PRUNING CLONE T.R.I. 2024; OBSERVATIONS IN THE MID COUNTRY

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Clone 2024 has steadily acquired a bad reputation for its behaviour after its first prune, and it is clear that failures are not confined to a few well-defined climatic zones, and can not always be attributed to rigorous treatment before pruning. In 1963, due to a misunderstanding, certain experimental plots of 2024 on the Institute's Sub-Station at Hantane were pruned in such a way that a high proportion of deaths resulted. It may be of value to record what was and was not done to these bushes, as the effect was so dramatic that estates should have the opportunity to consider the findings in relation to their own clonal pruning.

Site

A sheltered north-east slope on Hantane, 2,500 feet elevation; south-west monsoon zone. Soil low in organic matter and high in fine gravel.

Planting

The plots referred to were planted in October 1961, following guatemala grass rehabilitation of the former tea area. Bending was done two months later, and again six months after planting. This was not done too vigorously, and the final frames did not carry many strong, low-level branches. A cut-across was given fourteen months after planting, at 12".

Manuring for the two years before pruning, in October 1963, followed the general scheme given in the Tea Quarterly for September, 1961. Thatching was done when guatemala grass loppings were available.

A second experimental area adjoined Area I and contained clone 2024 and four others. A greater development of low-level branches was a feature of Area II. Surrounding both these areas, which were used for zinc-spraying experiments by my Division, were plots of many clones, planted and managed identically.

No shade was planted in Areas I or II, and much of the surrounding tea was also unshaded. This is taken into account in the comments given below.

Pruning

October 1963, at 15". In Area I thin branches were removed, including most of the low-lying ones with their foliage. Few bushes had more than 10-20 leaves on the pruned frame.

In Area II and elsewhere, it was apparent that a much greater leaf area remained (not calculated).

It may be of significance that during February and March 1963 a severe drought accompanied by strong wind caused a loss of foliage from some clones, 2024 among them. Such plants therefore had to make good the effects of this damage in a critical period before pruning. Plucking was light over this period, and some bushes were hardly plucked at all.

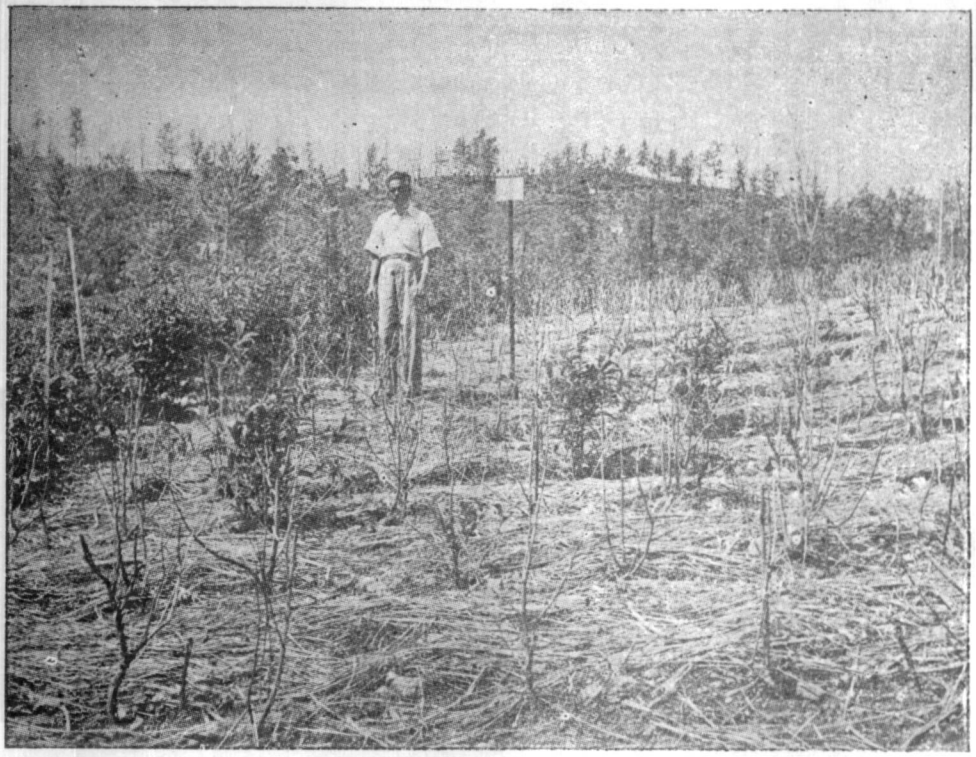

Figure 1.—A view of the worst casualties following clean-pruning of Clone 2024 at the Hantane Sub-Station. Lung-pruned 2024 at left; pruned at the same time. This photograph was taken seven months after pruning.

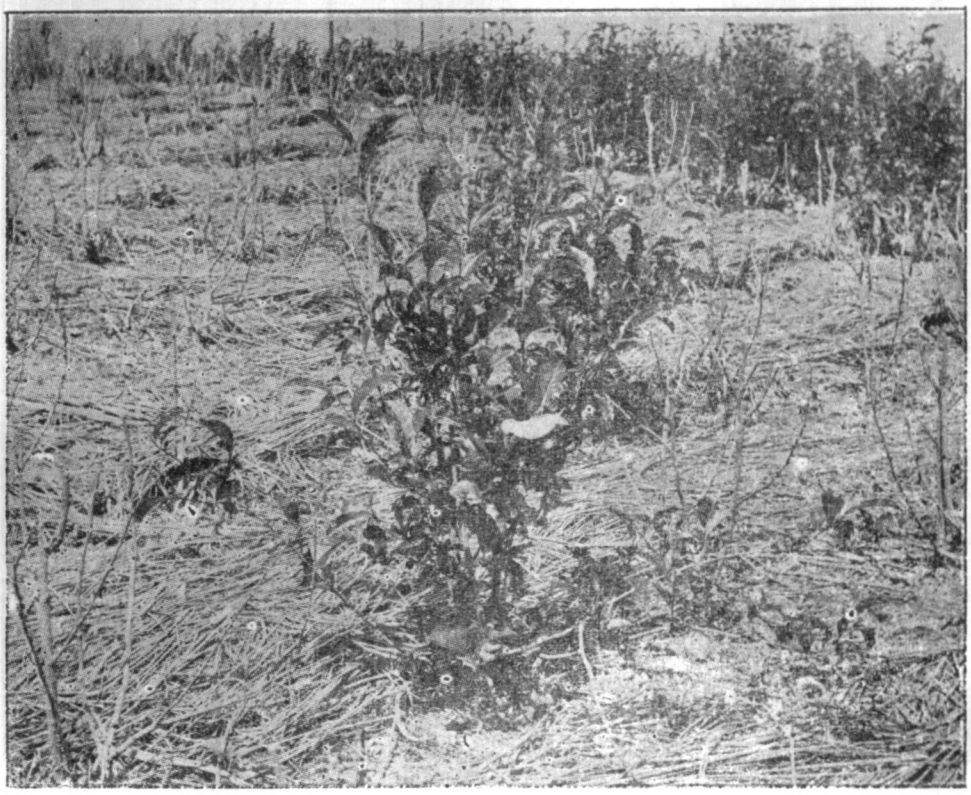

Figure 2.—An average survivor in the same area, showing small leafy branches which had acted as lungs.

The weather following pruning was favourable and recovery in Area II and elsewhere was very rapid, for all clones. Plants in Area I developed shoots which rapidly shrivelled, the unfolding leaves blackening at the tip and edges, and finally died completely. After several weeks, a few shoots on a proportion of the bushes had developed to a reasonable size, but the bark had been damaged, presumably by sun-scorch.

Three months after pruning, nearly 80% of the plants in the clean-pruned plots had died or were obviously about to die.

Four months later, the count was unchanged, and the survivors were on average similar to those illustrated. Observation suggested that the better bushes were those which carried several leafy, trailing branches.

Conclusion

By mischance, an area of clone 2024 was clean-pruned while adjoining areas of similarly managed 2024 were pruned to leave lungs. This was the only significant difference between the areas, and it may be safe to attribute the severe casualty rate in Area I to the absence of lungs.

Minor effects of locality were observed, apparently not related to exposure to wind, and in future experiments we will no doubt try to determine the importance of soil conditions in this connection.

Two-year old 2024, well managed, was obviously capable of excellent recovery from pruning, given an adequate (but at present undetermined) retention of foliage, at 2,500 feet elevation; south-west monsoon zone.

It would seem to be necessary to extend these observations by planning a series of experiments over a wide range of elevations. Reports of failures after pruning close-planted clonal areas in the low-country are perhaps to be expected, unless a special type of pruning is adopted to leave adequate lungs on frames which are often depleted of foliage at lower levels. Reports of poor recovery are occasionally received from up-country areas, and it would now seem reasonable to wonder if certain clones could benefit from a type of lung-pruning at elevations greater than are often thought to require these measures.