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Variability and correlation of leaf dry weight and related leaf characters of ten cultivars of true cinnamon (*Cinnamomum verum* Presl.)

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Cinnamon, (*Cinnamomum verum* Presl 2n=24) which is popularly termed as Ceylon cinnamon, indigenous as most say to Sri Lanka. Although the most significant perennial spice to Sri Lankan export economy in terms of both volume and value, it has been done little work regarding leaf morphology of cinnamon. Therefore, this study was undertaken to describe morphological variations of leaf length (cm), leaf width (cm), Leaf length / width ratio, leaf area (cm^2), average leaf dry weight (g), leaf oil % and correlation among the characters of selected ten vegetatively propagated cultivars.
Experiment was conducted at the Cinnamon Research Station, at Thihagoda, during 2006 to 2007. Vegetatively propagated selected ten cinnamon cultivars (CRS 351, CRS 166, CRS 156, CRS 23, CRS 201, CRS 83, CRS 317, CRS 184, CRS 318 and CRS 40) were used as treatments. Observations were recorded from five trees per cultivar and three replicates per each. Data were collected from randomly selected equally matured pests and diseases free 150 leaves of ten cultivars on above characters and leaf area was calculated by graphical method. Leaf dry weight was taken from same sample after five days oven dried at 70 ^{0}C and leaf oil % was determined by oil distillation method on dry basis. Experiment was repeated twice. According to the collected data regarding six leaf morphological characters showed significant difference among the selected cultivar ($P < 0.001$). Therefore the variation of leaf morphological characters could be used in characterization of true cinnamon cultivars. Among the various leaf characters, maximum variation was observed for dry weight of leaf (C.V. = 24.23) followed by leaf area (C.V.=17.63) . Inter character association of the six characters studied revealed highly significant positive association of leaf width with leaf area (r=0.94), leaf width with average leaf dry weight (r=0.83) and leaf area with leaf dry weight (r=0.81) and leaf length with leaf area (r=0.73). The highest negative association was observed between leaf width with length / width ratio (r= - 0.60). Out of five associations with leaf oil, only three were given significant difference, but all of them were negative (oil % with dry weight of r = - 0.52, leaf width r = - 0.46, leaf area r = - 0.44). Therefore, long and big leaf area types gave low leaf oil percentage and also due to evaporation of some volatile oils during the drying, total oil percentage could be reduced in dried leaves.

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