

CHAPTER VII

OTHER ASPECTS OR REPLANTING

The Government's assistance to the rubber industry is not only limited to replanting but also includes research into the various aspects of rubber. But for my purpose I will only discuss that part of research which is associated with replanting. The form of assistance towards this field is the establishment and subsidising of an institute of rubber research.

The first form of research which incidentally is the most important is that concerned with the breeding of strains of rubber capable of yielding more latex at a faster rate. Success in this field has been recorded and replanters have been benefitted in the sense that they have been provided with high-yielding materials for replanting. Normally, the average annual yield of the unselected seedling areas is about 350lb. per acre. But to-day strains of yields of up to 2,500lb. per acre are in commercial use. The progress that has been made since the Second World War in breeding new strains with improved yields is shown by comparing the average yields receivable

in normal tapping from the various types of rubber. This is shown in table 9.

TABLE 9

COMPARISON OF YIELDS PER ACRE

Year of Tapping	Unselected clones (lb. per acre)	Older clones (lb. per acre)	Modern clones (lb. per acre)
1	300	500	600
2	400	700	900
3	450	900	1,200
4	500	1,100	1,400
5	550	1,200	1,800

Source: Rubber Trend Sept. 1963.

From table 9 we see that the column under the modern clones gives the highest total of yield. Similarly, the rate of increase in yield is also faster than the other two categories. This is the result of research. It is expected that in years to come clones of higher yields than that shown in column three will be found and recommended for use of the replanters and those who undertake new planting of rubber trees.

Two other lines of research, the result of which has been taught to the replanters, are those

concerning planting methods and the use of fertilizers.

In recent years a new technique of budgrafting, known as the 'green budding' has been introduced. This method shortens the period of immaturity of the rubber trees by six months thus bringing the tappable age to an earlier date. By this method of bud-grafting, it is estimated that there is a saving of the plantation maintenance cost of \$25.00 per acre. This will, no doubt, reduce the cost of production of rubber. Another result of research which has been recommended for use by the replanters is the density of planting and the choice of ground cover plants. The present densities recommended for use are shown in table 10.

TABLE 10

DENSITIES OF PLANTING UNDER DIFFERENT CLONES

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Clones or budgrafts:-	<u>Trees per acre</u>
Original density	180
Final density	120
Clonal seedlings:-	
Original density	240
Final density	120

Source: Rubber Trend Sept. 1963.

Higher densities may be achieved with 'hedgerow' planting which is now widely used. The method of 'hedgerow' planting

is shown in table 11.

TABLE 11

METHOD OF HEDGEROW PLANTING WITH
RESULTING DENSITY

Planting Pattern (distance between trees)	Resulting Density (trees per acre)
50ft. by 4½ft.	193
50ft. by 5ft.	174
60ft. by 4ft.	181
70ft. by 3½ft.	178

With the different methods of planting and the resulting densities of trees per acre it is hoped that maximum yield will be obtained.

Another result of research is that substantial increase in yield is achieved by the use of leguminous cover crops, which conserve the soil, provide humus rich in nitrogen and maintain soil humidity. This is also being recommended for use by replanters. Furthermore, the use of nitrogeneous and potassium fertilizers has proved to have increased the yield by 5 to 6% over six years of tapping. Besides, this has also increased the tree girth by 16.3% especially those of the modern clones.

From the economy's point of view, and from the individual planter's point of view, the use of these methods in replanting will be beneficial, firstly, greater productivity can be obtained, secondly, the cost of producing a lb. of rubber can be reduced, and finally, greater profit can be obtained.

