

Can entomopathogenic fungi alter the feeding behavior of the neotropical brown-stink bug?

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Recently EPG (electropenetrography) has been used to unveil the feeding behavior of phytophagous stink bugs (pentatomids), opening opportunities to be used in the applied field of stink bug management. In Brazil, the neotropical brown-stink bug *Euschistus heros* (F.) (Hemiptera: Pentatomidae) is one of the most important soybean pests, causing significant production losses. Biological control via entomopathogenic fungi is being increasingly used by farmers, as it is a viable, effective and environmentally safe method. So far, the feeding behavior of stink bugs after the application of entomopathogenic fungi was not known, and this is a pioneering study. Therefore, we used the EPG AC-DC to compare the feeding behavior of *E. heros* on soybean plants, after the treatment with the fungus *Metarhizium anisopliae* compared to untreated stink bugs (control). We found that *E. heros* adults treated with *M. anisopliae* spent significantly less time on feeding activity. The number of waveform events per insect (NWEI) was significantly reduced on feeding activities on treated stink bugs. There was a 45% reduction in the final time of the last probe of treated stink bug compared to the control. Therefore, treated stink bugs stopped their feeding activities earlier. The use of EPG can be a promising technique to evaluate the feeding behavior of stink bugs treated with entomopathogenic fungi. This study paves the way for further research employing entomopathogenic fungi in pest control by strengthening biological control programs.