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Effect of dates of sowing on first symptom appearance and incidence of sterility mosaic in pigeonpea [*Cajanus cajan* (L) Millsp.]

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The experiment was conducted in pots (30 cm in diameter.) which were filled with field soil. Ten selfed seeds of each of 11 genotypes of pigeonpea were sown in three pots at different dates *viz.*, 15th September 2003, 25th November 2003 and 16th January 2004 to know the effect of different dates of sowing on the first symptom appearance and incidence of disease. Pigeonpea genotypes susceptible to sterility mosaic , exhibited symptoms of disease irrespective of three different dates of sowing. The highly resistant genotypes like ICP 7035 and ICP 8862 were free from sterility mosaic at all different dates of sowing. The incidence of disease in all genotypes sown in September was significantly higher as compared to incidence of disease exhibited by genotypes sown in November and January. The period required for first symptom appearance was significantly shorter in September sowing crop as compared to crop grown in November and January.

Key words: Pigeonpea, Sterility mosaic

INTRODUCTION

Sterility mosaic is considered to be one of the major constraints for low productivity of pigeonpea in India. The disease is known to occur in major pigeonpea growing areas of India (Kannaiyan *et al*.,1984) and yield losses has been observed up to 95 per cent. (Reddy and Nene, 1981). The disease is characterized by proliferation, mosaic symptoms, cessation of reproductive growth and a reduction in the size of the leaflets (Kandaswamy and Ramakrishnan, 1960). Symptom of the disease mainly depends on the time of infection. Infection in susceptible genotype at an early stage of crop growth (<30 to 45-day-old plants) results in the expression of characteristic disease symptoms in 10-15 days and almost complete cessation of flowering, but leaf symptoms become masked as plants grow and later infection in susceptible cultivars (>50 to 60 day-old plants) results in slightly delayed symptom development and then only mild mosaic symptoms on only a few branches or parts of branches and such plants show reduced flowering (20-50 %). However, after ratooning (severe pruning), new growth from such plants show severe mosaic and complete sterility symptom (Reddy and Nene, 1981).The present study was conducted to know the effect of different dates of sowing on the first symptoms appearance and incidence of disease.

MATERIALS AND METHODS

The present study was conducted in the Department & Mycology and Plant Pathology, Institute of Agrilcultural Sciences, B.H.U.,Varanasi during *kharif* season of 2003-2004. The experiment was conducted in pots. Pots (30 cm in diameter.) were filled with field soil. Ten selfed seeds of each of 11 genotypes of pigeonpea were sown in three pots at different dates *viz*., 15th September 2003, 25th November 2003 and 16th January 2004. The pots sown with susceptible genotype, ICP 8863 at different dates served as control. The pots were kept near the infector hedge in the field for natural infection. The plants were regularly monitored to see the first symptom appearance and incidence of disease. The per cent disease incidence (PDI) was calculated adopting the following formula :

$$\text{Per cent disease incidence} = \frac{\text{Number of infected plants}}{\text{Total number of plants}} \times 100$$

Weekly meteorological data regarding the maximum and minimum temperatures, relative humidity, rainfall and wind velocity were recorded from meteorological observatory of the Institute of Agricultural Sciences, Banaras Hindu University, Varanasi.

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