Seasonal Fluctuations in Leaf Nutrient Contents of Fertilised and Unfertilised Arabica Coffee in Papua New Guinea

P. E. HARDING

PNG Coffee Industry Corporation - Coffee Research Institute, Department of Soil Science, University of Reading, London Road, Reading RG1 5AQ, UK

SUMMARY

The study aims to illustrate, and explain, seasonal fluctuations in coffee leaf nutrient contents under PNG conditions. Leaf samples were collected, at monthly intervals, for 3 years, from 30 sites, and analysed for total N, P, K, Ca, Mg, Na, S, Zn, B, Fe, Mn and Cu contents.

Leaf N contents, from unfertilised and fertilised coffee, are used to illustrate seasonal fluctuations of leaf nutrient contents, which are shown to be considerable, but well explained by the annual crop development cycle. Fertiliser applications increase leaf nutrient contents generally, but do not remove their seasonal fluctuations.

Interpretation of leaf analytical data is thereby facilitated, provided the phenological time of sampling is known. Recommended times for collecting leaf samples are as rapid cherry expansion begins, and/or after the main crop has been harvested.