

Effect on maize genotypes (*Vicia faba* L.)
A. The net impact of individual and combined stress on the plant

Stress 1: European corn borer (*Ostrinia nubilalis*)
Stress 2: UV-B (300-400nm)
Stage of plant: Mid-whorl stage

The table shows the impact of individual and combined stress on the leaf damage and DIMBOA content of maize genotypes

Genotypes	Treatment	Response under combined stress	
		(Type C parameters*)	
		DIMBOA (mg/g)	
		1990	1991
CI31A	UV-B (300-400nm) + European corn bores (Sequential stress)	2.88	2.98
	European corn bores	3.45	3.43
MBR 6796-24	UV-B (300-400nm) + European corn bores (Sequential stress)	0.25	0.41
	European corn bores	0.7	1.04
MBR 6796-15	UV-B (300-400nm) + European corn bores (Sequential stress)	1.99	N/A
	European corn bores	2.13	N/A
B86	UV-B (300-400nm) + European corn bores (Sequential stress)	N/A	2.14
	European corn bores	N/A	2.21
MS72	UV-B (300-400nm) + European corn bores (Sequential stress)	1.36	1.65
	European corn bores	1.65	1.65

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

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

The table shows the effect of UV-B radiation on European corn borer damaging and consuming the leaf of various maize genotypes grown in field

Genotypes	Treatment	Response under combined stress			
		(Type B parameters*)			
		Leaf damage rating		Area consumed (mm ²)	
		1990	1991	1990	1991
CI31A	UV-B (300-400nm) + European corn bores (Sequential stress)	1.52	2.05	36.5	7.2
	European corn bores	2.11	2.33	44.1	12.2
MBR 6796- 24	UV-B (300-400nm) + European corn bores (Sequential stress)	2.04	N/A	15.3	N/A
	European corn bores	2.75	N/A	22.8	N/A
MBR 6796- 15	UV-B (300-400nm) + European corn bores (Sequential stress)	N/A	2.08	N/A	6.1
	European corn bores	N/A	2.3	N/A	13.7
B86	UV-B (300-400nm) + European corn bores (Sequential stress)	2.8	3.29	54.9	21.6
	European corn bores	4.07	4.69	69.4	46.3
MS72	UV-B (300-400nm) + European corn bores (Sequential stress)	6.52	5.52	70.4	30.4
	European corn bores	7.15	6.72	79.2	38.6

(Damage on a scale of 1: no damage to 9: extensive damage; N/A-not available)



Reference– Bergvinson DJ, Arnason JT, Hamilton RI, Tachibana S, Towers GHN (1994) Putative Role of Photodimerized Phenolic Acids in Maize Resistance to *Ostrinia nubilalis* (Lepidoptera: Pyralidae) . Environ. Entomol. **23**: 1516–1523

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

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Inference from the study: Bergvinson *et al.*, 1994 studied the interactive effects of UV-B radiation and insect European corn borer (ECB) in five maize cultivars such as CI31A, MBR 6796-24, MBR 6796-24, B86, and MS72 in the field. All the cultivars were studied for the combined interaction for two years, 1990-1991. The cultivar MBR 6796-24 was studied in the year 1990, and cultivars MBR 6796-24 in the year 1991. **The results analyzed from the study showed the increased susceptibility of all four maize cultivars to the combined interaction of ultraviolet radiation and European corn borer insect.**