



PRESENT STATUS OF ALTERNARIA BLIGHT OF MUSTARD IN TIKAMGARH DISTRICT OF BUNDELKHAND, MADHYA PRADESH

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ABSTRACTS: Mustard is one of the important oilseed crops in India. The oil of the rapeseed mustard is mainly used in human diet. The crop also has important place in industrial uses such as for manufacturing soap, paints, varnishes, hair oil, lubricants, textile auxiliaries and various other products. *Alternaria* blight is an important disease of mustard caused by *Alternaria brassicae* (Berk.) Sacc., all the continents of the world, in India it causes up to 47% yield losses. It is the major disease in mustard growing region of Madhya Pradesh and causing heavy losses. The disease attacks all areal parts of the plants including pods resulting in severe defoliation and blighted appearance of the plant. A survey of the disease was under taken covering mustard growing blocks of Tikamgarh district. The disease has assumed a status of major disease of mustard in Tikamgarh, Bundelkhand region of Madhya Pradesh. The disease was observed at all the locations and the disease intensity ranged from 28.1 to 36.6 per cent. All the areal plant parts were found affected. No morphological or cultural differences were observed in isolate obtained from different plant parts.

Key words: Survey, *Alternaria* blight, mustard, disease intensity

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Mustard (*Brassica juncea* (L.) Czern & Coss) is the third important oilseed crop in the world after soybean (*Glycine max* L.) and palm (*Elaeis guineensis* Jacq.) oil. It is grown in subtropical and tropical countries in the world comprise eight cultivated crops of tribe Brassiceae within the family cruciferae (Brassicaceae). In India, it is the second most important edible oilseed after groundnut sharing 27.8% in the India's oilseed economy. The oil of the rapeseed mustard is mainly used in human diet. The crop also has important place in industrial uses such as for manufacturing soap, paints, varnishes, hair oil, lubricants, textile auxiliaries and various other products. The estimated area, production and productivity of rapeseed-mustard in the world was 30.74 million ha, 59.93 million tones and 1,950 kg/ha. In India the estimated area, production and productivity of rapeseed-mustard is 5.77 million ha, 6.59 million tones and 1,142kg/ha, respectively during the 2009-10 (Anonymous, 2012). Globally, India account for 21.7% and 10.7% of the total acreage and production (USDA 2010). In Madhya Pradesh mustard crop is cultivated in an area about 0.66 million ha with the production of 0.79 million tones and productivity of about 1192 kg/ha. The productivity of mustard in Tikamgarh district is very low 561 kg/ha as compared to state average productivity.

Though the area of the crop has increased 0.20 million ha (Anonymous, 2012). The losses in oilseed crop due to biotic stresses is about 49.9% out of which diseases causes severe yield reaction at different growth stages. *Alternaria* blight and white rust are two major diseases severely affecting Indian mustard crop during cool and humid weather causing 47% losses in yield (Singh et al., 2009).

MATERIALS AND METHODS

Experimental as well as commercial fields of mustard at various locations (blocks) in Tikamgarh district of Madhya Pradesh were surveyed during 2013-14 cropping seasons in the months of January to examine the occurrence of *Alternaria* leaf blight. Infected leaves showing typical lesions were collected and observed under the light microscope for the presence of conidia of the pathogen. Mustard fields were selected randomly on road side after a gap of about 4-5 km.

In all 24 fields at 6 blocks spread over the districts mentioned above were critically surveyed to assess the incidence and intensity of *Alternaria* blight. In each field, fifty random plants distributed across the field were studied. The disease incidence and intensity was recorded and the representative samples were collected and dried in between blotters in press and preserved.