

ABSTRACT

Investigations of a bacterial leaf spot of cucumber (*Cucumis sativus* L.) in Trinidad revealed that the causal agent is *Xanthomonas cucurbitae* (Bryan) Dowson. Details of the morphological and biochemical characteristics of the pathogen are reported.

The pathogen attacks the leaves of cucumber where it colonizes the interveinal areas. The bacteria occupy the intercellular spaces of the spongy and palisade mesophyll, but do not enter the cells. Their presence results in the collapse and disintegration of these tissues. Bacteria were sometimes observed in the xylem vessels but no disintegration of xylem tissue was observed, suggesting that this tissue may serve only as a means of transport for the bacteria.

The pathogen is seed-borne but not soil-borne.

Although pumpkin (*Cucurbita maxima*, Duch) and watermelon (*Citrullus vulgaris*, Shard.) are also grown, cucumber appears to be the only member of the family Cucurbitaceae that is attacked in Trinidad.

Investigations also revealed that *X. cucurbitae* appears to cause no severe damage to cucumber and as a result control by chemical sprays may not be economically justifiable. As the

pathogen is seed-borne, seed-treatment is recommended. Mercuric chloride 0.01%, streptomycin sulphate 0.04% and 10% Clorox (5.25% sodium hypochlorite) have all been found to significantly reduce seed infection.

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