

# Turkish Journal of Botany

Turkish Journal

of

Botany

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**Influence of Some Plant Extracts and Microbioagents on Some Physiological Traits of Faba Bean Infected with Botrytis fabae**

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**Abstract:** Laboratory and greenhouse experiments were conducted to assess the efficacy of *Eucalyptus citriodora* Hook., *Ipomoea carnea* Jacq., *Cuminum cyminum* L., *Allium sativum* L. and *Hyoscyamus muticus* L. leaf extracts, and of *Streptomyces exfoliatus* (Waksman & Curtis) Waksman & Henrici (S) and *Trichoderma harzianum* Rifai (T) in controlling *Botrytis fabae*, which causes chocolate spot disease in the faba bean. Laboratory studies supported the use of leaf extracts of *E. citriodora* (Ex. 1) and *I. carnea* (Ex. 2) in preference to other extracts for controlling the mycelial growth of *B. fabae*. In addition, the mixture S + T was the best of inhibiting spore germination followed by Ex. 1 + Ex. 2 after 8 h of testing, whereas, Ex. 1 + Ex. 2 followed by S + T produced the lowest percentage of germination after 16 h. Moreover, Ex. 2 was more efficient than Ex. 1. However, after 4 days, the inhibiting order of the mycelial growth of *B. fabae* was S+T > Ex. 1 + Ex. 2 > T > Ex. 2 > Ex. 1 = S. Greenhouse experiments showed the highest activities of peroxidase, catalase and pectinase in plants infected with *B. fabae*. These activities were markedly reduced in healthy plants and changed widely under different biocontrol treatments. Applying biocontrol agents to infected plants increased mineral levels (N, P, K and Mg), and both Chl biosynthesis and photosynthetic activity, which in turn led to the accumulation of metabolites (carbohydrates and proteins). This accumulation helped the plant to resist the detrimental effects of *B. fabae* on growth, productivity and yield. In this context, the efficiency of the test biocontrol agents was in the order: T + S > Ex. 1 + Ex. 2 > T > Ex. 2 > S > Ex. 1.

**Key Words:** Catalase, growth, pectinase, peroxidase, photosynthesis, plant extracts, productivity, *Streptomyces*, *Trichoderma*, *Vicia faba*, yield

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Turk. J. Bot., **28**, (2004), 519-528.

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