

## Investigation on Durability of Different Mulches and Their Effect on Weed Growth in Low-Grown Young Tea

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Mulching is an essential cultural practice for weed suppression and conservation of soil and moisture in tea lands. However, this recommended practice has been neglected by tea growers due to scarcity of mulching materials and high cost of labour. Potential use of any plant material as a mulch depends upon its durability. An investigation was carried out to find out alternative plant materials as mulches, which are more durable and available at a lower cost. Shoots of *Diyapara* (*Dillenia suffruticosa*), Flemingia (*Flemingia congesta*) and Acacia (*Acacia auriculiformis*) were selected as mulching materials. These together with artificial agricultural mulch were tested against *Mana grass* (*Cymbopogon confertifloru*). Plots each sized 3 x 3.6 m in a tea new clearing was covered with each mulch material simultaneously as a treatment at the rate of 1.4 kg m<sup>-2</sup> on dry weight basis. Experiment was laid out in a Randomized Complete Block Design (RCBD) with four replicates. Results indicated that both *Diyapara* and *Acacia* were found to be more durable recording the highest weed suppression (0.61 kg fresh weight m<sup>-2</sup>) and the lowest mean weed count, 12.7 (0.09 m<sup>-2</sup>) were presented with *Diyapara*. The highest soil moisture retention (15%) during short dry spells, the lowest soil temperature (26-27 °C) throughout the experiment and the highest C: N ratio of 28:1 was also reported with *Diyapara*. There was no any significant improvement in tea growth between any mulch treatments (p>0.05). Further, no any allelopathic effect was manifested by any of mulch materials. *Diyapara* has an ability to suppress weeds more effectively than other mulching materials owing to its high durability.

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