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**ATTRACTIVENESS AND NON-PREFERENCE FOR OVIPOSITION OF  
*Tetranychus ogmophallos* (ACARI: TETRANYCHIDAE) ON  
GENOTYPES OF *Phaseolus vulgaris* L.**

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## **ATTRACTIVENESS AND NON-PREFERENCE FOR OVIPOSITION OF *Tetranychus ogmophallos* (ACARI: TETRANYCHIDAE) ON GENOTYPES OF *Phaseolus vulgaris* L.**

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### **INTRODUCTION**

The use cultivars resistant to arthropod pests is a significant tool used in integrated pest management. Indirectly cultivars on which arthropod show prolonged growth and development may expose the organism to the potential natural enemies resulting in natural control of arthropod population (Sarfraz et al., 2007). In Brazil, little information is available on the host plant resistance to *Tetranychus ogmophallos* mites, which presents high potential to infest common bean, peanut and soybean plant.

Bonato et al. (2000) verified that *T. ogmophallos* able to develop on bean and displayed high rates of increase when reared on this plant. In addition, the ability of develop on a wide range host plants, constitutes a factor that raises the status this pest (Bonato et al., 2000). Thus, it is important to analyze the attractiveness and oviposition response of *T. ogmophallos* on bean genotypes in order to determine the genotypes that are less preferred by mite. In this study we evaluated *T. ogmophallos* attractiveness and preference oviposition of common bean genotypes.

### **MATERIALS AND METHODS**

The experiment was conducted under controlled conditions of  $25 \pm 2$  °C temperature,  $70 \pm 10\%$  relative humidity, and 12 h photophase. The following bean genotypes were tested: BRS-Supremo, BRS Pérola, BRS Talismã, IAC-Harmonia and IPR Campos Gerais. Seeds of the common bean genotypes were sown in 5-L-pots and were kept in a greenhouse until use.

Plants were used at the vegetative stage V3-V4. The attractiveness and preference oviposition by *T. ogmophallos* in free-choice assay was designed in randomized blocks and, no-choice test completely randomized, with 10 replications each.

In the free-choice each replication consisted of a Petri dish arena (15 cm diameter x 1 cm height) containing the leaf discs (2.5 cm diameter) of each genotype distributed equidistantly. To prevent escape of mites and maintenance of moisture, the margins of Petri dishes were surrounded with water-soaked cotton and then covered with plastic film. Thereafter, 25 newly emerged *T. ogmophallos* female were released in the ratio of five females to each genotype.

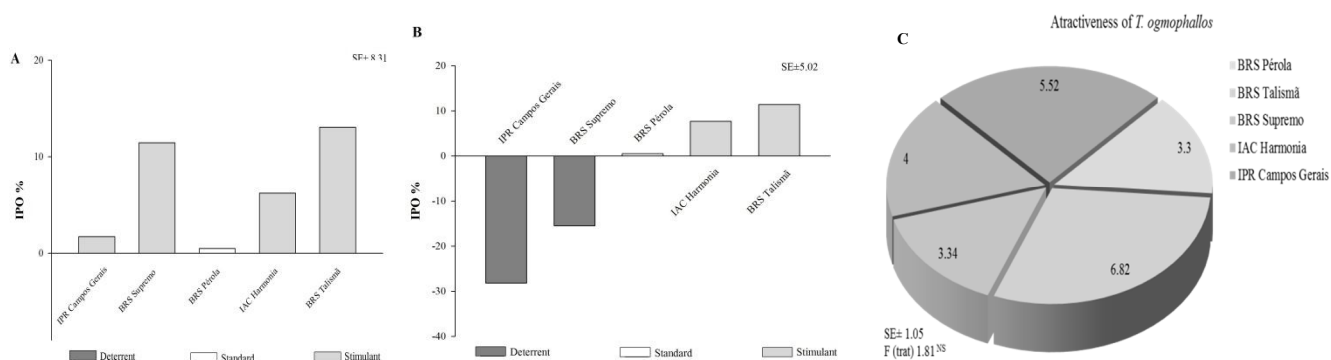
For the no-choice test, the arena (10 replication) consisted of a petri dish (6 cm diameter x 1 cm height) with an insect pin fixed in the center, where a supernatant leaf disc (2.5 cm diameter) was placed in water attached through the insect pin in order to avoid leaf movement and mite scape. Then, five newly emerged *T. ogmophallos* female were released in each Petri dish arena.

For both assays, after 48 h of oviposition period, leaf disc attractiveness to *T. ogmophallos* female was recorded and then the adults were removed and the eggs laid per plant was counted through stereomicroscope. From the number of eggs laid by *T.ogmophallos* per leaf disc, the oviposition preference index (OPI) was calculated according to Fenemore, 1980.

Data of attractiveness and number of eggs were analyzed for residuals normality and variance homogeneity, and when necessary, were transformed to meet the assumptions of analysis of variance (ANOVA). Next, data were subjected to analysis of ANOVA, and means were compared by Tukey's test ( $P<0.05$ ).

## RESULTS AND DISCUSSION

Regarding OPI results observed in no-choice test, genotypes behaved as stimulants for oviposition (Figure 1A). In the free-choice test, the genotypes BRS Supremo and IPR Campos Gerais were classified as deterrents for oviposition (Fig. 1B) Genotypes IAC Harmonia and BRS Talisman showed higher numbers of eggs than the genotype defined as the standard susceptible and therefore were classified as stimulants for oviposition.



**Figure 1.** Index preference for oviposition (IPO) and attractiveness of common bean genotypes to *Tetranychus ogmophallos*. IPO in no-choice test (A), free-choice test (B) and number *T. ogmophallos* attractiveness (C). <sup>NS</sup> sectors with same letter are not significantly different by Tukey test at 5% probability.

In addition, in the free-choice test, the attractiveness of *T. ogmophallos* did not differ between bean genotypes. However, it is worth highlighting that the genotype BRS Supremo was deterrent for oviposition and behaved as less preferred by *T. ogmophallos*.

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