

**Effect on Chrysanthemum cultivar (*Chrysanthemum × morifolium* Ramat.)**

**The interaction between the UV-B radiation and insect under the combined stress treatment at the plant interface**

 Stress 1: Western flower thrips  
 Stress 2: UV-B (0.30 kJ/m<sup>2</sup>, 0.60 kJ/m<sup>2</sup>, 1.19 kJ/m<sup>2</sup> and 1.79 kJ/m<sup>2</sup>)  
 Stage of plant: Cutting of full grown plant

The table shows the interactive effect of UV-B radiation and western flower thrips causing damage on leaves of Chrysanthemum cultivars

Cultivar	Treatment	Response under combined stress (Type B parameters*)
		Damage on leaves (mm <sup>2</sup> )
Pimento	UV-B (0.60 kJ/m <sup>2</sup> /day) for 1h + Western flower thrips (10 adult thrips) (Sequential stress)	4.41
	UV-B (1.19 kJ/m <sup>2</sup> /day) for 2h + Western flower thrips (10 adult thrips) (Sequential stress)	40.19
	UV-B (1.79 kJ/m <sup>2</sup> /day) for 3h + Western flower thrips (10 adult thrips) (Sequential stress)	61.47
	Western flower thrips (10 adult thrips)	27.89
Amadea	UV-B (0.60 kJ/m <sup>2</sup> /day) for 1h + Western flower thrips (10 adult thrips) (Sequential stress)	1.41
	UV-B (1.19 kJ/m <sup>2</sup> /day) for 2h + Western flower thrips (10 adult thrips) (Sequential stress)	18.44
	UV-B (1.79 kJ/m <sup>2</sup> /day) for 3h + Western flower thrips (10 adult thrips) (Sequential stress)	7.25
	Western flower thrips (10 adult thrips)	6.30
Baltica	UV-B (0.60 kJ/m <sup>2</sup> /day) for 1h + Western flower thrips (10 adult thrips) (Sequential stress)	18.12
	UV-B (1.19 kJ/m <sup>2</sup> /day) for 2h + Western flower thrips (10 adult thrips) (Sequential stress)	13.71
	UV-B (1.79 kJ/m <sup>2</sup> /day) for 3h + Western flower thrips (10 adult thrips) (Sequential stress)	25.06
	Western flower thrips (10 adult thrips)	26.32

**Reference** – Escobar-Bravo R, Nederpel C, Naranjo S, Kyong Kim H, Rodriguez MJL, Gang C, Gaetan G, Kirsten AL, Klinkhamer PGL (2019) Ultraviolet radiation modulates both constitutive and inducible plant defenses against thrips but is dose and plant genotype dependent. *J. Pest Sci.* <https://doi.org/10.1007/s10340-019-01166-w>

**Note:** Values are presented as it is from the source article without subjecting to the calculation.



‘\*’- *For more information on parameters classification, please refer to ‘methodology’ tab*

**Inference from the study:** Escobar Bravo *et al.* studied the interactive effect of ultraviolet B radiation and western flower thrips on three chrysanthemum cultivars Pimento, Amadea and Baltica. The interactive effect of UV-B radiation and western flower thrips caused more damaged leaves in cultivar Pimento than cultivar Amadea and Baltica. The overall observation suggests that the interactive effect of UV-B radiation and western flower thrips is cultivar dependant.