



DISTRIBUTION OF ALTERNARIA BLIGHT OF TOMATO IN TIKAMGARH AND NIMARI DISTRICT, BUNDELKHAND REGION OF MADHYA PRADESH

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ABSTRACT: Tomato (*Solanum lycopersicum*) is an important vegetable crop grown in throughout the world. In India, it is grown in a wide range of climate across states of Andhra Pradesh, Odisha, Karnataka, Maharashtra, West Bengal, Bihar, Gujarat, Uttar Pradesh, Madhya Pradesh and Chhattisgarh Tomatoes have more nutritive value and miscellaneous uses. Among several fungal diseases of tomato, early blight caused by *Alternaria solani* is the most severe and destructive disease. Rowing survey was carried out during 2018-19 in Rabi season. The results revealed that incidence and intensity of the disease was prevalent in all the areas of surveyed blocks of district Tikamgarh and Niwari. In Tikamgarh and Niwari districts, overall early blight incidence was ranged between 29.5 to 60 and 37 to 37.5 per cent. Disease incidence and intensity was more in Tikamgarh block (60% and 51%) followed by block Baldevgarh (46.5% and 37 %) and less incidence and intensity was observed in block Palera (29.5% and 26.5).

Key words: Survey, *Alternaria blight*, Incidence and Intensity

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Tomato (*Solanum lycopersicum*) is one of the most remunerative and widely grown vegetables in the world. It is a nightshade, small annual or short lived crop belonging to the family Solanaceae and native of "South America". Tomato holds second rank next to potato in world acreage although it is first among processing crops. Tomato is grown for its edible fruits, which can be consumed either fresh or in the form of various processed products such as paste, powder, ketchup, sauce, soup and canned whole fruits. Tomato is also known for high medicinal value and nutritional values. The pulp and juice is digestible, promoter of gastric secretion and blood purifier.

Tomato cultivation has become more popular since mid-nineteenth century because of its varied climatic adaptability and high nutritive value. It is cultivated in an area of 4.78 million hectares all over the world with production of 177.04 million tonnes and an average yield of 19.57 tonnes ha⁻¹ (FAO Stat 2016).

In India, it is grown in a wide range of climate across states of Andhra Pradesh, Odisha, Karnataka, Maharashtra, West Bengal, Bihar, Gujarat, Uttar Pradesh, Madhya Pradesh and Chhattisgarh and accounting a total production of 19.69 million tonnes from an area of 0.81 million hectares with an average

productivity of 24.4 tonnes ha⁻¹ during 2016-17 (Anon., 2017 a).

In Madhya Pradesh it is cultivated throughout the year. It occupies an area of 0.1 million hectares with the production of 3.10 million tonnes and productivity of 31.02 tonnes ha⁻¹ during 2016-17 (Anon., 2017 b). Tikamgarh district is situated under Bundelkhand zone of Madhya Pradesh. The annual production was 0.025 million tonnes from 0.002 million hectares with an average productivity 14.50 tonnes ha⁻¹ (Anon., 2017 c).

Tomato crop is vulnerable to infect by bacterial, viral, nematode and fungal diseases. Among the early blight was reported to be the most important disease, causing 50 to 80 per cent losses in fruit yield of Tomato (Mathur and Shekhawat, 1986). Every one per cent increase in disease intensity could reduce yield by 1.36 per cent, and complete crop failure occurred when the disease is severe (Sherf and MacNab, 1986). Saha and Das (2012) reported losses in yield to an extent of 0.75 to 0.77 tons ha⁻¹ with 1 percent increase in disease severity.

MATERIALS 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 Pradesh and observed for severity of *Alternaria*