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Field Evaluation of Fusarium Head Blight in Durum Wheat Caused by Fusarium culmorum in Algeria

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Abstract : In Algeria, several works carried out in recent years have shown the importance of fusarium head blight in durum wheat. Indeed, this disease is caused by a complex of Fusarium genus pathogens. The research carried out reports that F. culmorum is the main species infecting cereals. These informations motivated our interest in the field evaluation of the behavior of some durum wheat genotypes (parental varieties and lines) with regard to fusarium head blight, mainly caused by four F. culmorum isolates. Our research work focused on following the evolution of symptom development throughout the grain filling, after artificial inoculation of ears by Fusarium isolates in order to establish a first image on the differences in genotype behavior to fusarium haed blight. Field disease assessment criteria are: disease assessment using a grading scale, thousand grain weight measurement and AUDPC. The results obtained revealed that the varieties and lines resulting from crosses had a quite different level of sensitivity to F. culmorum species and no genotype showed complete resistance in our culture conditions. Among the material tested, some lines showed higher resistance than their parents. The results also show a slight behavioral variability also linked to the aggressiveness of the Fusarium species studied in this work. Our results open very important research perspectives on fusarium head blight, in particular the search for toxins produced by Fusarium species.

Keywords : fusarium head blight, durum wheat, Fusarium culmorum, field disease assessment criteria, Algeria
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