

Potential tool to overlook the intervallic expansion of am fungi

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Arbuscular mycorrhizal (AM) fungi are extensively studied group of symbiotic fungi belongs to phylum *Glomeromycota*. It has the ability to influence plant diversity and productivity. The genetic disparity within AM fungal species is due to genetic variation among the different isolates. The cram of AM fungal diversity in ecological studies, particularly in identification of different AM fungi linked with the various host plants. Thus, the trustworthy identification of AM fungi over a periodic time scale requires a tool for fast and reliable genotyping of this important group of fungi. In this regard, microsatellite markers play a quite significant role to resolve this problem. Microsatellites are short tendom sequences repeat (SSR) of nucleotides, found in almost all the prokaryotes and eukaryotes including fungal genome. The microsatellites are now recognized as well-liked molecular markers for any population dynamic studies because they are highly prone to higher mutation rates compared to other regions of the genomes. It has gained its popularity due to polymorphic nature and broad application. When a particular mycorrhizal fungal population is introduced in the particular agricultural field or geological region, it has to compete with the various soil microbiota present in the same ecological niche. The fungus first tries to establish them into the introduced environmental condition and after establishment start to make the propagules to build their population in the introduced area. The microsatellite markers are strain specific for each stain of fungi. The genomic material of each fungus is always different from others in terms of number of nucleotide bases. Thus, they can be easily track into the introduced environment to find out the path of building block in the introduced ecological niche.

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