

After eight days the plants were examined and found to be in a fresh and healthy condition. The plants placed in the potting shed had been badly gnawed by rats, but were otherwise healthy. The whole twelve were then planted out in the ordinary way, and no special attention or treatment given to them. The plants commenced to grow readily with one exception, and this was the plant that had almost been denuded of bark by rats.

The results are very satisfactory, inasmuch as they prove that Para plants can be sent to any estate in the Island, packed in the way described, without fear of permanent injury, or loss, provided that they receive proper attention upon arrival at their destination. (*Report on the Botanic Station and Experiment Plots, St. Lucia, 1910-11*)

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## RUBBER IN THE SEYCHELLES.

The following extracts are taken from the Report of the Gurator (M. Dupont) on the Botanic Station, Seychelles, for 1911.

The total number of trees now in Seychelles is estimated at 70,585, of which 4,511 have reached tappable size. The tapping experiments on Hevea trees were continued. Several kinds of tapping knives were tried, but it was found that successful tapping depended more on the skill of the operator than on the instrument employed. The Barrydo knife proved a less dangerous implement in the hands of inexperienced tappers than either the Bowman—Northway or the Eagle knife, both of which produce deep wounds. The "half-herring-bone" method of tapping was used in most cases on the "opposite quarters" system, *i. e.*, one-quarter of the surface of the bark of the tree is tapped during one year, and it takes four years to tap the whole tree before beginning on renewed bark. The full spiral system was adopted in one set of experiments where trees were overcrowded, and although the death of few trees may follow this drastic method, the Curator considers that the greater yield obtained when prices are high fully compensates for this loss. He also suggests that in Seychelles it may be better to tap by this method for three months during the rainy season, when young trees can withstand the effects of serious wounds, than to employ any other method which would necessitate extending the tapping period into the dry season to obtain the same quantity of rubber.

Five-and-six-years-old trees were in one instance tapped by the full spiral method for five or six months, without any apparent check to the growth of the trees or to the fulfilment of their natural functions.

The following table shows the daily yield of latex obtained in one experiment designed to compare the two methods.

| Girth of tree at 3 ft. from ground | HALF-HERRING-BONE METHOD. |         |         | FULL SPIRAL METHOD. |         |         |
|------------------------------------|---------------------------|---------|---------|---------------------|---------|---------|
|                                    | 18 ins.                   | 18 ins. | 16 ins. | 18 in.              | 18 in.  | 16 in.  |
| Date                               | 16.3.II                   | 17.3.II | 16.3.II | 16.3.II             | 17.3.II | 16.3.II |
| Latex collected                    | 660 cc.                   | 730 cc. | 515 cc. | 1075cc.             | 1045cc  | 650 cc. |
| Number of trees                    | 41                        | 41      | 60      | 34                  | 34      | 60      |
| Latex per tree                     | 16 cc.                    | 18 cc.  | 8 cc.   | 32 cc.              | 31 cc.  | 10 cc.  |

The latex was coagulated with acetic acid, ammonia solution having been previously added to prevent coagulation on the cuts and in the collecting cups. One cubic centimetre of glacial acetic acid diluted with 250 cubic centimetres of water, was used to each litre of diluted latex.

The rubber was dried slowly in a cool chamber and exported in biscuit form. The slow drying tends to induce the growth of mould, and to prevent this, steps are being taken to effect the drying in a special drying room, after using a smoking machine.

Experiments carried out on a small estate near the Botanic Station serve to indicate to what extent and in what time a Para rubber estate comes into bearing in the hilly districts of Seychelles. The estate in question contains 1,800 trees planted in 1905 and 600 trees planted in 1907 and 1908. The soil is rocky and inferior, the trees overcrowded and irregularly planted 10 or 12 feet apart; yet in spite of these adverse conditions about 10 per cent. of the five-year-old trees have reached tappable size, 16 in. and over in girth at 3 feet from the ground. On marshy land about 50 per cent. reach tappable size in five years. The average yield of latex, on the twenty-third day of tapping, from trees 18 in. in girth was 16 cc. per tree by the half-herring-bone method and 24 cc. by the full spiral method. The best tree, 23 in. in girth, yielded nearly 100 cc. of latex daily during forty-two days, and this large yield had not decreased at the time the report was drawn up.

No fungoid disease has yet appeared on the Hevea in Seychelles, but as several diseases of other plants, which have spread to Hevea in Ceylon and other countries are present, precautions are being taken against infection.

An attempt was made to introduce rubber stumps from Ceylon, but the experiment was not very successful. The proportion of plants raised from stumps in two consignments received was 30 per cent. and 50 per cent. respectively. The number of plants raised from local seeds is steadily increasing, and it is anticipated that in two or three years it will be unnecessary to import Hevea seed for planting purposes.