

## 잔디 Large patch의 생물학적 방제를 위한 길항 미생물의 선발과 항균력 검정

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### Antimicrobial test of Antagonistic Microbes for Biological Control of Large patch of Zoysiagrass

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#### ABSTRACT

A large patch disease caused by *Rhizoctonia solani* AG2-2(IV) is a serious problem in turfgrass sites including golf courses and sports fields in Korea. The objectives of this study were to isolate some antagonistic microorganisms and to explain some involving mechanisms. Initially single colonies which were formed from the filtrates of various soil samples were obtained from LB culture and then co-cultured with *R.solani* AG2-2(IV) on PDA plate to explore some antagonistic microbes against for large patch fungus, *Rhizoctonia solani* AG2-2(IV). Out of total 82 antagonistic isolates which commonly had inhibition effect on *Rhizoctonia solani* AG2-2(IV) mycelial growth, one candidate (YPIN22) showed the most antifungal effect, which was confirmed by the longest distance from the edge of bacterial colony to the mycelial edge of the *Rhizoctonia solani* AG2-2(IV) in the dual culture. A succeeding investigation was to test any potential effect of the isolate on growth inhibition of 5 other turfgrass pathogens including *R. solani solani* AG2-2(III B), *P. ultimum*, *C. caudatum*, *C. lunata*, and *F.oxysporum*. Preliminary result indicated that the new isolate YPIN22 was also found to have antagonistic potential on the growth inhibition of those turfgrass pathogenic fungi, which was explained by inhibition zones ranging from 8 to 22mm. A further explanation of some characteristics of the isolate YPIN22 will be discussed in detail.