

## Weed controlling efficacy of glyphosate herbicides with 'Controlled Droplet Application' (CDA) sprayer

The "Controlled Droplet Application" (CDA) sprayer is reported to be more convenient and efficient in weed control in plantation crops. It requires a very low volume of spray solution (25 L ha<sup>-1</sup>) compared with knapsack sprayer, which requires 550 l ha<sup>-1</sup>. The objective of this study was therefore, to investigate the weed control efficacy of two glyphosate formulations with the use of CDA sprayer in comparison with knapsack sprayer, in tea plantation.

The experiment was conducted at Ratnapura, where the elevation is -00 m amsl in 1998. Sspark, 16% (w/v)@ -20g and 640g a. i. And Roundup, -6% a.i. (w/v) @198g and 594g a.i mixed in water @ 25 L ha<sup>-1</sup> and @ 550 L ha<sup>-1</sup> respectively were sprayed by CDA and knapsack sprayers on weedy plots (2x2m). An untreated control was also included. Treatments were replicated thrice in a Randomized Complete Block (RCB) Design. Herbicides were sprayed in May, June and November, 1998. Injury % of weeds and fresh weight were assessed, 4 and 10 weeks after spraying (WAS).

The greatest injury % and the least weed biomass yield were recorded with Roundup (-6%) @ 594 g and Spark (16%) @ 640g sprayed by the CDA sprayer at - 4WAS. The weed fresh weights resulted from CDA sprayer application were relatively lower than that of knapsack sprayer. Although not far more superior, the CDA sprayer performed better in the control of weeds, when compared with the knapsack sprayer.