

Foliar Absorption and Distribution of Radioactive Phosphorus in Healthy and Root (Wilt) Diseased Coconut Palms

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Abstract

Radioactive ^{32}P was fed to the coconut leaves in the laboratory and palms in the field. Higher rates of ^{32}P absorption and accumulation were recorded in healthy palms than in diseased ones at early hours of experiment, but during later period the trend of ^{32}P accumulation was reversed. The ^{32}P activity in the stems of healthy palms was lower than that of diseased ones but a reverse pattern was noted in native phosphorus content. Similarly, the outer, middle, and first fully opened leaves of healthy palms did not differ much in phosphorus content, but in the case of diseased ones, wide variations were observed. The autoradiographs and ^{32}P countrigs indicated that P was more in the leaves and less in the roots of diseased palms as compared to those of healthy ones.

Discussions

Pethiyagoda : Have you any views on where the radioactive P is being exported to from the leaves of diseased palms ?

Dwivedi : In any type of palms, either healthy or diseased, radioactive-P from leaf will be transported to nuts, spathe, roots, and trunk.

Ramadasan : You were referring to the healthy palms in Kayangulam. Are they not apparently healthy only?

Dwivedi : Yes, they are all only apparently healthy palms. But there are no concrete physiological, biochemical, or morphological evidences to show that they are not completely healthy.