

A SUMMARY OF THE INSTITUTE'S RECOMMENDATIONS ON SOIL REHABILITATION PRIOR TO REPLANTING

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The following table is taken from a general article in the *Tea Quarterly*, September 1956, and, together with the quotation, represents very concisely our aims regarding soil rehabilitation. Experience since that date has merely served to emphasise the value of manuring the Guatemala grass generously, *i.e.* at 4 cwt. per acre per cut.

PERIOD	OPERATION	INTENTION
Soil rehabilitation	<ol style="list-style-type: none"> 1. Following uprooting and contour lining plant thickly with grass, preferably 2 rows between the future tea rows 2. Manure regularly with little or no forking 3. Cut regularly and spread loppings all over surface 4. Continue for preferably 2 years 	<ol style="list-style-type: none"> 1. Maximum soil cover; minimum soil disturbance 2. Maximum production of organic matter above and below ground; building up mineral nutrient reserves 3. Protection of soil from sun, rain, wind and packing by labourers' feet 4. Disease control; build up of stable soil crumb structure
Soil activation	<ol style="list-style-type: none"> 1. Cut grass right out 2. Leave grass stumps whole on the surface 3. Broadcast manure 4. Hole, incorporating old thatch in the holes 	<ol style="list-style-type: none"> 1. 2. Wind break for young tea (see conclusions) 3. To assist the increased microbial activity from 1 and 4 4. To provide steady supply of nutrients to the young tea

"Our . . . proposal is really very simple, and it can be described as an attempt to get back to jungle conditions, but for convenience and greater efficiency we have aimed at a grass jungle. The original tea plantings made use of fertility which had accumulated over the centuries, and which had often vanished alarmingly once cultivation had imposed new and exacting conditions on the soil. We cannot hope to regain more than a small part of the virgin fertility in a rehabilitation period which, from economic necessity, can only last for one or two years, but as the object of replanting is to grow better tea, and as the future of the planting will depend so much on the initial success of the clearing, the Institute cannot stress too strongly the need to implement all the proposals, set out above, in the most generous fashion."

APPENDIX

Revised Guatemala Grass Manure Mixture

This manure, now known as the "T.R.I. Grass Manure," has been altered slightly by substituting rock phosphate for superphosphate.

New Grass Manure:—

Sulphate of ammonia	...	5	parts by weight
Saprophosphate	...	2½	" " "
60% Muriate of Potash	...	1½	" " "

Composition:—

		<u>% N</u>	<u>% P₂O₅</u>	<u>% K₂O</u>
Old mixture	...	10	9	12
New mixture	...	11	8	10

Used at the same rates as before, the new Grass Manure will supply 10 per cent. more nitrogen at a saving in manure cost of approximately 7 per cent.

TEA RESEARCH INSTITUTE YIELDS OF CLONAL ROWS

Clone No.	Rooting	CALCULATED AVERAGE YIELD/YR;		Quality	Type	Root System	Blister Blight
		Previous Cycle	Present Cycle				
740	Good	1321	Rested for taking cuttings	Average	Very large spreading	Intermediate	Highly resistant
777	Good	1480	2137	Average	Large spreading	Intermediate deep	Resistant
1114	Average	2671	5281	Below Average	Very large spreading	Intermediate	Fairly resistant
1526	Average	1224	Rested for taking cuttings	Above Average	Large spreading	Intermediate deep	Resistant
23	Above Average	942	Ended 1957 1335	Above Average	Large spreading	Intermediate deep	Fairly resistant
25	Average	1150	1525	Above Average	Very large spreading	Intermediate	Not resistant
1076	Average	1557	1965	Average	Very large spreading	Intermediate	Fairly resistant
2016	Good	1293	2670	Average	Large spreading	Intermediate	Fairly resistant
2021	Good	1370	1770	Above Average	Large spreading	Intermediate	Resistant
2022	Good	1348	2055	Average	Large spreading	Intermediate	Resistant
2024	Good	2063	3575	Above Average	Very large spreading	Intermediate deep	Highly resistant
2025	Very good	1628	2955	Average	Large spreading	Intermediate deep	Fairly resistant
2023	Very good	1453	2230	Above Average	Large spreading	Intermediate deep	Not resistant
2026	Very good	1093	3335	Below Average	Large spreading	Intermediate deep	Not resistant

Note:—Intermediate rooters = Most main roots penetrate the soil at an angle of 45°. 1956 very severe frost and drought damage.