

Exchangeable K was determined to be a reliable index for measuring the amount of available K under very intensive cropping conditions. Non-exchangeable K, measured by difference, was not reliable for estimating K release to the crops. **BCI**

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Rice harvest in the Mekong Delta.

References

- Brinkman, R., N.B. VE, T.K. Tinh, D.P. Hau, M.E.F. Mensvoort. 1985. Acid sulfate materials in the Western Mekong Delta, Viet Nam. Mission report VH10 project.
- De Datta, S.K. 1987. Principles and practices of rice production. Hohn Wiley & Sons, New York, 618 p.
- Ghloston, L.E. and C. Dale Hoover. 1948. The release of exchangeable and non-exchangeable K from several Mississippi and Lahabama soils upon continuous cropping. Soil Sci. Soc. Proc. 13: 116-121
- Kemmler, G. 1980. K deficiency in soils of the tropics as a constraint to food production. In priorities for alleviating soil-related constraints to food production in the tropics, pp. 253-276. International Rice Research Institute, Los Banos, Philippines.
- Mutscher, H. 1995. Measurement and assessment of soil K. International Potash Institute. Basel. Switzerland. p. 102
- Page, A.L., R.H. Miller, and D.R. Keeney. 1982. Method of soil analysis. Part 2 - Chemical and microbiological properties. A. Soc. Agro, Inc. and Soil Sci. Soc. Am, Inc. Madison, Wisconsin USA
- Ren, D.T., and N.M. Hoa. 1993 Response of NPK fertilizer in non-acid alluvial soils in the Mekong Delta. Report of the collaborative project between Soil Science Department and S.C.P.A., Aspach-le-Bas/France.
- Tributh, H. 1987. Development of K containing minerals during weathering and suitable methods for their determination. pp. 65-83. In: Methodology in K soil research. International Potash Institute, Bern, Switzerland.
- Uehara, G., M.S. Nishina and G.Y. Thuji. 1974. The composition of Mekong river silts and its possible role as a source of plant nutrients in the delta soils. Department of Agronomy and Soil Science, University of Hawaii, 1974.
- Xuan, V.T. and H.T. Hiep. 1970. In: Tap chi Cai tien Nong Nghiep nam 1970.

Brazil: Fertility Management for Sustainable Cropping on an Oxisol of the Central Amazon

Researchers established an experiment to determine depletion patterns of soil nutrients, along with aglime and fertilizer requirements, for continuous cultivation after slash and burn clearing. Yield responses were evaluated over an eight-year period and involving 17 crops (including rice, soybeans, cowpea, and corn).

In the absence of fertilizer and aglime, soil nutrient levels dropped, soils became more acidic, and percent aluminum (Al) saturation increased. Mean crop yields with aglime and fertilizer application based on soil tests were 4.1 t/ha/yr compared to 0.2 t/ha/yr for check plots. Total grain yields obtained during eight years of proper soil fertility management were 24 times greater than those under shifting cultivation practices. **BCI**

Source: Cravo, M.S. and T.J. Smyth. 1997. R. bras. Ci. Solo, Vicosa, 21: 607-616.

