

# **Synthèse des Résultats de Recherche sur les Méthodes Culturelles du Caféier Arabica (*Coffea arabica*) au Rwanda, au 31 Mars 1994**

**V. RUTUNGA<sup>1</sup>, F. KAVAMAHANGA<sup>2</sup>, J.-C. NSENGIMANA<sup>3</sup>**

<sup>1</sup>University of Nairobi, P.O. Box 30197, Nairobi, Kenya

<sup>2</sup>Ancien scientifique à l'ISAR Rubona, Butare, Rwanda

<sup>3</sup>IIBC Muguga, PRO. Box 76520, Nairobi, Kenya

## **SUMMARY**

Arabica coffee plays an important role in the macro-economic performance of Rwanda because it is one between the most important cash crops. As a result, INEAC and ISAR have done agronomy research aimed at improving its productivity. The ecological conditions for coffee in Rwanda are characterized by low rainfall and high light intensity. The high light intensity increases coffee evapotranspiration and dieback spread. Soil parental material and chemical properties are variable amongst different smallholder coffee producers.

The available results indicated that spacing in coffee planting of 2 m x 2 m or 2.5 m x 1.5 m are convenient. Higher density with "multicaule" planting provided better production with some clones. Pruning regime must be correctly followed. Mulching is the best cultural technique to improve production. The mulching materials are variable and inadequate. They are applied late (June, July). Living cover with different species including the legumes cannot replace efficiently the mulch, although *Desmodium intortum* cover offers some advantages. Black plastic film can be used as a cover but it is too costly to be economic. Shade trees in coffee plantation have not been successful. High density planting and mulching reduce weed spread. Mulch also improves soil physical and chemical properties and water storage. It improved mineral fertilizer use efficiency. In Rwanda, N fertilizer followed by K (especially when mulching is not appropriate) improved coffee production. The effect of P was not clear while Magnesium deficiency was observed in some plantations. The formula of N.P.K and N.P.K.Mg. can be recommended and their rates should vary according to the sites. Finally, a beneficial effect was observed in using coffee rinds compost in coffee.