

Crenate Broomrape Control in Pea by Foliar Application of Benzothiadiazole (BTH)

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Parasitic plants are becoming a severe constraint on major agricultural crops in Mediterranean and tropical countries and the efficacy of available means of control is minimal. The problem is particularly severe in field pea, which is very sensitive to standard glyphosate treatments and in which little resistance has been identified. Systemic Acquired Resistance (SAR) has proven to be effective as a tool for controlling plant pathogens, including fungi, bacteria and viruses, but only recently has this phenomenon started to be evaluated as a control strategy against parasitic weeds. The present studies were conducted to evaluate the potential of SAR activation for broomrape control in pea. The effect of salicylic acid, glutathione and benzothiadiazole (BTH) in three different application methods was studied. Foliar application of 0.6–1.0 mM BTH, in the form of Bion 50 (50% a.i.), reduced broomrape infection under controlled conditions (growth chamber and greenhouse) by limiting the success in attachment and retarding the development of established tubercles.

KEY WORDS: Parasitic plants; broomrape; *Orobanche crenata*; SAR; BTH; induced resistance; pea; *Pisum sativum*.

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