Residual Effects of Phosphorus Sources on Carrot Production in African Humid Tropics

Olubiyi David Ojo[1] and E.A. Akinrinde[2]

[1]NIHORT, PMB 5432, Idi Ishin, Ibadan, Nigeria.
[2]Department of Agronomy, University of Ibadan, Ibadan, Nigeria.

Productivity of carrot (*Dacus carota*) can be improved at reduced cost through combined use of low-cost Rock Phosphate (RP) phosphorus sources. Very little is known about RP residual release of phosphorus (P). It is probable that the differential performances exhibited by the RPs might be a function of their P residual properties after cropping. Based on these premises this study was carried out to evaluate the residual effects of P sources under continuous cropping for carrot production. The study was a completely randomized design with five replications. In order to monitor the residual effects of the P sources the experimental plots were cropped consecutively three times. Results from the study revealed that grain yield and Relative Agronomic Efficiency (RAE) decreased with continuous cropping for SSP but increased with continuous cropping for ORP and SRP till second cropping, thereafter there was a decrease. Averaged over the three continuous consecutive croppings, SRP and ORP were 66.3% and 70.8% as effective as SSP in increasing grain yield respectively. It was concluded therefore that ORP could be an alternative P source for carrot production under continuous cropping system in the humid tropics.