



Natural occurrence of *Tobacco streak virus* (ilar virus) on Bt cotton hybrids

G.P. JAGTAP* AND UTPAL DEY

Department of Plant Pathology, Marathwada Agricultural University, PARBHANI (M.S.) INDIA
(Email : drgpjagtap@gmail.com)

Abstract : Cotton is an important fibre crop. Cotton streak disease was newly recognized in India, identified to be caused by the Tobacco streak virus (TSV). The virus was recognized on 26 coded Bt entries at Cotton Research Station, Mehboob Bagh, Parbhani. Incidence of TSV was noted for the first time in Maharashtra. Disease observations were recorded from July-06 to November-06 at an interval of 15 days. Data revealed that viral disease incidence was recorded at increasing rate up to the end of September 06 and further incidence was noted in decline rate from October to November 2006. Maximum disease incidence was recorded in the month of September with in the range of 36.59 to 83.88 per cent. Lowest incidence was noticed on entry 6108 and highest on entry 6126.

Key Words : *Tobacco streak virus*, Cotton

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INTRODUCTION

Cotton (*Gossypium* spp.) is the most extensively cultivated commercial crop and the most important of all fibre crops of the world. Cotton belongs to the genus *Gossypium* of the family Malvaceae and has seven different species, but the cotton varieties grown in India belong to four distinct spp. namely, *G. arboreum*, *G. herbaceum*, *G. hirsutum* and *G. barbadense*.

Cotton is sub-tropical crop, but its cultivation is carried on successfully in many parts of the world away from such tropics. Heavy humid or cloudy weather and poor light or sunshine are harmful as they reduce the yield and promote the attack of pests and disease and lower the quality of the produce. Cotton is grown on variety of soil, black cotton soil in Maharashtra and Madhya Pradesh is common. Sowing season varies considerably from one part of country to another.

Cotton crop suffers from major diseases which are economically very important viz., cotton wilt (*Fusarium oxysporium*, *Fusarium varinfectum*), anthracnose

(*Colletotrichum indicum*), grey mildew (*Ramularia areola*), black arm or bacterial blight (*Xanthomonas malvacearum*). Now-a-days one of the viral diseases, tobacco streak virus (TSV) is also cited in southern Maharashtra region. Reddy *et al.* (2002) first reported the occurrence of tobacco streak virus on peanut in India.

MATERIALS AND METHODS

Per cent incidence of cotton streak virus on different Bt cotton hybrids under natural condition at Cotton Research Station, Mehboob Bagh, Parbhani were recorded during the year 2006- 2007. Gross plot size 5.4 x 6.0 (six rows with 10 dibbles) and net plot size 3.6 x 4.8 (four rows with 8 dibbles) were used. 90 x 60 cm spacing was followed. Fertilizer dose 100:50:50 NPK was applied. Date of sowing was 1.07.2006.

RESULTS AND DISCUSSION

The results of the present study as well as relevant discussions have been presented under following sub heads:

* Author for correspondence