

Histopathological changes in papaya due to papaya ring spot virus isolate in terai region of Eastern Uttar Pradesh

Ravindra Kumar Pandey

Received November 18, 2017 and Accepted February 22, 2018

ABSTRACT : Papaya Ring Spot Virus induces various histopathological changes in *Carica papaya* L. The morphological symptoms induced are ringspot, distortion and mottling symptoms on foliage, stunting in stem, fragile roots and concentric ring and deteriorated fruit. The anatomical studies of 90 days old symptomatic leaf, stem and root sample revealed extensive deformation of parenchyma tissues in leaf, poor differentiation of vascular tissue without disintegration, reduced size of xylem cells in roots. The root tissues also showed increased lignifications and reduced protoxylem. Hyperplasia in cells externally visible as ringspots was observed. Hypertrophy in cells due to poor differentiation of secondary tissues caused weak and fragile stem and roots in host. The disease was very widespread in the study region causing 71-86% yield losses.

Key Words : *Carica papaya* L., Histopathological changes, ring spot, distortion and mottling symptoms.