Stress Combination and their Interactions in Plants (SCIP) Database



Website link- http://www.nipgr.ac.in/scipdb.php

Effect on black mustard genotype (Brassica rapa L.)

The interaction between the ozone and insect under the combined stress treatment at the plant interface

Stress 1: Ozone (75 ppb) Stress 2: *Pieris brassicae* Stage of plant: Five-day old plants

The table shows the effect of ozone on P. brassicae consuming black mustard lines

| Lines | Treatment | Response under combined stress (Type B parameters*) | | | |
|-----------|---|--|------------|--------------------|-------------------|
| | | Plant material eaten (mg) | Frass (mg) | Larval weight (mg) | Final weight (mg) |
| Wild | Ozone (75 ppb) + P. brassicae (Sequential stress) | 4249.82 | 264.72 | 249.18 | 281.19 |
| | P. brassicae only | 3632.93 | 323.28 | 257.95 | 292.25 |
| Sensitive | Ozone (75 ppb) + P. brassicae (Sequential stress) | 2299.34 | 91.02 | 177.42 | 284.24 |
| | P. brassicae only | 3837.49 | 372.66 | 290.45 | 290.45 |
| Resistant | Ozone (75 ppb) + P. brassicae (Sequential stress) | 1542.7 | 35.21 | 177.56 | 304.71 |
| | P. brassicae only | 1571.56 | 21.77 | 139.72 | 334.92 |

Reference– Jondrup PM, Barnes JD, Port GR (2002) The effect of ozone fumigation and different *Brassica* rapa lines on the feeding behavior of *Pieris brassicae* larvae. Entomol. Exp. Appl. **104:**143–151

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

Inference from the study: Jondrup *et al.* 2002 studied the effect of ozone on the feeding behaviour of insect *Pieris brassicae* on wild, sensitive, and resistant varieties of black mustard. The pre-treatment of plants with ozone led *P. brassicae* to eat a high amount of plant material in wild type compared to sensitive variety. In contrast, the resistant variety was less affected by combined ozone and *P. brassicae* stress than the plants not treated with ozone.

^{&#}x27;*'- For more information on parameters classification, please refer to 'methodology' tab