COMPARATIVE HISTOPATHOGENESIS OF CERTAIN LEGUMINOUS CROPS INFECTED WITH ROTYLENCHULUS RENIFORMIS

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Abstract

Cellular responses of soybean, pea, cowpea, common bean and broad bean to *Rotylenchulus reniformis* infection differed greatly according to host type. Cell hypertrophy, syncytia, granulated cytoplasm and cell wall thickening were the most remarkable alterations induced by the nematode. Although the pericycle of all hosts was the most responsive tissue to infection by the nematode, cortical cells of soybean and broad bean occasionally became hypertrophied. Also endodermal cells may or may not take part in syncytial formation. In broad bean syncytia were formed completely from pericycle cells, while in soybean, pea, cowpea and common bean endodermal cells were involved in syncytia. Cell wall thickness was observed in hypertrophied pericycle cells of soybean. Cytoplasm granulation and vacuolation were commonly noticed in altered cells, particularly of cowpea, common bean and broad bean.