

Publication**Rapid nitrogen transfer in the Sorghum bicolor : glomus mosseae arbuscular mycorrhizal symbiosis****JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 2270316**Author(s)** Koegel, Sally; Boller, Thomas; Lehmann, Moritz F; Wiemken, Andres; Courty, Pierre-Emmanuel**Author(s) at UniBasel** [Lehmann, Moritz](#) ; [Boller, Thomas](#) ; [Courty, Pierre-Emmanuel](#) ; [Wiemken, Andres M.](#) ; [Koegel, Sally](#) ;**Year** 2013**Title** Rapid nitrogen transfer in the Sorghum bicolor : glomus mosseae arbuscular mycorrhizal symbiosis**Journal** Plant signaling & behavior**Volume** 8**Number** 8**Pages / Article-Number** 25229 1-3

We have recently identified two genes coding for ammonium transporters (AMT) in Sorghum bicolor that were induced in roots colonized by arbuscular mycorrhizal (AM) fungi. To improve our understanding of the dynamics of ammonium transport in this symbiosis, we studied the transfer of soil-ammonium-derived (¹⁵N) to S. bicolor plants via the Glomus mosseae fungal mycelium in compartmented microcosms. The (¹⁵NH₄⁺)-containing hyphal compartment was inaccessible to the roots in the plant compartment. (¹⁵N) label concentrations significantly increased in plant roots and leaves already 48 h after exposure of the AM fungus to the (¹⁵NH₄⁺) substrate, attesting an efficient symbiotic N transfer between the symbiotic partners and further highlighting that AM symbiosis represents an important component of plant nitrogen nutrition.

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