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Screening Catimor coffee (*Coffea arabica* L.) progeny for resistance to leaf rust fungus (*Hemileia vastatrix* B. & Br.)

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The coffee leaf rust disease destroyed almost all the coffee plantations that existed at the end of the 19th century in Sri Lanka. Catimor is the most famous coffee cultivar with a small plant which can be grown at any altitude. It is a hybrid between Hibrido-de-Timor (HDT) x Catura. Hibrido-de-Timor is a spontaneous hybrid between arabica and robusta that occurred in east Timor. Catura is a high yielding, semi-dwarf variety of Arabica. Though it is resistant to leaf rust disease, a Catimor progeny which was established at the Export Agriculture Research Station, Matale recorded rust incidences. Therefore, evaluation of this Catimor progeny for resistance to leaf rust disease is the main objective of this study. The Catimor progeny was field established in a completely randomized design. The trial was maintained using recommended general management practices and plants were assessed in three ways for the resistance to leaf rust disease. In first method, the whole plant was assessed on a visual scale for 0, 1-5, 6-10, 11-25, 26-50 and > 50% leaves infected. In second method, fifty leaves were randomly collected from each plant and percentages of infected leaves were calculated. Disease severity was calculated in the third method by rating each of the fifty leaves according to the visual assessment scale on the basis of the number of rust pustules present on a leaf where 0, 1-5, 6-10, 11-20, 21-50 and > 50 pustules/leaf. The whole plant assessment revealed that there were 13 plants completely free from leaf rust while percentages of leaf infection data showed that 11 plants had 0-5% leaf infections. According to the disease severity assessment, 102 plants had mild infections. Therefore, the plants with all the values lying in the resistant group in each assessment are acceptable as resistant plants. Those resistant plants are O 9, P 14, R 10, S 12, U 10, V 14 and Z 11. When considering the average parchment coffee yield over seven years the plants, Z 9, U 13, E 4 and K9 showed 2784, 2546, 2311, 2116 kg ha^{-1} respectively. Therefore, it can be concluded that the Catimor progeny is composed of plants having varying levels of resistance to coffee leaf rust disease. The selected rust resistant plants can be used for hybridizing with the high yielding plants to obtain plants having both characters.

Keywords: Catimor, *Hemileia vastatrix,* leaf rust disease, selection