



RESEARCH ARTICLE

# Seasonal incidence of mungbean leaf curl disease caused by peanut bud necrosis virus in Allahabad (U.P.)

■ V. MANOJ KUMAR\* AND P. WILLIAMS\*\*

\* Department of Plant Pathology, Agricultural College, (A.N.G. R.A.U.), BAPATLA (A.P.) INDIA

\*\*Sam Higginbottom Institute of Agriculture, Technology and Sciences (Formerly A.A.I.-D.U.), Naini, ALLAHABAD (U.P.) INDIA

## ARTICLE INFO

**Received** : 23.07.2012  
**Revised** : 20.08.2012  
**Accepted** : 30.09.2012

## Key Words :

Mungbean leaf curl,  
Seasonal incidence,  
Natural occurrence,  
Peanut bud necrosis virus,  
*Thrips palmi* Karny

## ABSTRACT

Experiments were conducted during *Kharif*-2006, summer -2007 and *Kharif*-2007 at Central Agricultural Farm, AAI-DU, Allahabad and observations were recorded on leaf curl disease incidence, *Thrips palmi* Karny population at fortnightly interval and were correlated with weather parameters during crop period in standard weeks of respective years. During *Kharif*-2006, the disease incidence had a significant positive correlation with thrips population, ( $r=0.967$ ), maximum temperature ( $r=0.964$ ), maximum relative humidity ( $r=0.927$ ), whereas minimum temperature showed a negative significant correlation ( $r=-0.907$ ). During summer-2007, disease incidence had a significant positive correlation with thrips population ( $r=0.948$ ) and maximum temperature (0.970), whereas minimum humidity had negative significant correlation ( $r=-0.894$ ). Disease incidence showed a significant positive correlation with thrips population, ( $r=0.974$ ), maximum temperature ( $r=0.900$ ) and maximum humidity ( $r=0.939$ ), negative significant correlation was observed between minimum temperature ( $r=-0.970$ ) and disease incidence during *Kharif*-2007. Investigation has revealed that mungbean pulse crop grown during *Kharif* in Allahabad district was prone to leaf curl during 2<sup>nd</sup> fortnight of July. Prophylactic spraying of systemic insecticides to control *Thrips palmi* at 30-40 days after sowing can reduce the leaf curl disease and similar practice can reduce the leaf curl in summer crop.

**How to view point the article** : Kumar, V. Manoj and Williams, P. (2012). Seasonal incidence of mungbean leaf curl disease caused by peanut bud necrosis virus in Allahabad (U.P.). *Intern at. J. Plant Protec.*, 5(2) : 420-423.

\*Corresponding author:  
[valaparla\\_mvk@rediffmail.com](mailto:valaparla_mvk@rediffmail.com)

## INTRODUCTION

In India, acreage, production and coverage under pulses have increased which emphasizes the significance of pulses in Indian agriculture. Among the pulse growing states of India, Uttar Pradesh occupies the prominent place in pulse production with area of 2.72 million hectares, which makes 10.06 per cent of all India pulse's area with a production of 2 million tones which is 13.72 per cent to all India production. (Agricultural Statistics at Glance, 2011). Among the pulses cultivated in Uttar Pradesh viz., pigeonpea, mungbean, lentil, cowpea, etc., mungbean is an important pulse crop in state

and is prone to several biotic stresses. Mungbean leaf curl is one of the important diseases of mungbean causing considerable loss in the past up to 40 per cent in 33 districts of Uttar Pradesh as per the survey conducted by Nene and Singh (1972). The disease already assumed alarming level in southern states like Andhra Pradesh (Prasada Rao, 2003) and was reported to be transmitted by *Thrips palmi* Karny in Andhra Pradesh (Sreekanth, 2002). As the disease is prevalent in Uttar Pradesh and causing considerable loss to mungbean, investigation was done to study the seasonal incidence of leaf curl so as to devise strategy for economical control measures.