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Investigating the effect of some tree characters and day and night temperatures on sap yield and tapping duration in traditional Kithul tapping

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Kithul tapping is one of the age old rural practices that completely based on traditional tapping techniques. A grater variation in the sap yield and tapping duration can be seen even within a same locality. There can be several contributing factors for this variation. In this work we studied the effect of some tree characters (tree height, girth, number of leaves, size of inflorescence) and day and night temperature on the sap yield and tapping duration in two selected sites: Rojasangama of Kotmale and Keerihena of Deraniyagala.

Variations in the sap yield and the tapping duration was very high in traditional kithul tapping. Sap yield was recorded as 3.81±2.24 L and 2.45±0.99 L at Rojasangama and Keerihena sites respectively where as tapping duration was 61.41±25.72 days and 44.8±23.14 days. Height of trees were 15.62 ± 7.24 m and 18.28 ± 8.14 m. Average girth of Kithul trees used in tapping varied from 85 to 150 cm at Rojasangama site and 90 to 135 cm at Keerihena. Average number of leaves of a tree at Rojasangama was varied from 5 to 23 and 14 to 30 at Keerihena. Average volume of inflorescences used at the two sites were 4195±1900 cc and 6030±4600 cc. Average Day/night temperatures at Rojasangama and Keerihena sites were 22.39±1.55/ 10.83±1.73 °C and 33.44±1.43/ 22.49±1.10 °C respectively.

Regression and correlation analysis revealed that any of the tree characters: tree height, girth, number of leaves and volume of the inflorescence has no significant relationship with sap yield and tapping duration. Day and night temperatures also did not show significant correlation with sap yield and tapping duration. Therefore, treatment methods and tapping techniques used in traditional Kithul tapping may be major factors that contribute to variation of sap yield and tapping duration.

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