

that all parts of the Empire stand to gain by the pooling of knowledge now rendered possible. The funds for the maintenance of these Bureaux are supplied mainly by the British Government, the contributions from the Dominions including India being small in proportion, while on the Executive Council, which is the governing body of the Bureaux, the Dominions have an equal voice with Great Britain. Coming nearer home, the Imperial Council of Agricultural Research has recently decided to establish a Bureau of Agricultural Information for India. Not only will this provide a liaison with the Imperial Bureaux already mentioned but it is hoped that it will also assist research workers in India in the various branches of agriculture to keep in touch with each other and with work in progress in other parts of the country. The Imperial Council of Agricultural Research is charged both with promotion of research and the dissemination of information; it is hoped that its latest venture will be successful in the latter direction.

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NOTE ON PINE-APPLE CULTIVATION ON THE SLOPES OF THE SIMHACHALAM HILL

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Pine-apples are cultivated on the slopes of the hill at Simhachalam, which is nearly 1,000 feet above the sea level. The place belongs to the Simhachalam Devasthanam under the management of the Vizianagaram Estate. The Estate gives the hill slopes for the cultivation of the pine-apples on lease generally for a term of ten years at a rental of Rs. 10 per acre per annum with a stipulation that the lessee should plant and grow at least 10 trees per acre of jack, mango, and cashewnut during that period. Generally the land is to be surrendered at the expiry of the ten years' period, as by that time, the soil would have been depleted and the trees would have grown up and shaded the land too much to allow of further successful cultivation of pine-apples. In rare cases the term of lease is extended for a further period of ten years, when fresh planting is made.

Soil.—The soil is a good loam, well mixed with organic matter and very rich.

Preparation of the land.—The jungle is cleared from land freshly taken for the planting of pine-apples, the brushwood burnt *in situ*, and the ashes spread on the land. Land is dug up to a depth of 1 to 2 feet and all stones are removed, and terraces formed. The stones removed are piled up to form a wall at the lower edge of each terrace which is generally 1 to 1½ yards wide. The soil dug up immediately near the wall, is thrown over it and the suckers planted in the depression thus formed. The entire process is done by manual labour with crowbars and *mammoties* and the cost of preparing the land and forming terraces ranges from Rs. 250 to Rs. 400 per acre according to the quantity of stones found. The stone walls with a covering of earth at the bottom on the inner side of the terrace, act as barriers, and prevent the rain water from running down too fast and eroding the surface. On the other hand they make it stand for some time, deposit the earth it carries, and slowly pass down through the crevices between the

stones of the wall. Here and there, footpaths are provided for the workers to move about.

Planting material and planting.—Suckers from an old plantation which is to be abandoned, are used as planting material. The tuft at the top of the fruit, and the whorl of suckers which arise at the top of the fruit stalk and just below the fruit, though useful as planting material, are not used for planting, as they take three years to bear fruit. The sucker coming up from the base of the plant below ground which takes two years to fruit, is also not generally planted. Hence suckers which arise from the axils of the leaves above ground, 50 per cent of which generally fruit in the first year of planting are used for planting. Planting is done in the rainy season, *i.e.*, during the months of *Sravanam* and *Bhadrapadam* (August–September). The planting is done in the depression along the wall, about a foot apart. About 8,000 suckers are required to plant up an acre, the cost of which ranges from Rs. 30 to Rs. 50 according to the distance from which the suckers are to be carried.

After cultivation.—Once the suckers are planted, nothing is done afterwards during the first year except a weeding. From the second year onwards, the plot is hoed with the *mammoty* once a year during the rainy season and the plants earthed up.

Fruiting.—Plants planted in August (*Sravanam*), begin to bear fruit by the following May (*Vaisakham*). During the first year, only 50 per cent of the plants bear fruit. From the second year onwards, all the plants bear, and during the period between the second and the sixth year, the bearing will be at its maximum. It is during this period, that a high outturn is realized from the plantation. The fruit-bearing capacity declines from the seventh year.

The plants begin to bear fruit from *Chaitram* to *Ashadam* (April to July), and of these *Jeshtam* and *Ashadam* (May–June), are said to be the months of maximum production.

Value.—Generally, the fruit is sold at Rs. 6 to Rs. 8 per 100 delivered on the hill. Conveyance charges from the hill to the foot of the hill will be about eight to ten annas per hundred fruit, according to the position of the plantation on the hill.

If there are 8,000 plants to the acre and only about 50 per cent of the plants bear fruit in the first year, there will be about 4,000 fruit, which will fetch Rs. 240 at the rate of Rs. 6 per 100 fruit, in the first year.

From the second to the sixth year, all plants bear fruit as this is the period of maximum production. From the 8,000 fruit obtained Rs. 480 are realized in each year. The value of the 40,000 fruit obtained in the five years (second to sixth year both inclusive) comes to Rs. 2,400.

From the seventh year, the fruit-bearing capacity declines and during this period the average can be taken as 3,200 per year which will fetch Rs. 192 per year or Rs. 768 in the four years (seventh to tenth year—both inclusive).

Thus the value of the produce obtained during the ten years will be Rs. 3,408. Deducting Rs. 408 for bad seasons and unfavourable market,

the produce may safely be valued at Rs. 3,000. Against this the cost of cultivation amounts to Rs. 550 as follows:—

		RS.	A.	P.	
Preparatory cultivation	400	0	0	} Charges for <i>m a m m o t y</i> hoeings have not been inclu- ded as the ryot personally at- tends to it.
Cost of planting material	50	0	0	
Lease amount for 10 years at Rs. 10-0-0					
per annum	100	0	0	
		<hr/>			
		550	0	0	
		<hr/>			

Deducting the cost of cultivation from the gross value of the produce there will be a net income of Rs. 2,450-0-0 over one acre for a period of ten years or nearly Rs. 250-0-0 per annum per acre

HINTS ON PINE-APPLE CULTIVATION

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The only place in the Northern Circars where pine-apples are grown on a fairly large scale is the Simhachalam hill, on the terraced slopes of which they are found to thrive without irrigation though the rainfall does not exceed 40" a year. Elsewhere, only a few plants are to be seen in citrus, mango, and other gardens. The general impression is that they thrive only on moisture-retaining hill slopes.

2. Pine-apples can, however, be successfully grown on ordinary cultivated lands also. The writer got them planted on about 80 cents of his land at Kondevaram in 1928 under what may be termed the 'raised bed' system. The attempt has been quite successful and last season, other ryots in the village copied the system on about four acres of theirs.

3. From the experience so far gained, the following hints may be given for the use of intending growers:—

1. Select a well-drained rich plot for planting.

2. Plough the land well, apply from 30 to 50 cartloads of *Penta* or village heap manure and work it in.

4. Procure suckers from Simhachalam, where they are available in August or September soon after the harvest of previous season's crop. They can be had at about Rs. 10 to 12 per 1,000 delivered at the Railway Station.

5. As far as possible, procure shoots which come up from the axils of the leaves on the stems from which fruit has been harvested. These bear fruit earlier than any other planting material, about 50 per cent bearing in the following season and the rest in the next. These shoots however are difficult to procure at Simhachalam as they are rarely parted with. The next best kind of planting material which is largely available is the suckers which arise from the ground, some of these being usually removed