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Western Bean Cutworm Monitoring Project in Northwest IA

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Western Bean Cutworm Monitoring Project in Northwest IA

Abstract

The western bean cutworm (WBC) has typically been an occasional pest of corn in northwest Iowa, and is more notably known to cause damage to crops in western Nebraska. Yet, beginning in 1999, the WBC has caused economic damage to corn in isolated locations of northwest Iowa, primarily in northern Ida County. Most recently, western bean cutworm moths and injury to corn have been found in most northwest Iowa counties. Because of the western bean cutworm's potential to cause large yield losses in corn and its presence in successive years, ISU extension researchers initiated a multi-county pheromone trapping project. Information from this effort can be used to determine how widespread the pest is and to aid in scouting and treatment recommendations.

Disciplines

Agricultural Science | Agriculture

Western Bean Cutworm Monitoring Project in Northwest IA

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compared with 20 days (July 14–August 4) in 2002.

Introduction

The western bean cutworm (WBC) has typically been an occasional pest of corn in northwest Iowa, and is more notably known to cause damage to crops in western Nebraska. Yet, beginning in 1999, the WBC has caused economic damage to corn in isolated locations of northwest Iowa, primarily in northern Ida County. Most recently, western bean cutworm moths and injury to corn have been found in most northwest Iowa counties. Because of the western bean cutworm's potential to cause large yield losses in corn and its presence in successive years, ISU extension researchers initiated a multi-county pheromone trapping project. Information from this effort can be used to determine how widespread the pest is and to aid in scouting and treatment recommendations.

Materials and Methods

2003 was the second year in which a large WBC trapping effort was conducted across several of Iowa's counties. Pheromone and black-light (one) traps were placed in northwest Iowa counties in early July 2003 (Figure 1).

Results and Discussion

The first moths were caught July 1, and the peak moth flight occurred July 25 (Figure 2), about three days later than observed in 2002 (Figure 3). The moth flight extended through August 10 in 2002 and 2003 (Figures 2 and 3). The average daily moth catch/trap in 2003 was much less than in 2002, with the moth catch on the peak day of 2003 being only 35% of the count on 2002's peak day. Moth catch duration was also shorter in 2003. Moth catch (for days that totaled at least 25% of the peak day) extended for 14 days (July 20–August 3) in 2003

Scouting recommendations from the University of Nebraska state that even though field scouting for western bean cutworm should begin when the first moths are caught, control decisions should be made shortly after moth flight peaks. More information on scouting and treatment recommendations for the WBC can be obtained from the following URL:

<http://www.ianr.unl.edu/pubs/insects/g1359.htm>

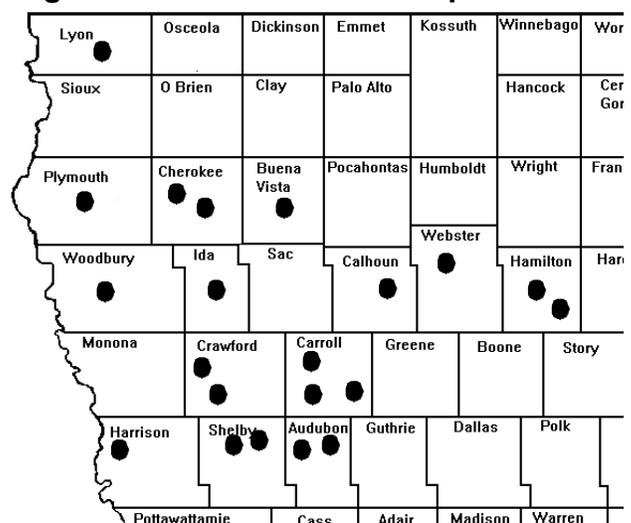
Trap data for individual locations can be observed at the following URL:

<http://latrodectus.ent.iastate.edu/westernbeancutworm/>

Acknowledgments

Much appreciation is extended to the many participants who set up and monitored traps throughout July and August.

Figure 1. Northwest Iowa Trap Locations



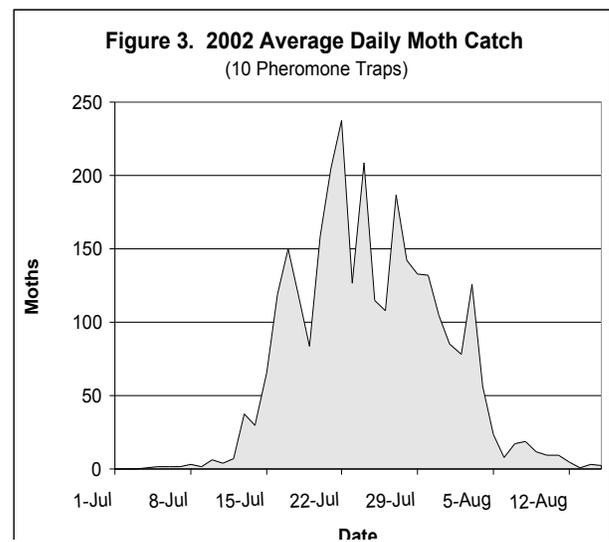
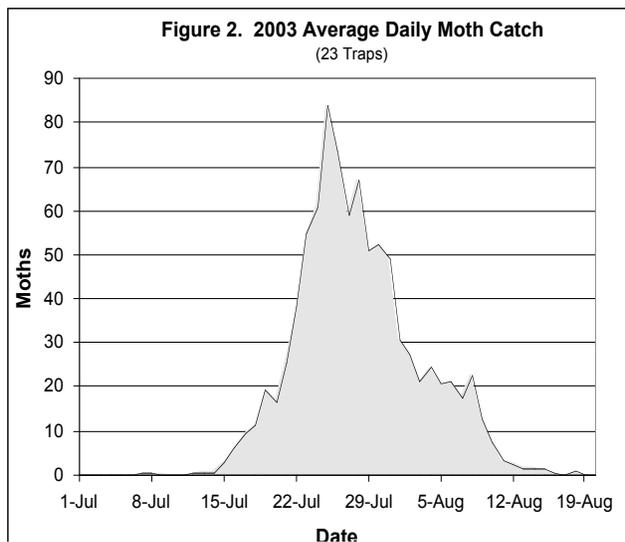


Table 1. Western bean cutworm pheromone and black-light trap location, catch and emergence data for northwest Iowa, 2003.

County	Nearest town	Trap type	Total catch	Date of 25% moth catch	Date of 50% moth catch
Audubon (1)	Fiscus	Pheromone	1872	July 22	July 25
Audubon (2)	Fiscus	Pheromone	919		
Buena Vista	Alta	Pheromone	461	July 25	July 27
Calhoun	Lake City	Pheromone	526		
Carroll (1)	Templeton	Pheromone	847	July 23	July 26
Carroll (2)	Templeton	Pheromone	346		
Carroll	Coon Rapids	Pheromone	143		
Cherokee	Cleghorn	Pheromone	1514	July 28	July 31
Cherokee	Marcus	Pheromone	1185		
Crawford (1)	Vail	Pheromone	358		
Crawford (2)	Vail	Pheromone	676	July 22	July 25
Crawford (1)	Aspinwall	Pheromone	1144		
Crawford (2)	Aspinwall	Pheromone	743		
Hamilton (1)	Webster City	Pheromone	237	July 19	July 21
Hamilton (2)	Webster City	Pheromone	247		
Harrison	Modale	Pheromone	131	July 26	July 28
Ida	Galva	Black Light	958	July 25	July 28
Lyon	Inwood	Pheromone	757	July 25	July 29
Plymouth	LeMars	Pheromone	994	July 25	July 26
Shelby (1)	Irwin	Pheromone	1531	July 22	July 25
Shelby (2)	Irwin	Pheromone	997		
Webster	Barnum	Pheromone	1131	July 23	July 25
Woodbury	Pierson	Pheromone	1318	July 26	July 28