

Infestation Mapping of Pink Bollworm and Spiny Bollworm on Cotton in the Western Part of Harran Plain

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ABSTRACT

Infestation maps of pink bollworm, PBW (*Pectinophora gossypiella* Saund.) and spiny bollworm, SBW (*Earias insulana* Boisd.) in the western part of Harran Plain were prepared using field infestation data collected in 2002-2003 and Arc View GIS 3.2 software. After the cotton harvest, 100 blind bolls from each of 45 localities were collected and dissected to give percent infestation by both pests without distinguishing between them.

Key words: Spiny bollworm, pink bollworm, blind boll, infestation maps, Harran Plain

INTRODUCTION

Cotton, a very important plant for Turkish economy, has several pests. Spiny bollworm, SBW (*Earias insulana* Boisd.) and pink bollworm, PBW (*Pectinophora gossypiella* Saund.) have been observed to cause considerable economic loss. Whereas PBW is still considered to be one of the most important worldwide pests of cotton, SBW is particularly found in Asian and African countries (Kıray, 1964; Stam & Al-Mosa, 1990). The larvae of both pests overwinter in mature cotton bolls, trash and soil (Bariola, 1984; Ünlü, 2001). The means for the transition of the pests from one season to the next and the source of infestation are the blind bolls, here defined as bolls left in the fields after the harvest. Therefore, these bolls are very important as the source of primary infection.

The effects of infestation are important because SBW and PBW cause widespread infestation in the entire Harran Plain. Infestation levels for both bollworms together were 13.7, 43.1 and 26.6% in 1998-2000, respectively (Ünlü & Kornosor, 2002). Similarly, infestation levels of these pests were 61.98% in 2001 (Ünlü & Bilgic, 2004) and 73.21 and 65.28% in 2002-2003, respectively (Ünlü & Efil, 2004).