

The influence of *Bt*-maize on biological traits of *Spodoptera eridania* (Cramer, 1782) and *Spodoptera frugiperda* (Smith, 1789) (Lepidoptera: Noctuidae)

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The cultivation of genetically modified plants (e.g. *Bt*-maize) is currently an alternative method of controlling major crops pests. Therefore, is important to know the influence of *Bt*-plants on pest and non-pest insects. This study aimed evaluate the impact of Cry1F and Cry1F+Cry1A.105+Cry2Ab2 proteins *Bt* expressed in corncobs on larval development of *Spodoptera eridania* (Cramer, 1782) and *Spodoptera frugiperda* (Smith, 1789) (Lepidoptera: Noctuidae). The immature grains were offered *ad libitum* to new-hatched larvae (until 24 hs old), to compare the development of the specimens fed to non-*Bt* corn (DOW 2B688) and two isogenic *Bt*, that express one (Cry1F) and three insecticides protein (Cry1F+Cry 1A.105+Cry2Ab2). The larvae survived less than two days when consumed both *Bt* immature grains and reach 100% of mortality. *Spodoptera eridania* reared on non-*Bt* corns grains shows a longer longevity (21.6 days) than *S. frugiperda* (18.4 days), but a lower viability (56.5% and 80.2% to *S. eridania* and *S. frugiperda*, respectively). Interesting, *S. eridania* consume a more amount immature grains (5.4g) than *S. frugiperda* (3.9 g). In summary, this study confirms that the toxins Cry1F, Cry1F+Cry 1A.105+Cry2Ab2 expressed in fresh corncobs are an important tool to protect the corn ears against *S. frugiperda* and the non-target pest *S. eridania*, however is important monitored the non-*Bt* corn fields due the possibility of this species caused damage in ears corn.

Key-words: *Bt*-corncobs; genetically modified organisms (GMO), Lepidopteran pests.

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