

Abstract

Bacterial canker of tomato, caused by *Clavibacter michiganensis* subspecies *michiganensis* (*Cmm*), occurs worldwide and affects both yield and fruit quality due to spotting. Fruit spotting was studied by spraying flowers once or twice with *Cmm* at 10⁸ cfu/ml beginning at 5 days pre- to 4 days post-anthesis. In flowers sprayed once, maximum incidence of spotted fruit (15–42%) and maximum severity of spotting (5.1–6.8 spots/diseased fruit) occurred when flowers were sprayed 2 days post-anthesis. In flowers sprayed twice, maximum incidence (78%) and maximum severity (15 spots/diseased fruit) occurred when flowers were sprayed 2 and 5 days post-anthesis. *Cmm* strains characterized as virulent or avirulent based on a stem inoculation assay were applied to the epidermis of fruits <22 mm in diameter with a paintbrush. Incidence of spotting was 67 to 100% for virulent strains and 75 to 80% for avirulent strains. Severity was 61–110 and 20–36 spots/diseased fruit, respectively. Defining factors affecting fruit spot development may help formulate strategies to control spotting.