SUMMARY

Effect of resistance inducers on the response of habanero pepper (Capsicum chinense Jacq.) against Fusarium oxysporum Schltdl

Vascular wilt caused by *F. oxysporum* is one of the diseases that affects habanero peppers, causing great losses during the production of this crop. The use of biofungicides is today an alternative to suppress diseases in habanero peppers, because the plants can guide their defense mechanisms against *F. oxysporum*, such as in the vascular tissue, by limiting the colonization of the xylem, reducing the symptoms of disease, wilting in the root tissue by restricting the entry of pathogens into the roots and in the leaf tissue by attempting to reduce pathogen-induced necrosis. The objective of this work was to evaluate the effect of different resistance inducers on the response of habanero pepper to infection caused by *F. oxysporum*; To do this, first, the identity of the fungus was corroborated by observing its morphology, then, 30-35-day-old habanero pepper plants were sprayed with one of the following compounds: 5 mM ethephon, 1 mM salicylic acid (SA) and two concentrations of chitosan (0.5 and 1 mg. mL^{-1}). Twenty-four hours later, the plants were inoculated with two disks of *F. oxysporum* mycelium, 5 days old. The symptomatology of the plants was evaluated between 10 and 20 days post-inoculation (dpi); a severity scale was designed to calculate the area under the disease progress curve (AUCPE). The results obtained showed that SA and chitosan (0.5 and 1 mg. mL^{-1}) induced tolerance in habanero pepper plants against F. oxysporum, since the plants did not die or the level of wilting was lower. Our observations can provide information on these phytohormones for the control of fungal diseases in pepper plants or different crops.

Keywords: *Fusarium oxysporum*, plant growth regulators, chitosan and habanero pepper