Bacterial Leaf and Peduncle Soft Rot Caused by *Pectobacterium carotovorum* on Tulips in Konya, Turkey

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The etiology of a new soft rot disease of tulips, causing leaf spots, leaf blight, neck and bulb rot in Konya, Turkey, was investigated. This disease occurred in tulip fields grown for seed bulbs of various varieties in 2002. Bacteria were isolated from the lesions on leaf, bud neck and bulbs and the causal bacterium was identified as *Pectobacterium carotovorum* on the basis of biochemical and physiological tests. Cells were Gram-negative, rod-shaped, fermentative, potato-rot positive. Colonies were capable of growth at 37°C. On nutrient agar the colonies were creamy-white. The isolates were non-fluorescent on King's B medium, positive for acetoin production, gelatin liquefaction, acid-production-from-lactose, and catalase; and negative for gas from glucose, reducing substances from sucrose, and phosphatase activity. Additionally, tests for egg yolk (lecithin), sensitivity to erythromycin, and pigmentation on yeast dextrose carbonate agar were negative; growth on 5% sodium chloride was positive. All the bacterial isolates obtained from the leaf, bud neck and bulbs produced the original symptoms following inoculation to the susceptible tulip variety 'Gander'. The rate of damage caused by this bacterium was evaluated on several tulip varieties under field and storage conditions. Gander was the most susceptible variety in the field whereas 'Salmon Parrot' exhibited the highest rate of bulb rot in storage. Disease severity was lower in 2003 than 2002.

KEY WORDS: Bacterial soft rot; *Pectobacterium carotovorum*; tulip.

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