



RESEARCH ARTICLE

Survey and surveillance of pigeonpea wilt in Marathwada region

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ABSTRACT

To assess the severity of the problem, survey for the wilt disease was undertaken in *Kharif* 2009-10. The information collected revealed that incidence of wilt ranged from 1 to 22 per cent with mean incidence of 5.09 per cent. Sole crop of pigeonpea expressed more incidence than the intercrop with sorghum, soybean or cotton. Survey also showed that farmers had tendency to use the saved seed for next year sowing rather than purchasing fresh, treated seeds of recommended variety. Only 40.46 per cent farmers used certified seeds of varieties viz., BSMR-736, BSMR-853 and BDN-708, thereby indicating great scope for seed replacement with processed, treated seeds of recommended varieties of the region.

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INTRODUCTION

Pigeonpea [*Cajanus cajan* (L.) Mills.], a pulse crop of Indian origin is a major source of protein in world's vegetarian diet. In India South East Asia and in remaining world, it is consumed as "Dal", "Varan" or "Sambhar" and is an important item in the vegetarian menu. Pigeonpea is grown in Kenya, Uganda, Malawi in eastern Africa, Dominican Republic and Puerto Rico in Central America. In Asia it is grown in India and South East Asia. Major area of the world under pigeonpea is concentrated in India which accounts for the 90 (%) of the world hectareage.

Major cause of low productivity is the losses due to diseases. Among diseases, wilt and sterility mosaic diseases are important. Recent surveys have indicated that major losses in the pigeonpea are due to wilt which is caused by *Fusarium udum* Butler Losses varying from 0.2 to 100 per cent have been estimated in India (Gade, 2002). Kannaiyan *et al.* (1984) recorded maximum mean losses to the tune of 22 per cent from Maharashtra.

The disease is known in India with description of wilt of pigeonpea by Butler (1906). Though the disease goes unnoticed in early stages, the symptoms of yellowing and drying of leaves and finally death of few branches or of entire

plant are the conspicuous symptoms manifested during flowering or grain development. If wilted plants are uprooted and longitudinally split, a clear vascular browning in tap root extending to upper stem is seen. Infection of the plants in early stage leads to infection of roots, stem cortex and reaching up to vascular bundles where the pathogen multiplies and blocks water and nutrient flow to upper region which leads to yellowing, drying and finally death of the plant. In order to make in depth study of wilt in pigeonpea the present studies were undertaken.

MATERIALS AND METHODS

A roving survey on wilt incidence of pigeonpea was undertaken in villages of Aurangabad, Beed, Jalna, Hingoli, Latur, Nanded, Parbhani and Osmanabad districts during October, November and December, 2009. Wilt (%) incidence was noted/plot/location viz., the information was collected, tabulated, analyzed.

The per cent disease incidence of wilt disease was calculated by the using formula :

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