Iran. J. Plant Path., Vol. 46, No. 4, 2010: 89-91

MORPHOLOGY AND HOST RANGE OF *Uromyces viciae – fabae*, THE CAUSAL AGENT OF FABA RUST*

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(Received : 7.4.2010; Accepted : 10.11.2010)

Abstract

In this investigation faba rust *Uromyces viciae-fabae* was studied for its host range and spore morphology. Three *Viciae faba* cultivars (Barekat, Saraziry ,Shakh Bozi) and four *Pisum sativum* cultivars (Green Agro-Atrilo- Dorango- Mr. Big) comonly grown in Iran were inoculated with urediniospores produced from a single pustule isolate collected from Shushtar and increased on faba bean in the greenhouse. Disease symptoms were recorded 12 days after inoculation. Infection type of the entries, recorded according to Stakman's method, indicated that all the broad bean and pea cultivars were susceptible to the rust isolate. *Lens culinaris* and *Vicia* spp. and *Lathyrus* spp., which have been reported as hosts of this rust, were inoculated by three methods of dusting, brushing and mist spray. However, no rust pustules were produced on any of these plants. Morpholgical studies on photomicrographs and scanning electron micrographs showed that urediniospores have fine echinulations and teliospores are smooth. Morpholgical studies of urediniospores of this isolate from broad bean and pea and also urediniospores of herbarium specimen of this rust on lentils revealed no significant differences for the parameters of spore length, width, number of germ pores and their positions. Also, teliospores of this isolate from the two hosts of faba bean and pea were identical in morphological features. However, statistical analysis showd that teliospores of faba rust isolate differ from those of lens isolate in parameters of spore length, apex length and pedicel length. Germinated teliospores produced four basidiospores on sterigmata. Based on the results of host range and morphological studies, and in accordance with the results of studies by Emeran *et al*. (2005 and 2008), the rust isolate in this investigation is suggested to be *Uromyces viciae-fabae* f sp. *vicia faba*.

Keywords: Rust, Faba, Pea, Teliospore, Urediniospore, Basidiospore, Sterigma

See Persian text for figures and tables (Pages ۳۰۹-۳۱۷).

*: Part of PhD. Thesis of the First Author, Submitted to College of Agric., Chamran University Ahwaz.

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