

Survey of Chickpea Blight Incidence in Different Districts of Andhra Pradesh

Key words : Chickpea disease, *Colletotrichum* blight, Survey

Chickpea (*Cicer arietenum* L.) is one of the important pulse crops in India and other semi arid regions of the world. Dry root rot and *Fusarium* wilt are the major diseases of Chickpea prevailing in Andhra Pradesh. In addition to these diseases, *Colletotrichum* blight was observed in Andhra Pradesh from Kurnool, Prakasam and Anantapur districts in severe form during *Rabi* 2009 and 2010 due to heavy unusual rains which resulted more yield losses (Anonymous, 2010).

Colletotrichum blight was reported to be caused by *Colletotrichum dematium* (Persoon) Grove. and *Colletotrichum capsici* (Sydow) Butler & Bisby. *Colletotrichum* blight is seed and soil borne disease. It is severe in the early sown September crop when the temperatures are high (25 - 30°C) and normally does not occur in post-rainy-season crop, except under unusual rains (Nene *et al.*, 1996).

Keeping in view the importance of disease, to know the occurrence and intensity of *Colletotrichum* blight survey was conducted in different chickpea growing districts of Andhra Pradesh.

Roving survey was conducted in major Chickpea growing mandals of Kurnool, Anantapur, Prakasam, Kadapa and Nellore districts of Andhra Pradesh during *rabi* 2011-12 to determine the per cent disease incidence of *Colletotrichum* blight of Chickpea.

Survey was conducted in five major mandals in Kurnool, Anantapur, Prakasam districts, three mandals in Kadapa district, one mandal in Nellore district. In each mandal 20 fields were selected for recording the disease incidence based on larger area under Chickpea. In each field 5 locations of each 5m² area were selected randomly for recording disease incidence on plants. The per cent disease incidence was calculated by using the formula given below.

$$\text{Percent disease incidence} = \frac{\text{Number of Infected Plants}}{\text{Total Number of Plants}} \times 100$$

An intensive roving survey was conducted in major Chickpea growing mandals of Kurnool, Anantapur, Prakasam, Kadapa and Nellore districts to record the incidence of the disease and results on per cent disease incidence are presented in Table 1. The results revealed that, the *Colletotrichum* blight incidence ranged from 0 to 90 per cent. The highest disease incidence was recorded in Nellore district (76.5 %), followed by Prakasam district (41.8 %). The lowest disease incidence was recorded in Anantapur district (6.3 %) followed by Kurnool district (7.2 %).

Out of the 19 mandals surveyed, maximum disease incidence was recorded in Kondapuram (76.5 %) mandal in Nellore district followed by Giddalur (52.9 %) mandal of Prakasam district. The disease incidence was minimum in Guntakal (5.3 %) mandal of Anantapur district followed by Banaganapalli (5.7 %) mandal of Kurnool district.

In Kurnool district, highest per cent disease incidence was recorded in Kovelakuntla (8.1 %) whereas lowest was recorded in Banaganapalli (5.7 %). In Anantapur district highest per cent disease incidence was recorded in Vajrakarur (6.8 %) whereas lowest was recorded in Guntakal (5.7 %).

In Prakasam district, highest per cent disease incidence was recorded in Giddalur (52.9 %) whereas lowest was recorded in Bestavaripet (36.7 %). In Kadapa district, highest per cent disease incidence was recorded in Peddamudium (31.7 %), whereas lowest was recorded in Simhadripuram (12 %).

Mishra *et al.* (1974) conducted a periodical survey on diseases of pulse crops and observed a severe disease incidence on Chickpea caused by *Colletotrichum dematium* at Jabalpur and also at

Table 1. Survey on the incidence of *Colletotrichum blight* in major Chickpea growing districts of Andhra Pradesh.

S.No	District	Mandal	Disease Incidence (%)	Mean Disease Incidence (%)	Range (%)
1.	Kurnool	Banaganapalli	5.7	7.2	0-10
		Kovelakuntla	8.1		
		Nandyal	7.3		
		Orvakal	7.0		
		Panyam	7.9		
2.	Anantapur	Guntakal	5.3	6.3	0-8
		Putlur	6.7		
		Tadipatri	6.0		
		Uravakonda	6.6		
		Vajrakarur	6.8		
3.	Prakasam	Bestavaripet	36.7	41.8	1-85
		Giddaluru	52.9		
		Kambham	38.4		
		Komarolu	38.7		
4.	Kadapa	Markapur	42.3	18.8	1-35
		Jammalmadugu	12.6		
		Peddamudium	31.7		
5.	Nellore	Simhadripuram	12.0	76.5	1-90
		Kondapuram	76.5		

Indore (Madhya Pradesh) during October 1974 on affected local gram variety Kabuli.

Varaprasad (2000) conducted survey on *Colletotrichum* blight disease during *rabi* 1998-99 in and around Gulbarga district of Karnataka and observed that disease incidence ranged from 0-91 per cent with maximum disease incidence of 67.84 per cent.

Survey conducted during *rabi* 2011-12 revealed that the *Colletotrichum* blight disease incidence ranged from 0-90 per cent with maximum disease incidence of 76.5 per cent in Nellore district followed by Prakasam district (41.8 %). Minimum per cent disease incidence was recorded in Anantapur district (6.3 %) followed by Kurnool district (7.2%).

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