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SHORT COMMUNICATION

Status of *Alternaria* blight of watermelon under Rajasthan conditions

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Watermelon [*Citrullus lanatus* (Thunb) Mansf.] is one of the most widely cultivated crop in the world. China is the leading country in production of watermelon followed by Turkey, United States, Iran and Republic of Korea (Huh *et al.*, 2008). This crop is also known as *Tarbooj*, *Kalinda* and *Mateera* in India. It accounts for 6.8% of the world area devoted to vegetable production (Goreta *et al.*, 2005). Farrukhabadi, Moradabadi, Faizabadi of Uttar Pradesh and Mateera of Rajasthan are an important landraces of watermelon grown by farmers using their own saved seeds. It has sufficient variability for high productivity, quality, appearance traits such as shape, size, colour and is able to withstand damage from biotic and abiotic factors (Wehner *et al.*, 2001). It is subjected to attack of a number of fungal, bacterial and viral diseases, which inflict heavy damage on yield of the crop every year. Among the fungal diseases, *Alternaria* blight is an important disease in Rajasthan and other watermelon growing states of India. This disease needs regular monitoring for evolving effective control measures. Keeping the above facts in mind, a survey was conducted to record the status of *Alternaria* blight in four districts of Rajasthan at farmer's fields and the results are presented in Table 1 and Fig. 1.

A survey was conducted on watermelon fields in four districts of Rajasthan *viz.*, Bikaner, Hanumangarh, Jaipur and Sriganganagar during April- May 2010 and the incidence and severity of *Alternaria* blight were recorded. Observations were recorded from farmer's fields located at different places under natural conditions. Naturally infested watermelon plants showing characteristic symptoms of *Alternaria* blight caused by *Alternaria* spp. were examined from each field. For assessing disease incidence and severity, three fields from each village/locality were randomly selected. In each district, three villages/localities were surveyed. The diseased and healthy plants taken from 2 m x 2 m area of three random fields in every village were counted and disease incidence was calculated on the basis of per cent plant infected. Disease severity was also recorded on the basis of per cent leaf area affected (Singh *et al.* 2006).

The incidence and severity of *Alternaria* blight of watermelon recorded during survey programme is presented in Table 1. The data revealed that *Alternaria* blight of watermelon was present to the varying extents in watermelon fields of above four districts of Rajasthan in which two localities such as Pakka Saharana (Hanumangarh) and Piperan (Sriganganagar) were found free from the incidence of the disease. The disease incidence and disease severity ranged from 13.50- 26.50% and 3.0 to 18.50%, respectively. Highest disease incidence (26.50%) and disease severity (18.50%) were observed at Pathology Block (Beechwal, Bikaner) followed by Khejroli (Chomu, Jaipur), 25.50% and 12.0%, respectively. The disease incidence (13.50%) and disease severity (3.0%) were found lowest at locality Khara (Bikaner). The district wise average disease severity was observed highest (10.92%) in Bikaner district, while minimum disease severity (5.58%) was found in Hanumangarh followed by Sriganganagar (5.67%) (Fig. 1).

Variation in different disease parameters such as disease incidence and disease severity from location to location has been reported in case of many pathogen-host interactions (Chauhan *et al.*, 2002; Singh *et al.*, 2003). Basir (2005) also recorded variation in the status of angular leaf spot in french bean.

Other factors contributing to variation in disease incidence and disease severity in various villages/localities of Rajasthan may probably be attributed to differences in local atmospheric conditions. This include deviation in relative humidity, temperature and rainfall pattern among the abiotic factors and monoculturing, soil types and use of susceptible varieties among biotic and edaphic factors. The disease may attain an alarming proposition and may cause serious losses in watermelon growing areas if not taken care well in time. Therefore, it is imperative to evolve an effective management strategy to combat this disease, before the disease is blown out of proportion.

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Table 1. Disease incidence and severity of *Alternaria* blight of watermelon in Rajasthan during 2010.

S. No.	Name of village/ locality	Name of district	Disease incidence (%)	Disease severity (%)
1.	Khejroli (Chomu)	Jaipur	*25.50	*12.0
2.	Sonarawali (Chomu)	Jaipur	16.50	8.75
3.	Blaken (Chomu)	Jaipur	17.5	3.6
			Mean=19.83	8.11
4.	Khara	Bikaner	13.50	3.0
5.	Beechwal (Pathology Block)	Bikaner	26.5	18.50
6.	Jaisalsar, Dungargarh	Bikaner	19.25	11.25
			Mean=19.75	10.92
7.	Pakka Saharana	Hanumangarh	0.0	0.0
8.	Lilawali	Hanumangarh	18.50	7.75
9.	Pili Banga	Hanumangarh	17.25	9.0
			Mean=11.92	5.58
10.	Piperan	Sriganganagar	0.0	0.0
11.	Morjhandakhari	Sriganganagar	18.75	7.50
12.	Suratgarh	Sriganganagar	16.33	9.5
			Mean=11.69	5.67

*Data presented in average of the observations recorded in three fields at each village/locality.

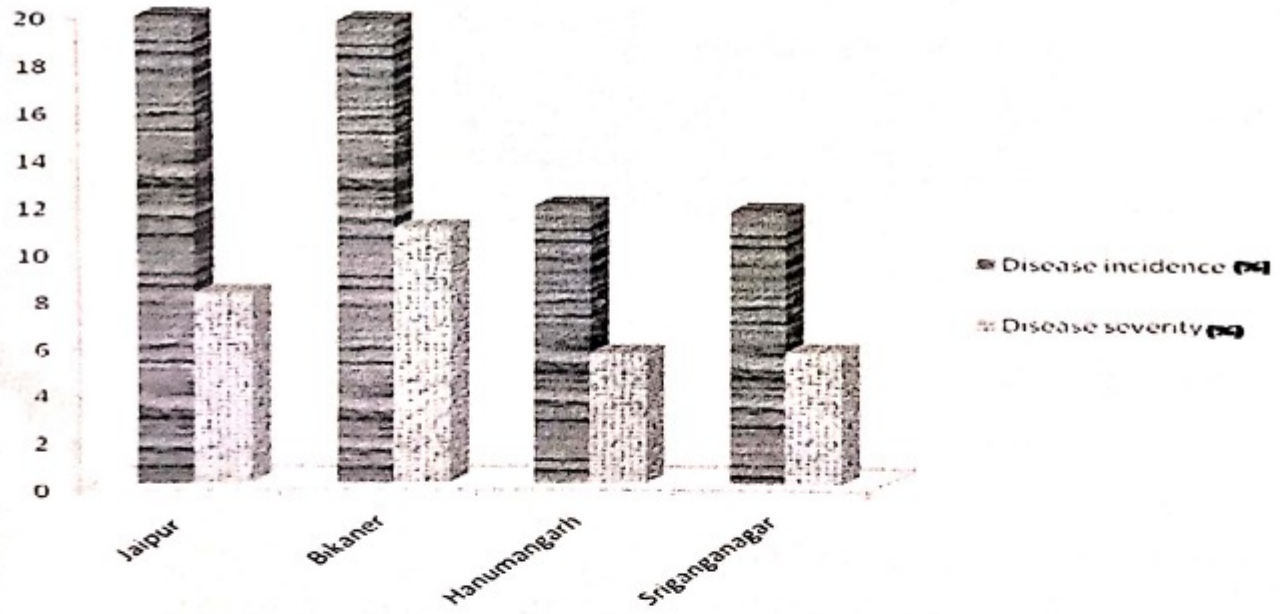

Fig.1 Status of disease incidence and severity of *Alternaria* blight

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