

### Spider community in soybean agroecosystem in the federal district

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In field cropping systems, spiders represent a major portion of the generalist predatory arthropods, responsible for the reduction in pest population which optimizes biological control. Transgenic soybean expressing *Bacillus thuringiensis* Berliner (Bt) toxins is the most common crop commercialized in Brazil. In this study, we explore the influence of Cry1Ac Bt and non-Bt soybeans on the spider community, which is not a target for the Bt technology. The study was conducted at the experimental area of Embrapa Cerrados, Planaltina, DF. The experimental design was a randomized block with three replications of Bt and non-Bt. Evaluations were made within an area of 6 ha, without the use of insecticide. The collection method was destructive and absolute during the phenological stages V3-R8 (vegetative-reproductive). We expected to find that spider assemblages were similar in both Bt and non-Bt soybean areas, most likely because spiders are early colonizers and generalist predators. We identified species belonging to 10 spiders families (Araneidae, Eutichuridae, Linyphiidae, Lycosidae, Oxyopidae, Philodromidae, Salticidae, Sparassidae, Theridiidae, Thomisidae). We found on Bt soybean 21 individuals of 8 species, compared to 51 individuals of 16 species on non-Bt soybean. It was observed that the dominance of *Cheiracanthium inclusum* (Eutichuridae) in both areas was higher than 30%. This species occupies a variety of habitats, being common in agroecosystems, presents nocturnal behavior and is an efficient lepidopteran egg predator. This study shows the presence of higher species richness and abundance of spiders in the non-Bt soybean agroecosystem, where more possible prey occurs, for example from the Lepidoptera immatures. As this study was done in non-sprayed fields, we may suggest that the difference found in the spider community was indirectly because of Bt technology. So, prey-mediated effects lead to a necessity for more integrated management to preserve beneficial arthropods.

**Palavras-chave:** Agroecosystems, Biological control, Eutichuridae, Lepidoptera, Predators.

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