

**NITROGEN AND PHOSPHATE FERTILIZATION IN ACID SULFATE  
SOILS OF THAILAND**

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**ABSTRACT**

These studies showed the importance of nitrogen and phosphorus fertilization in acid sulfate soils of Thailand. Laboratory and pot experiments revealed the nature of acid sulfate soils in which nitrogen and phosphorus are the key limiting nutrients for plant growth. Ammonification was retarded due to extremely low pH of the soil. No response of nitrogen was obtained when no phosphate was applied, and vice versa. Effect of nitrogen upon the growth of rice was higher than the effect of phosphorus for every soils studied except for Rangsit very acid soil in which effect of phosphorus was higher than nitrogen. Phosphorus sorption isotherm was compared between acid sulfate and non acid sulfate soils. The results showed that among the acid sulfate soils, P-sorption was highest in Rangsit very acid soil, while fixation was least in Rangsit soil. Among all soils, Bangkok soil, which is non acid sulfate soil had the least fixation.