



Stress Combination and their Interaction in Plants (SCIP) Database

Website link: <http://www.nipgr.res.in/scipdb.php>

Effect on faba bean cultivars (*Vicia faba* L.)

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

Stress 1: *Botrytis fabae*
 Stress 2: Aphid (*Aphis faba*)
 Stage of plant: Two leaf stage

The table shows the effect of fungus *B. fabae* on development, weight, relative growth and fecundity of aphid on faba bean cultivars

Cultivar	Treatment	Response under combined stress (Type B Parameter*)															
		Relative developmental stage (RDS) of <i>Aphis fabae</i>											Adult weight (µg)	Relative growth rate (RGR) (µg/day)	Generation length (days)	Total fecundity per aphid	Intrinsic rate of natural increase (rm)
		Days since start of experiment															
		0	1	2	3	4	5	6	7	8	9	10					
Diana	<i>B. fabae</i> + <i>A. faba</i> (Five to seven 1-4-h-old third instar nymph) (Sequential stress)	0.9	1.3	1.7	2.3	2.9	3.8	3.9	4.8	4.9	4.9	4.9	883	0.47	7.5	82	0.38
	<i>A. faba</i> (Five to seven 1-4-h-old third instar nymph)	0.9	1.4	1.7	2.3	2.9	3.7	4.0	4.6	5	5.0	5.0	767	0.45	7.6	80	0.36
Bolero	<i>B. fabae</i> + <i>A. faba</i> (Five to seven 1-4-h-old third instar nymph) (Sequential stress)	0.9	1.3	1.9	2.4	2.9	3.8	3.9	4.7	4.9	4.9	4.9	549	0.40	7.6	63	0.34
	<i>A. faba</i> (Five to seven 1-4-h-old third instar nymph)	0.9	1.4	1.6	2.1	2.6	3.1	3.6	3.9	4.4	4.8	4.9	375	0.31	8.9	42	0.25

For raw data – Click here (.xlsx file)

Reference– Zebitz CPW, Kehlenbeck H (1991) Performance of *Aphis Fabae* on chocolate spot disease infected faba bean plants. *Phytoparasitica* **19**: 113

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

The inference from the study: Zebitz and Kehlenback, 1991 study focus on effect of fungus *B. fabae* on the performance of the insect *A. faba* on faba bean cultivars Diana and Bolero. The cultivar Diana is resistant and cv. Bolero is partially resistant to insect *A. faba*. The results showed that the pre-inoculation of fungus had no significant effect on the development of the insect *A. faba* on both cultivars. However, the mean weight of adults, mean relative growth rate, fecundity, and intrinsic rate of natural increase for aphids were enhanced in combined inoculation of both the pathogens, in comparison with a single infestation of *A. faba* for cv. Bolero, in variation with cv. Diana where a small difference was observed. **The overall observation concludes the comparative positive effect of *B. fabae* on the performance of *A. faba* in faba bean cv. Bolero than cv. Diana.**