

## RELATIONSHIP BETWEEN INCIDENCE AND SEVERITY OF ALTERNARIA BLIGHT DISEASE ON DIFFERENT SPECIES OF *BRASSICA* IN GONBAD REGION \*

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### Abstract

Alternaria blight disease, caused by *Alternaria* spp., damages severely to oil-producing species of *Brassica* spp. all over the world and reduces the quality and quantity of the oil. To determine the relationships between incidence (*I*) and severity (*S*) of Brassica blight disease, and making a model for predicting *S* based on *I* values, this research was performed on two genotypes of mustard (j-98-102/51-5 and Bard-1), two genotypes of turnip (Rainbow and Candle), three genotypes of canola (Hayola401, Shiralee and RGS003) and genotype Select 4 (fourth generation of rapeseed-mustard cross) in agricultural research station of Gonbad, Iran as a completely randomized block design in three replications. Severity of disease in the specified time intervals was measured until the appearance of withdrawal symptoms. Results showed that the Allometric model (natural logarithm transformation of *I* and *S*) with about 66 % of  $R^2$  had the best fitting for the collected data and therefore it was the best model to describe *I-S* relationships in Alternaria blight of *Brassica* spp. Based on the regression slope of Ln transformed values of *I* and *S*, the genotypes were classified in 3 groups. The first group includes Bard-1 genotype with high slope (1.48). Candle, Select4 and RGS003 were placed in the second group with moderate slope (1.25) and the third group was included genotypes Rainbow, Shiralee and J-98 with the least slope (1.15).

**Keywords:** Canola, Indian mustard, Turnip, Alternaria blight, *I-S* relationships.

See Persian text for figures and tables (Pages ۵۱-۶۰).

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