

INCREASED ATMOSPHERIC CARBON DIOXIDE CONCENTRATION REDUCES THE SEVERITY OF *Ceratocystis* WILT, RUST AND LEAF-SPOT IN *Eucalyptus* PLANTLETS

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The rising atmospheric carbon dioxide concentrations projected for the coming decades will result in changes in host-pathogen interactions. The objective of this study was to evaluate the effects of high air CO₂ concentration on the severity of eucalypt rust (*Puccinia psidii*), *Ceratocystis* wilt (*Ceratocystis fimbriata*) and leaf-spot (*Cylindrocladium candelabrum*) and on eucalypt plantlets growth. The experiments for each pathogen were performed in open-top chambers and closed chambers. Two clones with different levels of rust resistance were studied in the experiments with rust and *Ceratocystis* wilt: a *Eucalyptus urophylla* x *E. camaldulensis* hybrid (VM 01) and an *E. urophylla* (clone MN 463). For leaf-spot, seedling of *E. urophylla* were tested. The experiments were repeated twice. The plantlets were cultivated under ambient (395 ppm, approximately) and high CO₂ concentrations (ranging from 520 to 1,147 ppm) for at least 30 days before the inoculation of the pathogens. Increased atmospheric CO₂ concentrations resulted in a decrease in diseases severity. Plant growth was stimulated and carbon content of the plants was greater at higher CO₂ concentrations. In this study, increased concentrations of atmospheric CO₂ favourably affected eucalypt growth and reduced diseases severity. This effect could potentially compensate for negative impacts from other environmental variables that are affected by climate change and should be considered in the development of adaptation strategies to address climate change.

RESÚMENES DE PÓSTERES

Etiología y diagnóstico (P-001 a P-053)

Interacciones planta microorganismo (P-054 a P-100)

Epidemiología (P-101 a P-131)

Control de enfermedades de plantas (P-132 a P-230)