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STUDIES ON DISEASE INCIDENCE AND INTENSITY OF *ALTERNARIA* BLIGHT OF LINSEED IN TIKAMGARH AND NIMARI DISTRICTS OF MADHYA PRADESH

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ABSTRACT: The linseed (*Linum usitissimum* L.) is an important *Rabi* oilseed crop next to rapeseed and mustard and it is grown predominantly under rain fed (63%) and utera (25%) conditions in India. Linseed crop suffers from several diseases in India. Significant yield losses occur in linseed i.e., *Alternaria* blight (*Alternaria lini*), Powdery mildew (*Oidium lini*) and rust. Linseed leaf spot and bud blight incited by *Alternaria lini* is one of the serious disease causing 28-60% yield losses. Rowing survey was carried out during 2019-2020 in *Rabi* season. The results revealed that incidence and intensity of the disease was prevalent in all the areas of Tikamgarh and Niwari districts. In Tikamgarh and Niwari districts, overall *Alternaria* blight incidence ranged between 33.65 to 43.24 and 36.84 to 39.42 per cent respectively. Disease incidence was more in Palera block (42.96%) where as highest disease intensity was observed in Niwari block (35.59%). Over all disease incidence (38.67%) and intensity (32.24%) was recorded in both districts.

Keywords: *Alternaria blight, incidence, intensity, occurrence, linseed*

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INTRODUCTION

The linseed (*Linum usitissimum* L.) is an important *Rabi* oilseed crop next to rapeseed and mustard in India. It is traditionally cultivated for oil meant for edible as well as industrial purposes. Almost every part of this plant is commercially utilized either direct or after processing. On small scale, the seed and its oil are directly used for human consumption as flax seed breads, bagels and other baked and fired food staffs. It is Industrial oil and mostly 80 % of oil is used for paints, varnishes, wide range of coating oils, linoleum, pad and printing inks, leather and soap industries. Recent advances in medical research have found linseed as best herbal source of omega - 3 and omega - 6 fatty acids. There are different varieties of linseed cultivated for fibre and oil purpose. This crop has many industrial and medicinal values in addition to its direct food value. It is one of the most important oilseed crops of temperate and subtropical region of the world (Singh e*t al.*, 2014).

India is an important linseed growing country in the world ranking first in acreage occupying an area of about 2.92 lakh ha (172.71 thousand ha) with an annual production of 1.43 lakh tones (99.07 thousand MT and productivity of 489 kg ha^{-1} (Anonymous, 2016). Madhya Pradesh has largest growing area 1.12 lakh ha and production 0.57 lakh tones with 503 kg ha^{-1} productivity (Anonymous 2016). In Tikamgarh district the linseed growing area is 0.70 thousand ha and production of 0.24 thousand MT with 340 kg ha^{-1} productivity (Anonymous, 2018).

The linseed crop is attacked by number of disease i.e*. Fusarium wilt*, *Alternaria* blight, Collar rot, Powdery mildew. Among them the *Alternaria* (Blight) is an important disease incited by *Alternaria lini*. It causes yield losses by 20 to 60 % (Chauhan and Shrivastava 1975). Similarly, Singh *et al*., (2014) observed that maximum yield loss (58.44%) was recorded in Neelam cultivar of linseed. Keeping the above points in view, the present study will be laid out on the present status of the *Alternaria* blight of linseed in Bundelkhand agroclimatic zone of Madhya Pradesh.

MATERIAL AND METHODS

A random roving survey was made in four blocks of Tikamgarh district and two blocks of Niwari district under Bundelkhand Agro-climatic condition of Madhya