THE IMPLICATIONS OF WEATHER/CROP RELATIONSHIP IN TEA CULTIVATION

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In the management of tea plantations weather constitutes the major uncontrollable factor that influences plant growth and thereby determines management efficiency. Kandiah and Thevadasan (1980) derived a weather term $f_tR_wS_p$, from daily recordings of air temperature rainfall and sunshine hours, that was found to quantity the effect of weather on crop from April to December in the wet zone hill country of Sri Lanka. Yield responses to $f_tR_wS_p$ lags by a month. The overall effect of weather on the growth of tea will be on its gross increase in dry weight of which crop is a fraction. Thus, crop variation will be related to growth variation in the rest of the plant. Some aspects of this relationships are reported in this study, where crop was assessed along with secondary growth of stem and root, and root reserves.

Yield variation in tea was found to be associated with cambial activity in stem and root, and level of root reserves. Hence the weather parameter, $f_tR_wS_p$, used for prediction of yield can also be used to follow the growth potential of stem and root, and variation of root reserves. The physiological implications of this relationship are examined in relation to some of the cultural operations. Kandiah and Thevadasan (1980), 36th SLAAS sessional paper — communicated.

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