

Abstract

Effects of triploidy on yield and some yield components were evaluated in a heterogenous Kenyan population of diploid and naturally occurring triploid tea genotypes. Significant differences were recorded in all the components studied. Triploid clones produced larger and heavier shoots than diploids, with fewer pluckable shoots per unit area. They also regenerated fewer shoots than diploids during the experimental period. The shoot extension rate of actively growing shoots was independent of ploidy. Triploid axillary buds took longer to reach plucking maturity than diploids. Triploid clones also had larger stomata. Phenotypic correlation (r_p) evaluated between pairs of combinations of yield components and yield revealed that all components studied were individually weakly correlated with yield except shoot population (number per square meter on the plucking table surface) which had a significant positive correlation with yield. Shoot size traits (i.e. shoot fresh and dry mass, leaf area, internode length, total shoot length, etc) were positively intercorrelated whilst most of the shoot production efficiency traits (shoot density, shoot extension rate, total time of shoot development, regeneration rate) were weakly inter-correlated.