

Helicoverpa Zea and Heliothis Virescens Moth Traps

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Introduction

Helicoverpa Zea, or corn earworm is a major pest in corn and BT cotton in the southern United States. Corn is predominately the food of choice for H. Zea but it will also need on BT cotton for it has a nigh resistance to BT. Heliothis Virescens is also a pest of corn and BT cotton but the low resistance to BT makes it an easy kill for the virus. Keeping count of the population of these worms is essential to the survival and yield of the crops. One way to keep account of the presence of H. Zea and H. Vir worms is by counting their adult form moths.

Materials and Methods

Our Division in SIMRU has been monitoring the H. Zea and H. Vir presence in and around the Stoneville area since 1992. We have five sets of traps in five different locations that attracts both H. Zea and H. Vir by their respective pheromones. The traps are checked and counted weekly with pheromones being replaced every other week.

1992-2012 Pheromone Trap Data
Heliothis virescens
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Average # of Moths/Trap/Month																Average # of Moths/Trap/Month						
Month	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	Month	2007	2008	2009	2010	2011	2012
April	5	0	10	1	0	17	6	10	0	15	2	9	7	2	8	April	1	1	1	0	2	2
May	68	123	110	45	54	41	41	41	42	37	14	13	20	4	4	May	2	1	1	4	6	9
June	66	134	104	114	131	55	18	26	39	65	46	54	54	8	7	June	11	3	2	5	14	7
July	396	125	395	322	109	88	36	28	56	50	65	31	27	6	6	July	3	3	3	9	14	12
August	179	292	131	144	157	56	99	45	134	61	100	20	35	4	11	August	3	5	7	19	33	
September	314	482	114	156	456	160	119	99	109	78	146	79	76	36	18	September	8	5	6	10	14	
October	15	17	47	71	18	16	61	18	75	34	33	28	9	5	5	October	2	3	0	0	3	
Average # of Moths/Trap/Season																Average # of Moths/Trap/Season						
1043 1173 911 853 925 433 380 267 455 340 406 234 228 65 59																30 21 20 47 86						

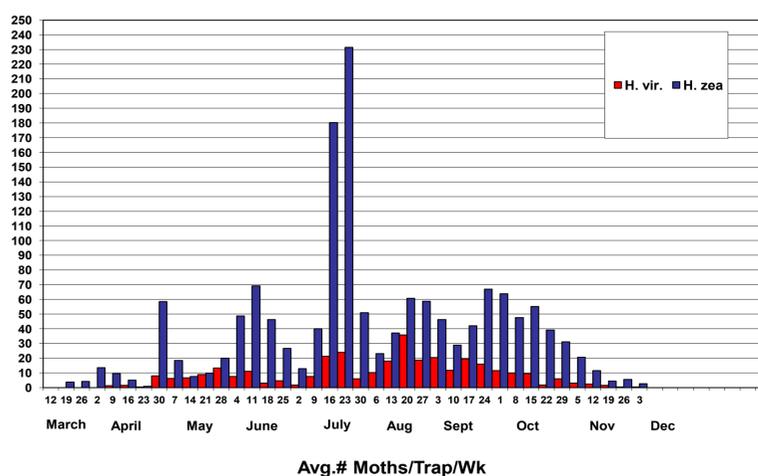
Results and Discussion

The past twenty years of data collected sheds light on the effectiveness of transgenic crops as well as the different generations of the moths. After the introduction of BT cotton and corn there is a notable decline in both H. Zea and H. Vir with H. Vir having the most significant drop in population. BT has not eradicated either species so insecticide regimens are still needed to control the population



Helicoverpa zea adult. Photo ©Mark Dreiling, Bugwood.org

2012 Heliothis/Helicoverpa
Pheromone Trap Captures
Washington County, Mississippi



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References

Luttrell, R. G., Jackson, R. E. 2012. *Helicoverpa zea* and *Bt* cotton in the United states. GM Crops Food. 3(3): 213-227

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