

Yield performance of selected cinnamon cultivars (*Cinnamomum verum* Presl.) in different regions of Sri Lanka

K.G.G. Wijesinghe¹, H.R.S.N. Kumari¹ and W.D.L. Gunaratna²

¹Cinnamon Research Station, Palolpitiya, Thihagoda

²Central Research Station, Department of Export Agriculture, Matale

Abstract

True Cinnamon, *Cinnamomum verum* Presl; syn: *C.zeylanicum* Blum 2n=24 is cultivated in about 29,000 ha in Sri Lanka and earns nearly Rs. 9,000 mn annually. The average dry bark yield of true cinnamon is about 500 kg/ha which is very low compared to the potential yield of 1000 kg/ha, where one of the problems is not a single improved variety was introduced in recent past. Therefore, available existing cinnamon germplasm at the Cinnamon Research Station was screened and selected 10 superior cinnamon cultivars (CRS 351, CRS 166, CRS 156, CRS 23, CRS 201, CRS 83, CRS 317, CRS 184, CRS 318 and CRS 40).

In this study, these selected cultivars were evaluated under different cinnamon growing regions of Sri Lanka in order to introduce high yielding superior quality cinnamon variety or varieties. Four experiments were initiated in Matara, Galle, Kalutara and Rathnapura districts using vegetative propagated materials. Randomized complete block design was used with three replicates.

Detailed study of stem bark yield, oil percentage bark and leaf and their main quality characters (Cinnamaldehyde percentage in bark oil and Eugenol percentage in leaf oil) were recorded. Data were statistically analyzed using SAS package.

Results of dry bark yield and oil percentage of 10 selected cultivars were significantly different ($P < 0.001$) in different locations. Highest bark yield was obtained after third harvests from each location. The highest bark yield was recorded from CRS 317 (1313.9 kg/ha) followed by CRS 40 (1145.0 kg/ha), where as the highest bark oil percentage and quality were recorded from CRS 40 (3.2 % and 74.6 %). The highest leaf oil and Eugenol percentage were from CRS 184 (4.3%) and CRS 166 (90.8 %) respectively.

Considering six years yield data and other relevant characters, following recommendation was made. Variety CRS 317 recorded the highest bark yield, while variety CRS 40 recorded the highest bark oil and superior oil quality. Highest leaf oil was given from the variety CRS 184, while highest leaf oil was given by variety CRS 166.

Keywords: Bark yield, Cinnamaldehyde, Eugenol, Leaf & Bark Oil, Vegetative Propagation and True Cinnamons