

## Effect of green manures on P solubilization and uptake from phosphate rocks

### ABSTRACT

The effect of fresh leaves of *Gliricidia sepium*, *Acacia mangium*, *Leucaena leucocephala* and *Senna siamea* on P availability and uptake from phosphate rocks from North Carolina (NCPR), Christmas Island (CIPR), China (CPR), Algeria (APR) and Tunisia (TPR) was studied. The  $^{32}\text{P}$  isotope dilution technique was used in a pot experiment with sweet corn. APR was the most reactive PR whilst CPR was the least reactive in the absence of green manures (GMs). GMs generally increased the solubility of the less reactive PRs and depressed that of the more reactive ones. This was believed to be through nutrient supply and release of P; and indirectly by decreasing or increasing P fixing capacity. The extent of the influence was observed to be dependent on GM quality, especially C:P ratio.

**Keyword:** Decomposition; Green manures; P availability; P fixation; Phosphate rock reactivity