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**Selection of Catimor coffee (*Coffea arabica* L.) lines: based on growth and yield pattern after collar pruning**

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As a beverage crop, two species of coffee are commercially cultivated, namely *Coffea arabica* (Arabica coffee), which is a tetraploid species with a small plant and *Coffea canephora* (Robusta coffee), a diploid species with a robust plant. Arabica coffee which is adapted only for higher elevations (>600 m Mean Sea Level), occupies 80% of the world market and it gives a more favorable flavour and aroma but Robusta coffee thrives well under warm humid conditions and it can be grown successfully up to 900 m MSL and is resistant to coffee rust disease. Catimor is a small plant which can be grown at any altitude and 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. Therefore, evaluation of Catimor progeny which has good characteristics of both arabica and robusta and selection of the best performing lines were carried out at the Export Agriculture Research Station, Matale. All the plants of this Catimor progeny which was field established in completely randomized design in 1982 were collar pruned in March 1998 to obtain even canopy structure. The trial was maintained using recommended general management practices published by the Department. Initial growth data including height of the plant, girth of the stem at 7.5 cm height from the soil surface, canopy diameter and the number of fruiting (plagiotropic) branches of a plant were recorded at four-month intervals. The yield data were recorded by harvesting fresh berries and estimating the parchment coffee yields during a seven year period. Data were analyzed using the SAS software package.

Results revealed that the line Z 9 performed well giving the highest average parchment coffee yield 2784 kg ha<sup>-1</sup> where as the lines U 13 and E 4 showed 2546 and 2311kg ha<sup>-1</sup> respectively. When considering growth parameters of the above lines; Z 9 plant has shown a promising height (>150 cm), girth (>21 mm), canopy spread (>100 cm) and number of plagiotropic branches (>24 plant<sup>-1</sup>) at 16 months of age. Therefore, the best yielding Catimor coffee line is Z 9 followed by the lines U 13 and E 4 where the estimated parchment coffee yields are over 2300 kg ha<sup>-1</sup> yr<sup>-1</sup>. Those lines can be selected from this progeny for future hybridization programmes and vegetative propagated lines could be included in comparative yield trials for further evaluation. After eight years of collar pruning, with the economic analysis, it is advisable to collar prune the lines again for obtaining a constant yielding pattern from Catimor lines.

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