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Field Nutrition Studies of Cassava

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ABSTRACT

Coastal soils of Queensland are of generally low chemical fertility and fertilizer application is necessary for most commercial crops. Field experiments were conducted to investigate the mineral nutrition of cassava on several soil types commonly found in northern Australia.

When cassava was grown after sown pasture, applied nitrogen promoted growth of plant tops, but there was no positive effect on economic yield. Absorption of nitrogen, phosphorous and potassium was closely linked with total biomass production. In high latitude areas of S.E. Queensland, there was a large seasonal variation in crop growth rate and hence absorption of the mineral nutrients varied greatly within a year.

Cassava in this environment, particularly under high soil fertility conditions, produced high leaf and stem dry matter. The leaves were mostly shed at the beginning of winter and large quantities of mineral nutrients were returned to the soil. Stem incorporation into the soil after the harvesting of underground storage organs would also contribute to the return of the nutrients and hence the maintenance of soil fertility.