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PERFORMANCE OF COTTON APHID *Aphis gossypii* GLOVER UNDER TRANSGENIC COTTON Bt-Cry1Ac AND RR



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Introdução


- ❖ The management of non-lepidopteran pests remains a requirement for the sustainable deployment of Bt-cotton.
- ❖ Varieties of Bt cotton provide highly effective and selective control of major lepidopteran pests.
- ❖ However, these varieties may have a differential impact on cotton aphid, *Aphis gossypii* Glover (Homoptera: Aphididae), one of the most important non-lepidopteran pests in cotton.
- ❖ Field studies about the impact of the Bt cotton on the biological performance of *A. gossypii* can contribute to the development of appropriate management strategies.

2

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Introdução

- ❖ Hypothesis
 - ✓ Bt cotton does not affect the natural mortality of *A. gossypii*.
- ❖ Objective
 - ✓ Evaluate the impact of Bt cotton Cry1Ac and RR on the biological performance of *A. gossypii*.

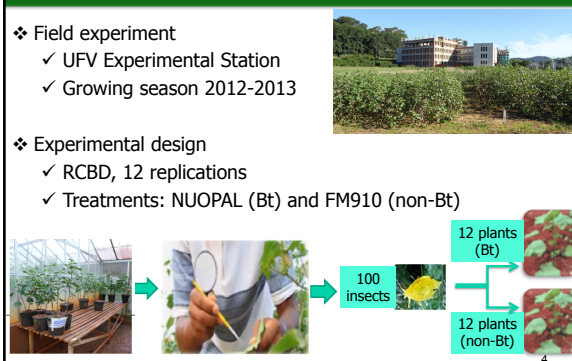


3

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Material & methods

- ❖ Field experiment
 - ✓ UFV Experimental Station
 - ✓ Growing season 2012-2013
- ❖ Experimental design
 - ✓ RCBD, 12 replications
 - ✓ Treatments: NUOPAL (Bt) and FM910 (non-Bt)




4

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Material & methods

- ❖ Evaluation
 - ✓ *A. gossypii* and its mortality
 - ✓ Reproduction
 - ✓ Development
- ❖ Data analysis
 - ✓ Anova




5

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Results

Table 1: Biological performance of *A. gossypii* between Bt and non-Bt cotton varieties.



| Biological parameters of <i>A. gossypii</i> | F _{1,22} | P < 0,05 |
|---|-------------------|----------|
| Mortality of adults (%) | 0.91 | 0.226 |
| Total nymphal instar (%) | 0.07 | 0.798 |
| Nymphs produced / female | 1.56 | 0.226 |
| Winged produced | 1.08 | 0.301 |
| Duration of life cycle | 0.23 | 0.633 |
| Longevity of adults | 1.73 | 0.202 |

6

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Conclusions



- ❖ The performance of *A. gossypii* on both Bt and non-Bt cotton was similar.
- ❖ Therefore, the management of *A. gossypii* must be similar in both Bt and non-Bt transgenic cotton.

7

Acknowledgments



8