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Community Structure of Arbuscular Mycorrhizal Fungi in Upo Wetland, Korea

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Arbuscular mycorrhizal fungi (AMF) are one of the most widespread symbionts globally. Owing to their enhanced nutrient absorption capacity, AMF significantly contribute to the survival of individual plants and the ecosystem functioning. Community structures of AMF are affected by many environmental factors. Inland wetlands have a different environment from common forest soils, therefore, plants inhabiting wetlands may have characteristic AMF communities. The purpose of this study was to compare the AMF communities in wetlands, among the species of host plants. We sampled the roots of 3 host plant species, *Phragmites communis*, *Miscanthus sacchariflorus*, and *Trisetum bifidum* with rhizospheres from 3 isolated areas in Upo wetland, Korea. We extracted DNA from AMF spores in rhizospheres and the roots of 3 plant species. We amplified 18S rDNA of AMF using AMF specific primer. As a result, we confirmed 9 species from 5 genera in AMF spores, and 5 species from 3 genera in plant roots. *Funneliformis caledonium* was the most dominant species in field soils, on the other hand, *Diversispora aurantia* was the most dominant species in plant roots. We confirmed that species diversity and abundance of AMF communities were different among host plant species. These results showed that the AMF community had specific to host plants in the inland wetland.