

SYNERGISM ANALYSIS BETWEEN THE PATHOGEN INFECTION AND ABIOTIC STRESSES

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Genetic and biochemical dissection of signaling pathways regulating plant pathogen defense has revealed in the last years remarkable similarities to the response to some abiotic stresses. However very little is known about the effect of multiple, co-occurring stress factors, despite the fact that multiple stresses are probably the rule under natural conditions. Rather than being additive, the presence of an abiotic stress can have the effect of reducing or enhancing susceptibility to a biotic pest or pathogen and viceversa. To gain insight into the interaction of pathogen infection and abiotic stresses, we have infected *Nicotiana benthamiana* plants with the *Tomato leaf curl Sardinia virus*, a DNA virus that belongs to the Geminiviridae family and cause severe epidemics in tomato worldwide. Infected plants were grown under temperature, drought and salt stresses. Quantification of accumulated-viral DNA and symptom development reveals positive and negative effects of the abiotic stresses in the viral infection.