Phosphatase Activity in Soils. (S11-ranatunga203725-Poster)

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Abstract:

We investigated the relationships of phosphatase (acid, alkaline, and phosphodiesterase) enzyme activity with phosphorus (P) forms, and selected soil properties of eight highly weathered Alabama soils. Alkaline and phosphodiesterases significantly correlated with soil pH, cation exchange capacity, and electrical conductivity. No significant correlations were found between enzyme activities and available P (Mehlich III extractable). The available P content in these soils varied between 0.02-20.3 mg/Kg. Alkaline and phosphodiesterase activities also showed significant correlations with available metals (Ca, Mg, Al, and Zn) suggesting enzyme-metal interactions. No significant relationships were detected between acid phosphatase activity and available metals. Phosphorus fractionation indicated more labile P forms low or absent in these soils.

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