# The effect of wet weather on yield stimulation of rubber (*Hevea brasiliensis* Mull. Arg.)

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The rubber tree is economically important because of it's latex, which is harvested by wounding the bark by a process termed 'tapping'. Low frequency tapping together with stimulation is currently recommended to address the issue of tapper shortage.

Latex production can be stimulated by applying chemicals such as Ethephone. However, as most of the rubber plantations are located in the wet zone of Sri Lanka, the effectiveness of yield stimulant could be affected by rain interference.

The objective of this study was to determine the influence of rainfall on the effectiveness of yield stimulation done by two different methods, namely panel and bark applications.

The experiment was conducted at Dartonfield estate of the Rubber Research Institute of Sri Lanka (RRISL), Agalawatta. A rubber clearing with the genotype RRIC 121 was selected for the study. Eighty trees of this clone were selected on the basis of uniformity in yield and girth .The rain was simulated by wetting the trunk of rubber trees with 500 mL water in each occasion. Two methods of stimulation and four wetting patterns, namely 8 h,16 h,24 h, and unwetted (control) were combined to produce 8 treatment combinations which were imposed randomly with 10 replications in trees selected as single tree plots. Treatments were assets in terms of dry rubber yield per tree per tapping (g/t/t) and yield determining parameters such as total volume of latex, initial flow rate and plugging index.

Trees that were wet 8h after stimulation showed a significantly lower yield than the tree with no any wetting pattern. Though not significant, the mean dry rubber yield per tree per tapping (g/t/t) was highest in the unwetted trees. However, yield of trees that were wet 16 and 24 h after stimulation did not show a significant yield decline suggesting that the absorption of the ethephone into the tree would take place to a greater extent between 8 and16 h. With compare to the bark application the panel appliication of ethephone may be highly subjected to wash off by the rain seeping down through the trunk explain way the former has show a better response to the latter system of stimulation.

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