said about their manurial needs.

Mangosteen proved a complete failure and, in spite of the greatest care, only one is surviving but that has not added $\frac{1}{2}$ an inch to its height and it still has only two leaves though not the original two. Avocado pear—only one plant is surviving but I think the deaths were due to want of care. Probably some shading in summer might have saved the rest.

Custard Apple :

This has distinct possibilities and seems worth cultivating as another poor man's fruit. My plants have been bearing heavily fruits of excellent size, flavour and sweetness. Many of the plants have been bearing continuously for the last few months. They are, however, susceptible to a fungus disease which attacks and destroys the branches. This attack began in the unusually heavy monsoon this season though the few old trees in the adjoining Government Farm have been severely affected year after year for the last three years that I have seen them.

I am trying a Bordeaux paste application. No other fungicide is available. Even the I. C. I. which has some proprietary ones and is selling them in Australia and other countries does not stock them in this country.

As the demand is negligible no firm is even likely to import any. Under these circumstances I think it is the duty of the Agricultural Department to see that fungicidal and other spray materials manufactured by firms like I. C. I., Du-pont Chemical Works etc., are imported and made available for orchardists like myself.

Grapes :

I have also tried grape vine cultivation on these soils. Contrary to expectations the crop has done well. The fruit has an excellent taste and the quality is far better than the best that Penukonda or Krishnagiri has ever produced. The size of the fruit was however small. I feel that there is a great future for grapes on the West-Coast, especially for a seedless variety.

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