# EFFECT OF BURNING GRASS LAND ON THE WHITE GRUB (ANOMALA sp.) POPULATION.

C. B. REDMAN KING.

A small area of ground was opened up this year by the Soil Chemist for experimental work. It was divided into a number of plots about one twentieth of an acre in extent which were arranged in pairs, one of each pair being burned over first, the other being forked only. It seemed a good opportunity to find out whether the burning of the grass had any effect on the White Grubs present in the roots of the grass.

Six pairs of plots were chosen for sampling, and three random samples were taken from each of the twelve plots, each sample consisting of a count of the grubs in one square foot of soil. The following counts were made:—

| | Burned | Unburned |
|---|---|---|
| 1st pair of plots | 20 | 19 |
| | 5 | 11 |
| | 16 | 6 |
| 2nd pair of plots | 9 | 11 |
| | 7 | 9 |
| | 18 | 6 |
| 3rd pair of plots | 6 | 22 |
| | 12 | 14 |
| | 9 | 12 |
| 4th pair of plots | 13 | 22 |
| | 10 | 14 |
| | 8 | 5 |
| 5th pair of plots | 5 | 6 |
| | 2 | 4 |
| | 7 | 4 |
| 6th pair of plots | 6 | 6 |
| | 9 | 3 |
| | 7 | 4 |
| Mean for 18 samples | 9·33 | 9·8 |

Mean for all 36 samples 9·638

All figures are the number of living grubs found; no dead grubs were discovered in either type of plot. The counts were made six weeks after the grass was burned.

From a consideration of the sampling variations, the standard error of difference between the treatment means was found to be 2·8. From this figure, a "significant difference" of 7·2 was deduced. The "significant difference" is the difference which *must* be exceeded when the means are compared, if that difference is to be regarded as being due to treatment and not to chance causes.

Now the difference of the means of the two sets of eighteen samples is only 9·8 – 9·38, which is ·42 in favour of the unburned plots. If the difference had been greater than 7·2 (the significant difference) in favour of the unburned plots, then it could be concluded that the burning had had a significant effect. The actual difference found is only about one seventeenth of this, so that we may say that the burning had no effect whatever on the White Grub population under the conditions in which the burning was carried out.

It is proposed now to find whether cultivation has any effect on the White Grub population, and experiments to this end will be carried out on both burned and unburned plots.

Acknowledgments are due to the Soil Chemist for kindly analysing and working out results from the figures obtained.

**SUMMARY.**

Random counts of White Grubs were taken from burned and unburned plots to find if the burning had any adverse effect on the grubs. The results show conclusively that there was none whatever.

---

# PRUNING TERMINOLOGY.

F. R. TUBBS.

Whenever a discussion upon pruning methods occurs, the need is felt for a clarification of the meaning of the various terms used to denote the different types of pruning in use. For example, the terms "skiff", "Travancore", "cut across", "brush", and "hedge" are often used to denote but one type of pruning. Even more confusing is the case where one term is used by different individuals to denote different methods of pruning. It would be extremely difficult to determine which term was used first to describe any one type of pruning and, moreover, the information would be of historical interest only.

With the initiation of pruning experiments under the auspices of the Tea Research Institute, a description of which will be found elsewhere, clear definitions of the terms that will be used when discussing them become essential. The following definitions have been submitted to several prominent planters for criticism. While it is not claimed that these terms have any historical priority over others, it is intended that they shall provide a basis for reference, whereby the experiments and their results may be more easily understood.

**CENTRING.**

The leader or leaders of a young, hitherto unpruned bush, are cut back to a pre-determined level, with the intention of causing the production of lateral branches, as a basis for frame production.

**COLLAR PRUNING.**

The whole of the above ground portions of the bush are removed, the cut being made through the main trunk at, or near ground level.

**CLEAN PRUNING.**

The main frame-forming branches are cut to the level determined upon, the greater part of the smaller shoots being removed.

**UMBRELLA PRUNING.**

A complete leafy branch is left standing above the level of an otherwise stick-pruned bush.

**RIM LUNG PRUNING.**

The centre of the bush is ~~stick~~ clean pruned, or cut across, but the branches on the circumference are left untouched or later trimmed back to a level, i.e., the bush is not cut to a uniform level in the first case.

**CUT ACROSS.**

The top of the bush is cut level about 3 in. above the last pruning cut, nothing being removed below the pruning level save diseased wood.

**TRAVANCORE.**

The bush is cut level about one inch above the tipping level, or one inch above the level of the previous Travancore.

**BAGJAN**

The bush is "Travancored" at the level of the previous cut, i.e., nearly all new wood is removed.

**SKIFF**

A high "cut across", designed to prolong a pruning cycle or to delay a rush of flush.