Arbuscular mycorrhiza (AM) is a symbiotic interaction between vascular plants and arbuscular mycorrhizal fungi from phylum Glomeromycota. AM symbiosis is considered as a nonspecific interaction, because AM fungi are able to colonize roots of all plant species which are hosts for this type of symbiosis, nevertheless certain specific interactions exist between the partners. The specificity can be evident on the level of the formation of mycorrhiza, which means that different species of plants can vary in the composition of fungal community in their roots or AM fungi can differ in an ability of colonization and sporulation depending on host plant species. The specificity can also manifest as different functionality of the symbiosis in dependence on the particular partners affecting the mycorrhizal response of the host plants. All of these specific interactions can have an impact on the coexistence and diversity of plants in communities.