On-farm performance of Arabica F1 Hybrids in the western high lands of Cameroon

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Introduction

The use of Arabica coffee F1 hybrids in agroforestry (high productivity, cup quality, tolerance to drought, pest and diseases) have dominated scientific debates in efforts to promote the use of such hybrids over conventional varieties. However, arabica F1 hybrids are relatively new to farmers, especially those in the Western highlands of Cameroon, a major arabica coffee growing area. The study evaluated and compared 2 Arabica F1 hybrids; Centroamerica and Starmaya with two conventional varieties Marsellesa and "Java" a Typica genotype grown in Cameroon, as a control

Materials/Methods

The experiment was setup on six farmers fields using the complete randomized block design. Two main blocks (15 × 60 m) were established, which were split into four trial plots of 15 × 10.5 m. Each trial plot contained 12 plants from each variety following planted using 3 x 1.5m spacing giving a total of 48 plants per plot. Shade trees leucena (*Leucaena leucocephala*), and plantains (*Musa sp*) were planted on the lines, at 6 x 6 m. The plant phenotype parameters assessed were number of nodes, plant height,and stem diameter.

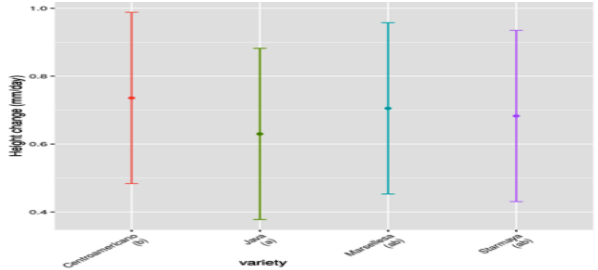

Figure 1: Plant height variation of arabica F1 hybrids and conventional varieties

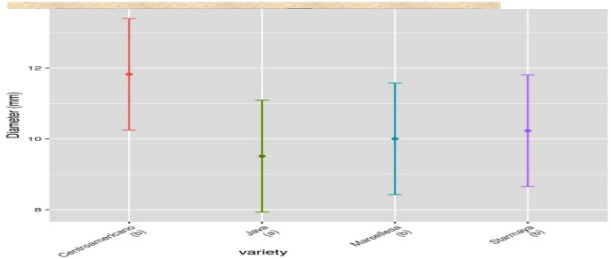

Figure 2: Stem diameter variation of arabica F1 hybrids and conventional varieties

Results/Discussion

The new F1 hybrids performed better than the local variety Java in all aspects of growth parameters (Figure 1). The new F hybrids (Centroamerica and stamaya) and the conventional variety Marcellesa showed good performance compared to the control variety (Java), even though there was no significant difference between the varieties at P≤ 0.05. The stem diameter of centro-amemerica (H1) hybrid variety was significantly different at P≤ 0.05 from the other varieties (Figure 2) .

Conclusion/Perspectives

The study suggests the adoption of Starmaya and Centroamerica Hybrids due to their fast growth. The good performance of the F1 hybrids varieties confers their adaptability to the western highland agro-ecological zone. Integration of other data sources (soil, climate) to adequately evaluate the performance of F1 hybrids. Finally, farmer-led multiplication of the F1 varieties through rooted mini cuttings could also be investigated,

References:

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