

**EVALUATION OF YIELD VARIATIONS OF TRUE CINNAMON
(*Cinnamomum zeylanicum* Blume) IN DIFFERENT AGRO-ECOLOGICAL
REGIONS IN MATARA DISTRICT**

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by
ARUMA JAYAWEERA PATABENDIGE NITHYA KAUMUDUNI

**Department of Export Agriculture
Faculty of Animal Science and Export Agriculture
Uva Wellassa University of Sri Lanka**

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ABSTRACT

Cinnamomum zeylanicum Blume of family Lauraceae is one of the major spice crops in Sri Lanka. Cinnamon is a very important crop to Sri Lanka because of its nativity. Due to the high demand for Sri Lankan true cinnamon, the highest export agricultural income is earned from cinnamon than all the other export crops in Sri Lanka. Information about yield variations in cinnamon cultivated areas are very useful in identification of high potential areas for cinnamon cultivation to utilize the lands optimally in the agricultural development process. This research was conducted to identify the yield variations of cinnamon in different agro-ecological regions in Matara district. Cinnamon leaf and stems and other field data were collected from 24 different places in selected Grama Niladhari Divisions in Matara district covering eight agro-ecological regions in the district. Collected stem and leaf samples were subjected to steam distillation of oil for quantification and identification of yield variation of cinnamon under different ecological conditions. In this study, Agro-ecological regions of IL1a, IL1b, WL1a, WL2a, IM2a, WM1a, WM1b and WU1 in Matara district were identified as treatments and length of the stem (m), girth of the stem (cm), thickness of the bark (mm), bark dry weight per unit length of stem (gm^{-1}), leaf dry weight per unit length of stem (gm^{-1}), leaf oil percentage (%) and bark oil percentage (%) were analyzed for identification of yield variation of cinnamon. Result revealed significantly higher cinnamon bark yield (77.44gm^{-1}) and leaf yield (893.11gm^{-1}) was found in IL1a region. Similarly, the oil percentage in cinnamon bark (3.27%) was high in IL1a region than other seven regions ($P<0.05$). Further, significant amount of cinnamon leaf oil (4.09%) was found in cinnamon, cultivated in IM2a region ($P<0.05$). Therefore, there is a higher potential of giving high yield of true cinnamon in IL1a region than that of other agro-ecological regions in Matara District.

Keywords: Agro-ecological regions, Cinnamon, Leaf and bark oil, Steam distillation,

Yield