

ABSTRACT

Bacterial spot of pepper and tomato, caused by *Xanthomonas campestris* pv. *vesicatoria* was severe and widespread in Barbados during the wet and dry seasons of 1988-1989. The bacterium was isolated from field soils, diseased plants and seeds of commercial pepper and tomato cultivars. The size of the soil-borne population of *X. campestris* pv. *vesicatoria* was generally similar from one period to the next and seeds of 6 of 25 cultivars carried the bacterium. When the bacterium was tested for pathogenicity races 1-3 of *X. campestris* pv. *vesicatoria* were detected. Moreover 82, 58, and 51 percent of the strains of *X. campestris* pv. *vesicatoria* from soil, pepper and tomato respectively, were race 1 and these were 2.3 to 25 times more abundant than races 2 and 3. Strains from seeds were also commonly race 1 or non-pathogenic and strains from tomato were significantly more pathogenic than those from pepper towards the pepper cultivar Early Calwonder. Of the strains tested for sensitivity to bactericides, 57, 60 and 23 percent were resistant to copper, zinc and streptomycin respectively. DNA lysates of 8 of 13 copper-resistant strains and 3 of 6 copper-sensitive strains contained 2-4 bands of plasmid estimated at 250-190 kilobase.