BÖLÜM 5

BİYOKONTROL ETMENİ OLAN VE BİTKİ BÜYÜMESİNİ DESTEKLEYEN TRİCHODERMA SP.'NİN TOPRAĞIN MİKROÇEVRESİ ÜZERİNDEKİ ETKİLERİ

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GİRİŞ

Toprak mikroorganizmaları, kendi aralarında ve aynı toprakta yetiştirilen bitkilerle rekabet halinde olup, biyojeokimyasal ve besin döngülerinde, organik madde oluşumu ve ayrışmasında, toprak yapısında önemli bir rol oynar (1). Tarımsal ürünlerin gelişimi ve kalitesi, rizosfer mikroorganizmalarının göreceli bolluğundan da etkilenebilir (2) Hastalık varlığı, bitki patojenlerini destekleyen toprak mikroekolojisindeki değişikliklerle yakından ilişkilidir (3). Toprak mikroorganizmaları, özellikle mantarlar ve bakteriler, besin döngüsünde, toprak ekosisteminin korunmasında ve tarımsal ekosistemlerin genel işleyişinde önemli bir rol oynarlar. Toprak organik maddesinin ayrışmasına aktif olarak katılırlar ve bitkinin besin gereksinimlerine göre besin döngüsüne katkıda bulunurlar (4). Bu nedenle, bitki büyümesini teşvik eden fungi ve bakteriler, bitki büyümesini artıran çeşitli işlevler sergiler (5). Bu işlevler, fitohormonların sentezini, organik maddelerin minerallere dönüştürülmesini, toprakta bulunan bitkilerce erişilemeyen besin maddelerinin çözünmesini, indüklenen sistemik direncin uyarılmasını ve bitkilerin hem biyotik hem de abiyotik streslere karşı korunmasını kapsar (2).

Trichoderma türleri, toprak mikrobiyal topluluklarını etkileme, bitki büyümesini artırma ve düşük girdili tarım sistemlerinde ekosistem işleyişini iyileştirme yetenekleri nedeniyle toprağın ve verimlilik yönetiminin sürdürülebilirliğinde

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