BARROW, JERRY[1], BOBBY MCCASLIN,[2] CURTIS MONGER[2], & INEZ FEDER[2]. [1] USDA-ARS, Jornada Experimental Range, Las Cruces, NM 88003. [2] Department of Agronomy and Horticulture, New Mexico State University, Las Cruces NM 88003. - Mycorrhizal similarities of septate fungal root endophytes in native plant species of arid ecosystems

Levels of fungal colonization in the roots of fourwing saltbush *Atriplex canescens* and other dominant native grass and shrub species from an arid ecosystem have been studied. It was shown that colonization by septate fungal colonization was 2.7 times greater in fourwing saltbush than colonization by VAM fungi. Historically studies have focused on the role of VAM fungi and how they affect the plant. The septate fungi bear several similarities to other types of mycorrhizae. They formed extensive non-destructive interfaces, primarily by vegetative hyphae, within the root cortex. They enhance nutrient uptake at low concentrations and restrict uptake at high concentrations. They also protect against high salt concentrations. Some are competent decomposers and appear to enhance seedling vigor and establishment by supplying nutrients from external organic matter. They modify soil by binding sand particles to the root surface. We propose that septate fungal endophytes have a major function in ecosystem processes.