Below is the abstract for symposium nr 620, abstract nr 136:

Title:

**Evaluation of the tolerance of seven citrus rootstocks to
Phytophthora gummosis under saline conditions**

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The combination of biotic and abiotic stresses in semiarid regions results in severe losses in citrus production. Neglecting the interactions that may occur between these factors would lead to the over or underprediction of the performance of rootstock species under natural conditions and therefore to their erroneous ranking. In this study, seven citrus rootstocks, including two new *Poncirus trifoliata* hybrids, were evaluated for tolerance to *Phytophthora* gummosis after a short exposure to salt stress. The inoculation was made at stem level with a pathogenic isolate of *Phytophthora citrophthora* collected at the experimental field of INRA in Kenitra, Morocco. The results of this study highlighted a significant influence of salinity on the length of stem necrosis caused by *Phytophthora* attacks. Interestingly, the seedlings of the new *Poncirus trifoliata* hybrids, F6 and F18, expressed a high level of tolerance to gummosis under saline conditions similar to that observed in the 'Gou Tou' sour orange (*Citrus aurantium* L.) and Sunki mandarin (*Citrus sunki* Hort. Ex. Tan.) checks, whereas pomelo (*Citrus grandis*) and citrumelo cv. 'Winter Haven' (*Citrus paradisi* Macf. x *Poncirus trifoliata* L. Raf.) were ranked as sensitive. The length of stem necrosis was positively correlated with the accumulation of chloride in the leaves, but was independent of stem water content. This finding supports the hypothesis

that the fungal infection is favored by the specific effects of salts rather than their osmotic effects.

Keywords:

Citrus, environmental stress, salinity, Phytophthora citrophthora, chloride