

***Fusarium* SPECIES THAT CAUSE ROOT AND CROWN ROT OF WHEAT IN KERMANSHAH PROVINCE ***

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Abstract

In order to identify fungi involving root and crown rot of wheat and to determine their distribution and frequency, wheat fields in different regions of Kermanshah province were sampled at seedling, tillering and heading stages during 2004-9. For isolation of fungi, some samples of infected roots, subcrown internode, crown and foot were surface sterilized and then placed on potato dextrose agar containing streptomycin sulfate. Pathogenicity test was performed by mixing of pasteurized soil with inoculum (colonized wheat seeds with an isolate) under greenhouse condition. Disease severity (D.S.) was evaluated by scoring from 1 to 5 (1= no symptoms, 5= extensive necrosis of the crown and stem base resulting in plant death). Besides other genera, 241 isolates of *Fusarium* spp. were isolated. Also the results revealed that *Fusarium* spp. exist in most parts of the province and their D.S. are from 1 to 2.9. Among *Fusarium* species *Fusarium culmorum* and *F. pseudograminearum* had the highest D.S., *F. acuminatum*, *F. avenaceum*, *F. crookwellense*, *F. proliferatum* and *F. udum* had medium D.S. and that of *F. nygamai*, *F. reticulatum* and *F. merismoides* was the least amount. The species that could not cause disease were *F. equiseti*, *F. lateritium*, *F. moniliforme*, *F. oxysporum*, *F. sambucinum*, *F. semitectum*, *F. solani* and *F. trisectum*. This is the first report of pathogenicity of *F. udum*, *F. nygamai* and *F. merismoides* on wheat root in the world.

Keywords: *Fusarium udum*, *Fusarium nygama*, *Fusarium merismoides*, Wheat, Disease, Kermanshah, Iran

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