

OCCURRENCE OF SAINFOIN ASCOCHYTA BLIGHT IN ISFAHAN PROVINCE, IRAN

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INTERODUCTION

Sainfoin (*Onobrychis viciifolia*) is a deep-rooted perennial forage crop arising from a branching root crown, of Fabaceae family. Sainfoin is a cool-season non-bloat causing legume which can be used as hay, or grazed in pastures alone or in a grass-legume mix. *Ascochyta fabae* Speg. causes blight disease on sainfoin leaves and stems that eventually destroys the whole plant in severe cases. *Ascochyta* blight has been reported previously on sainfoin in Ardabil, Iran.

MATERIALS AND METHODS

During the autumn of 2013, a disease with typical blight symptoms was observed in sainfoin fields in Freidan, Isfahan province, Iran. The infected plants were collected and carried to laboratory. Initial symptoms on leaves were more or less circular, slightly sunken with a definite margin usually dark brown with a lighter centre in which pycnidia developed. Stem lesions were elongated, sunken and darker in color than leaf lesions with scattered pycnidia. To satisfy Koch's postulates, a conidial suspension (10^6 conidia/ml) of the fungus was sprayed onto leaves and stems of sainfoin seedlings. Both inoculated seedlings and control seedlings (inoculated with sterile water) were covered with plastic bags for 72 h in a greenhouse at 25 °C.

RESULTS AND DISCUSSION

Microscopic studies revealed that small black pycnidia of fungus produced hyaline, straight, slightly truncate at the base and rounded at the apex, 1-3 septate (rarely 3 septate), 12 to 17 μm (average 14.2 μm) \times 4 to 5 μm (average 4.5 μm). The fungus was isolated on potato dextrose agar from diseased leaves or stems. Colonies of fungus on PDA were white to ash-white with sparse to abundant pycnidia. Pycnidia were subglabrous, brown, with usually one papillate ostiole. The fungus was identified as *Ascochyta fabae* Speg. based on morphological characteristics of pycnidia and conidia (Ellis & Ellis, 1985). Based on disease symptoms and fungus characteristics in pathogenicity test, the disease was identified as *Ascochyta* blight. This is the first report of *Ascochyta* blight on sainfoin in Isfahan province, Iran.

Key words: *Ascochyta fabae*, *Onobrychis viciifolia*, Sainfoin

REFERENCES

Ellis, MB, Ellis JP, 1985. Microfungi on Land Plants: An identification handbook. Croom Helm Ltd. London, UK, 818pp.