

N O T E

Larval Competition between *Helicoverpa zea* and *Spodoptera frugiperda* (Lepidoptera: Noctuidae) on Corn Ears in Northern México¹

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The fall armyworm, *Spodoptera frugiperda* (J. E. Smith), and the corn earworm, *Helicoverpa zea* Boddie, are the most important insect pests of corn in the southeastern U.S., México, Central and South America (Fuentes et al. 1998, Agron. Mesoam. 9: 42 - 52). The most common feeding site for *S. frugiperda* is the whorl in young plants; whereas, *H. zea* prefer to feed from ears. However, both insect pests can infest and damage either the whorl or the ear, depending on insect development and plant phenology (Chilcutt et al. 2006, J. Econ. Entomol. 99: 2164 - 2170). Feeding from ears by both species is important because of direct grain loss, quality decrease, and facilitation of mycotoxin-producing fungi invasion (Dowd 2003, J. Toxicol. Toxin Rev. 22: 327 - 350).

Despite the frequent cooccurrence of *H. zea* and *S. frugiperda* on corn ears (Rodríguez-del-Bosque et al. 2010, Southwest. Entomol. 35: 157 - 164), there is a paucity on information regarding their interspecific association. Larval densities of both species are usually reduced to one per plant when larvae feed in close proximity due to cannibalism, which may account for up to 75% of larval mortality (Stinner et al. 1977, Can. Entomol. 109: 879 - 890). Similarly, both *H. zea* and *S. frugiperda* prey upon each other and other lepidopterans when competing for space and food (Dorhout and Rice 2010, J. Econ. Entomol. 103: 54 - 62). The objective of this study was to determine the interspecific association between *H. zea* and *S. frugiperda* larvae on corn ears in northern México.

This study was conducted at the Campo Experimental INIFAP (Mexican Agricultural Research Service), near Río Bravo, Tamaulipas (25°57'N, 98°01'W) during the spring growing seasons of 2006 - 2009. Field corn (cv. H-439) was planted each year in 0.5 ha during early February. No insecticides were applied, and other agronomic practices were according to local recommendations. A total of 400 plants was

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