

Effect on bell pepper (*Capsicum annuum*) cultivars

The net impact of stress on plant growth

The table shows the effect of individual and combined salt and UV stress on bell pepper cultivars

Crop: Bell pepper (*Capsicum annuum*) cv. Mavras and Stayer
Stress 1: Salinity- 100 mM NaCl
Stress 2: UV- UVA 4–5 W m⁻²; UVB 10–14 W m⁻²
Stage of the plant: Vegetative

Cultivars	Stress treatments	Plant response to stress			
		Type A parameters*		Type C parameters*	
		Shoot dry weight	Shoot fresh weight	Leaf cymaroside content [#] (mg g ⁻¹)	Leaf graveobioside content [#] (mg g ⁻¹)
Mavras	UV	27.3↓	8.2↓	2.2	13.6
	Salinity	55.8↓	53.5↓	0.41	31.7
	Salinity and UV	85.7↓	63.1↓	2.62	31.4
Stayer	UV	21.9↓	12.5↓	2.5	14.4
	Salinity	58.3↓	55.6↓	0.88	17.7
	Salinity and UV	70.8↓	58.2↓	2.9	25.6

Control values for Total leaf cymaroside content-0.29(Mavras), 0.49(Stayer). Total graveobioside content-16.9(Mavras), 17.2(Stayer)

Note:

The values presented in the table were calculated using the formula described below.

$$\text{Reduction over control (\%)} = \frac{(\text{Value Control} - \text{Value Stress})}{\text{Value Control}} \times 100$$

1) '↓'- indicates plant parameters affected by stress that lead to high susceptibility (higher the value more the damage).

Reference-

Ellenberger J, Siefen N, Krefting P, Schulze Lutum JB, Pfarr D, Rimmel M, Schröder L and Röhlen-Schmittgen S (2020). Effect of UV Radiation and Salt Stress on the Accumulation of Economically Relevant Secondary Metabolites in Bell Pepper Plants. *Agronomy* 10: 142.

Note:

#-Values are presented as it is from the source article without subjecting to the calculation.

*** - For more information on parameter classification, please refer to the 'methodology' tab.*

The inference from the study: Ellenberger et al., 2020, studied the impact of combined salt and UV stress on bell pepper cultivars Mavras and Stayer. The authors exposed bell pepper plants to combined salt and UV stress and observed that the combined stress led to greater shoot biomass reductions. The authors reported that cultivar 'Mavras' experienced greater reductions in shoot biomass and accumulated higher amounts of flavones under salt-only and combined salt and UV stress conditions.