

Adaptive Agricultural Practices and Land Use Cycles on Pyritic Sediments in South Kalimantan

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Abstract

この論文は国立情報学研究所の学術雑誌公開支援事業により電子化されました。 The reclamation of potential acid sulfate soils for agriculture involves the danger that pyritic minerals present in the soil will be oxidized and produce unfavorable conditions for plant growth. Pyritic minerals are oxidized when swamp is reclaimed by forest cutting, canal excavation, and destruction of the covering peat layer. In South Kalimantan, Banjarese people use an "adaptive" agricultural technique to cultivate rice and perennial crops on potential acid sulfate soils. Its characteristic features are as follows. (1) Drainage is kept to the minimum needed for the reclamation, so as to depress the oxidation of pyritic sediments. (2) The traditional method of swamp-land rice cultivation is employed. (3) The secondary Melaleuca forest is conserved by the shifting cultivation of rice cultivation with long-term planting and long-term fallowing periods. This paper presents details of the adaptive rice culture techniques and the cycle of land use in South Kalimantan. The chemical and geomorphic characters of the sediments will be presented in forthcoming papers.

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