



RESEARCH ARTICLE

# Effect of date on sowing and correlation of weather parameters on the incidence of anthracnose of greengram

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## ABSTRACT

Greengram one of the important pulse crops of India, is being affected by several foliar diseases among which anthracnose is the most important. The crop sown on 4<sup>th</sup> June recorded significantly less disease severity, which was enhanced in subsequent sowing dates because the weather conditions were very much congenial that is moderate temperature coupled with higher humidity. Correlation of weather parameters indicated that maximum and minimum temperatures had significantly negative correlation with disease. However, correlation coefficient with relative humidity and rainfall were positive but non-significant.

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## INTRODUCTION

Greengram [*Vigna radiata* (L.) Wilczek] is an ancient and well known leguminous crop of Asia. It is quite versatile crop grown for seeds, green manure and forage and it is also considered as “Golden bean”. Greengram is one of the important pulse crops, of India. Among the major diseases of greengram, anthracnose caused by *Colletotrichum truncatum* (Schw.) Andrus and Moore is a major disease. The disease severity varying from 18.2 to 86.57 per cent have been reported in northern Karnataka (Laxman,2006). The yield losses caused by anthracnose is proportional to the disease severity and varies remarkably depending on the stage of infection, genotypes and environmental conditions. To overcome some of these problems, the present investigations were undertaken to study the effect of sowing dates and weather factors on severity of the disease to understand their practical utility in integrated disease management strategy of anthracnose.

## MATERIALS AND METHODS

A field experiment was conducted during *Kharif* 2007 and 2008 at ARS, Bidar to assess the progress of anthracnose

at different time interval in different dates of sowing. A replicated field trial was carried out to explore the possibility of disease escape.

The experiment was conducted in Randomized Block Design with four replications. The first date of sowing was done with highly susceptible variety Chinamung on 4<sup>th</sup> June and subsequent sowings were done at weekly interval. Totally six different dates of sowings were undertaken. The severity of anthracnose was recorded at 40 DAS on five randomly selected plants using a disease rating scale 0 to 9 (Mayee and Datar,1986) Further, these ratings were converted to per cent disease index (PDI). The meteorological data for the experimental period *viz.*, maximum and minimum temperatures, rainfall and relative humidity (morning and evening) were recorded during the crop growth period for each sowing. The correlation between anthracnose severity and weather parameters was made. Further grain yield was recorded.

## RESULTS AND DISCUSSION

A field experiment was conducted during *Kharif* season of 2007 and 2008 with six different sowing dates starting from