

An alternative criterion for selecting high yielding cultivars of tea (*Camellia sinensis* L.)M A B Ranatunga*, J H N Piyasundera¹, R Paskarathevan and M T K Gunasekare*Plant Breeding Division, Tea Research Institute of Sri Lanka, Talawakelle, Sri Lanka*¹ *Plant Breeding Division, Tea Research Institute of Sri Lanka, Low Country Station, Ratnapura, Sri Lanka*

The relationship between yield and weight of pruned biomass of tea cultivars grown in two agro-climatic regions, in the up country and in the low country was investigated to develop an alternative selection criterion for preliminary selection of high yielding tea cultivars. A significant positive correlation was observed between weight of pruned biomass and annual yield as well as average cycle yield of the cultivars tested in both locations. The correlations seen were consistent in the two different tea-growing regions indicating that irrespective of the region, it is possible to use weight of pruning as a parameter in selecting high yielding tea cultivars. From the annual yield data of the first pruning cycle, the 3rd year yield in the low country and the 4th year yield in the up country showed the highest correlation coefficients with their corresponding average cycle yields. Average cycle yields of cultivars in turn adequately correlated with the weight of pruned biomass.

Using weight of pruned biomass, it was possible to identify 80% and 50% of the accepted high yielding cultivars in the up country and in the low country evaluation trials respectively. This indicates it's reasonably accurate as a selection criterion in selecting tea cultivars in their preliminary evaluation stages, with a small base population and also with reductions in labour costs and the researchers time involved.

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