

Conservation of the Rice Terraces of the Philippine Cordilleras Based on the Soil Environmental Factors.

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Rice terraces of the Philippine Cordilleras in northern Luzon have been damaged seriously. They need proper and efficient agricultural management. In slope failure area including rice terraces, reports said that the infiltration from paddy field surface strongly affected to the short -time ground water level changes. In that situation, the chance of land collapse would be higher when the water infiltration becomes larger. Therefore, in this study, the relationship between soil properties and vertical infiltration was examined. Cone-penetrometer test and infiltration test with ponded paddy was carried out at the site, and soil analysis (C,N and mineral) were at the laboratory. Results showed that both hardpan formation and clogging with organic matter (OM) were considered as factors that control infiltration. At the site, the rice terraces with no-hard pan stored more OM and exchangeable cations had been leached out. Although infiltration control has two patterns, hard pan formation is preferable from the perspective of soil fertility.

Keywords: rice terraces, hardpan, organic matter, Philippines