

A Review of Coffee-Banana Based Cropping Systems in Tanzania: the Economics

**G.S. CHIPUNGAHELO¹, J.M. TERI¹, P. MATOWO², J. MSAKY², F.L. MAGINA¹,
S. MALINGA¹, D. MBOWE¹, W. KIMARO**

¹Tanzania Coffee Research Institute, P.O. Box 3004 Moshi, Lyamungu, Tanzania

²Selian, Agriculture Research Institute P.O. Box 6024 Arusha, Tanzania

SUMMARY

The coffee-banana based cropping system is the most widespread farming practice characteristic in the Kilimanjaro region Mbeya, Kagera and Arusha areas of Tanzania. The benefits to adopting this system versus a pure coffee system, is that it offers higher returns to the smallholder. On average, farm sizes featuring coffee-banana interplanting are about 3 acres, with banana being the main subsistence crop and coffee a subsidiary cash crop. In the past few years, lower coffee prices have caused many farmers to neglect their coffee in favor of banana, significantly reducing the revenue potential of their farms. High production costs, especially in controlling coffee berry disease and coffee leaf rust have further eroded coffee's profitability to farmers.

The first step that Tanzania Coffee Research Institute (TaCRI) at Lyamungu has taken to address these specific issues is to develop improved coffee hybrids that are resistant to coffee berry disease and coffee leaf rust.

TaCRI carried out field trials and surveys in intercropping of coffee with banana to find out the best configuration of coffee-banana interplanting that would provide the greatest economic return to smallholders. The studies revealed that the crop arrangement of one banana stool to six coffee trees was optimal and a dramatic improvement on the traditional system where farmers tend to plant very close, at a ratio of one banana stool to one coffee tree. In economic terms, the results were very clear indeed. Total revenues generated by adopting the optimal coffee-banana cropping system were 50% higher than a pure coffee system, and 42% higher than the traditional system of 1 banana to 1 coffee.

The study clearly concludes that by adopting this optimal system, both productivity and profitability improves. The paper discusses the yield and economic returns of different coffee + banana intercropping systems.