

劣化土壌における植物バイオマス量に人工マクロポア導入が与える影響 Artificial macropore installation effect on plant biomass amount at a degraded land.

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At ill-drained lands, heavy rain would cause erosion which enhances degradation process much faster. According to our previous study, artificial macropore successfully enhanced vertical infiltration and increased organic matter contents. However, there was a concern that infiltrated fresh soil water transported nutrient and oxygen at the same time, resulting decomposition of the organic matter. We installed artificial macropores to degraded clayey soils to evaluate how they affected vertical infiltration, organic matter contents and vegetation. Four repetitive plots were prepared for macropore, no macropore, macropore with nutrients and no macropore with nutrients treatment, respectively. Nutrients would be delivered to soil body by macropores, which would stimulate biological activity. After 6 month, results showed that total carbon was slightly larger than no macropore treatment. At the same, it could be said that macropore treatment would not negatively stimulate the decomposition of organic matter. Dry weight of plants was significantly larger in macropore treatment, which would be caused by better infiltration.

キーワード: マクロポア, 下方浸透, 炭素貯留

Keywords: Macropore, Infiltration, Carbon sequestration