

ABSTRACT

An account is given of *Carica papaya*, its origin, distribution, taxonomy and uses, in addition to the diseases of the stem and fruit.

The etiology of stem canker disease, observed, to date, only at the Texaco Food Crops Farm, Trinidad was investigated. The causal agent was shown to be a bacterium belonging to the genus *Erwinia* in the 'amylovora' group. The pathogen enters the host only through wounds, causing water-soaked spots on the petioles and stems, the latter especially in the area of the leaf axils, which later develop into cankers that girdle the stem and cause breakage in windy conditions. Diseased plants develop 'pencil-point' symptoms, in which there is a small crown of leaves, following the withering and abscission of the lower leaves. The roots of infected trees, even in advanced stages of the disease, remain healthy and the disease was shown not to be seed borne.

The biochemical, physiological and morphological properties of the bacterium are described. The bacterium was found to be a Gram-negative organism which produced no fluorescent pigment, was oxidase negative, produced acid from glucose aerobically and anaerobically, fermented lactose, produced H_2S and reduced nitrates to nitrites. The pathogen has not been reported before, and on the basis of the above characteristics a new species of *Erwinia*, is proposed. The bacterium was not pathogenic on a number of cultivated plants and weeds growing in or adjacent to diseased papaya fields. The spread of bacterial stem canker

