

Effect on soybean (*Glycine max*) cultivars

Interaction between temperature and insect

The table shows the interaction between temperature and insect infestation in relation to the survival and performance of soybean aphids on soybean

Crop: Soybean (*Glycine max*) cultivars RG607RR and LDXG04018.

Insect: Soybean aphids (*Aphis glycines*)

Stress 1: Temperature- Cool (17.4 °C) and warm temperature (25.5°C)

Stress 2: 10 adult aphids were placed on leaf of soybean plants at vegetative stage by a fine paint brush.

Stage of the plant: Vegetative

Cultivars	Stress treatments	Plant response under combined stress		
		Type B parameter*		
		Aphids/plant [#]	Nymphs/plant [#]	Fecundity/adult [#]
RG607RR	Cool temperature + <i>A. glycines</i>	36	9.2	0.5
	Warm temperature + <i>A. glycines</i>	61	18.1	1.1
LDXG04018	Cool temperature + <i>A. glycines</i>	10	7.65	0.49
	Warm temperature + <i>A. glycines</i>	0.7	6.3	0.5

Control values not provided.

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.

Reference-

Whalen R and Harmon JP (2015). Temperature alters the interaction between a herbivore and a resistant host plant. *Arthropod-Plant Interactions* 9(3):233-40.

The inference from the study: Whalen and Harmon 2015 investigated the interaction between both low and warm temperature on the performance of soybean aphids on soybean cultivars RG607RR (aphid susceptible) and LDXG04018 (resistant to aphids). The authors observed that warmer temperature improved aphid performance susceptible cultivar RG607RR but worsened it in the resistant cultivar. The authors also showed that the resistant cultivar served as a poor nutrient source for aphids, and higher temperatures reduced aphid survival under poor nutrition conditions.