



## **Effects of mycorrhizal fungi on nitrogen isotopes of plants under different water conditions**

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Nitrogen is the limiting nutrient for plant growth in most ecosystems. Widely distributed mycorrhizal fungi may alleviate the limitation. Nitrogen isotope measurements could provide insights into changing interactions among plants, mycorrhizal fungi, and soil processes across environmental gradients. Previous studies have observed the effects of mycorrhizal fungi on nitrogen uptake by plants, but few studies have addressed how the effects of mycorrhizal fungi vary across environmental conditions. In this study, we did a pot experiment with corn. Five water conditions (80%, 70%, 60%, 45% and 30% of the maximum water holding capacity of the soil) were set. Foliar nitrogen isotopes were found to have significant differences across water conditions, and they decrease with the increasing water content when *Glomus mosseae* is not inoculated whereas an opposite trend was observed when *Glomus mosseae* is inoculated. It indicates that mycorrhizal fungi would change the effects of water on nitrogen uptake by plants.