

Yield Response of Forest Arabica Coffee to Ridges and Rejuvenation Methods

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SUMMARY

An experiment was superimposed on forest arabica coffee at Tepi Agricultural Research Sub-center with the objectives to investigate the effects of ridges [tied ridge (closed end ridge), untied ridge (open end ridge) and flat land (without moisture conservation maintained as farmers' practice)] and rejuvenation [topping, agobiado, eskeletamento, decote, layering, clean stumping, ground level stumping and control (not rejuvenated)] methods on boosting and sustaining the productivity of the crop. A split-plot design with three replications, ridges as main-plot and rejuvenation as sub-plot treatments, were used. Mean coffee yield averaged over five cropping seasons significantly ($p < 0.01$) affected by the main effects of both ridges and rejuvenation practices. Tied ridge gave respective yield advantage of 18.96 and 23.56% over untied ridge and the traditional flat land planting. Similarly, topping, agobiado and eskeletamento significantly ($p < 0.01$) out yielded the conventional clean stumping by 43.18, 40.40 and 38.00% and the control by 12.46, 8.35 and 4.67%, respectively. In contrast, the interaction of land preparation and rejuvenation methods did not significantly affect yield. The results indicated that tied ridge, and topping, agobiado and eskeletamento are indispensable for increasing productivity of old coffee orchards in areas like Tepi.