

## Abstract

Onion blight was first recorded in Barbados in 1971 and it is characterized by the rapid necrosis and die-back of onion leaves. A bacterium isolated from lesions induced the formation of water-soaked lesions on onion leaves within three days after inoculation. The bacterium was identified as *Xanthomonas campestris* on the basis of fatty acid analysis and other biochemical tests. The bacterium also grew on the semi-selective media SX, D5 and SM and its host range includes sugar cane and *Dieffenbachia*. Onion blight was enhanced when plants were inoculated with *Xanthomonas* followed by *Erwinia herbicola* but it was controlled when *E. herbicola* preceded *Xanthomonas*. Attempts to control the disease over the past 15-20 years have relied almost exclusively on the copper-based bactericides. These bactericides offer little control because of a high frequency of resistance to copper in the pathogen population. Copper-resistance in the pathogen is a transmissible trait. The pathogen is however more sensitive to bactericides containing zinc as a constituent. DNA analysis of the pathogen revealed the presence of a plasmid estimated at 200 Kb in size. The present study is the first report of the causal agent of onion blight in Barbados.