THE UNIVERSITY OF ARIZONA
COLLEGE OF AGRICULTURE AND LIFE SCIENCES
COOPERATIVE EXTENSION
Yuma Agricultural Center

Areawide Diamondback Moth Trapping Network

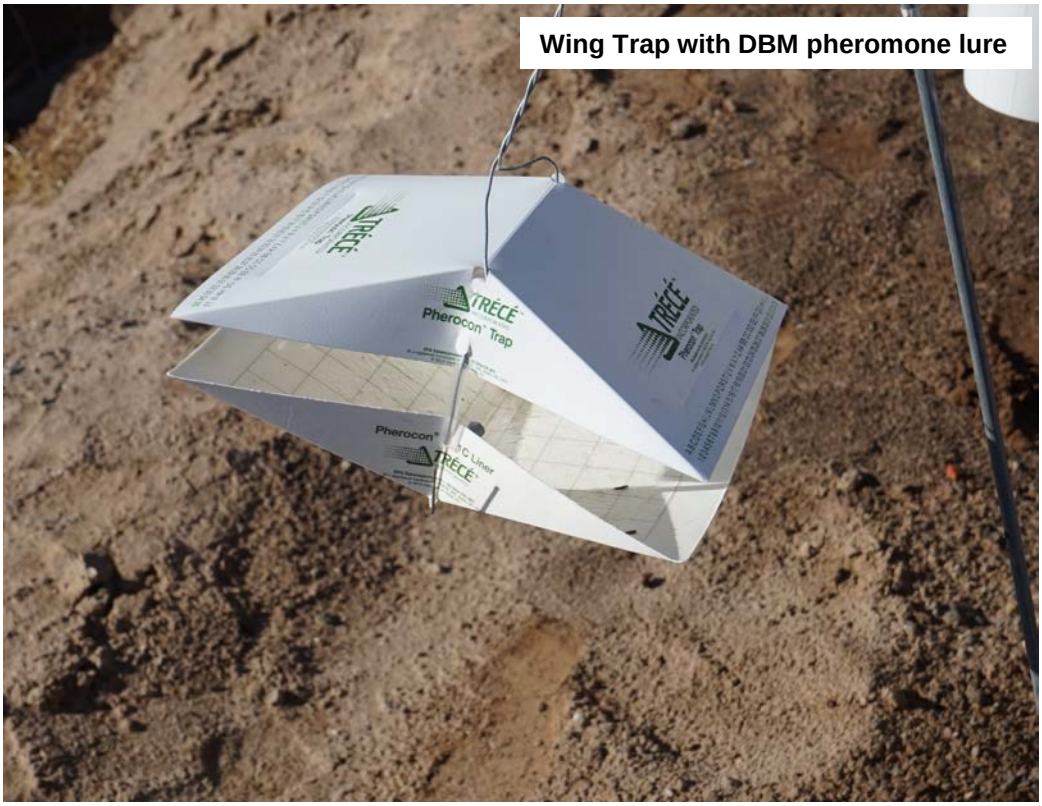
In response to the recent outbreaks of Diamondback moth (DBM) , *Plutella xylostella* in Yuma, we have established a pheromone trap network in January of 2017 designed to monitor the activity and movement of adult populations of DBM. PCAs had difficulty controlling DBM in cabbage, broccoli and cauliflower last season. In the 2017 -2018 season we have expanded out network to include traps placed in Texas Hill, Tacna, Roll, Wellton, Dome Valley, Gila Valley, Yuma Valley and in the Bard /Winterhaven area in locations where cole crops are presently being grown or in areas where infestations were known to occur last fall.

The data is not intended to indicate field infestations, as trap data is largely a reflection of adult movement. The data may reflect emergence of adults in adjacent fields with known infestations, or provide an indication that DBM may be moving into fields not previously infested. If nothing else, the data may make PCAs aware of increased pest activity in some areas and encourage intensified scouting in susceptible produce fields.

Historically, from 1998-2001, we established a trap network in Yuma which included DBM. Data from those studies is provided below for a historical perspective. We will continue to monitor DBM trap activity throughout the season. We will also continue to trap population activity throughout the summer to determine whether DBM is active when brassica hosts are not available. This may give us an indication of the potential for more problems on next years fall crops. From a historical perspective we ran traps during the summer of 1999-2001 in the Yuma Valley and consistently found DBM moths in traps at low levels (0-1.2 moths/trap/night from July-August). We concluded at that time that many of the DBM captured may have come in with transplants, but were not certain whether DBM is capable of over summering in the desert. We hope to gain more insight into the pest's activity during summer moths in Yuma this year.

Area-wide DBM Trapping Network

Yuma, Arizona



Wing Trap with DBM pheromone lure

DBM moths captured in trap

Trapping Data – by Location and Crop

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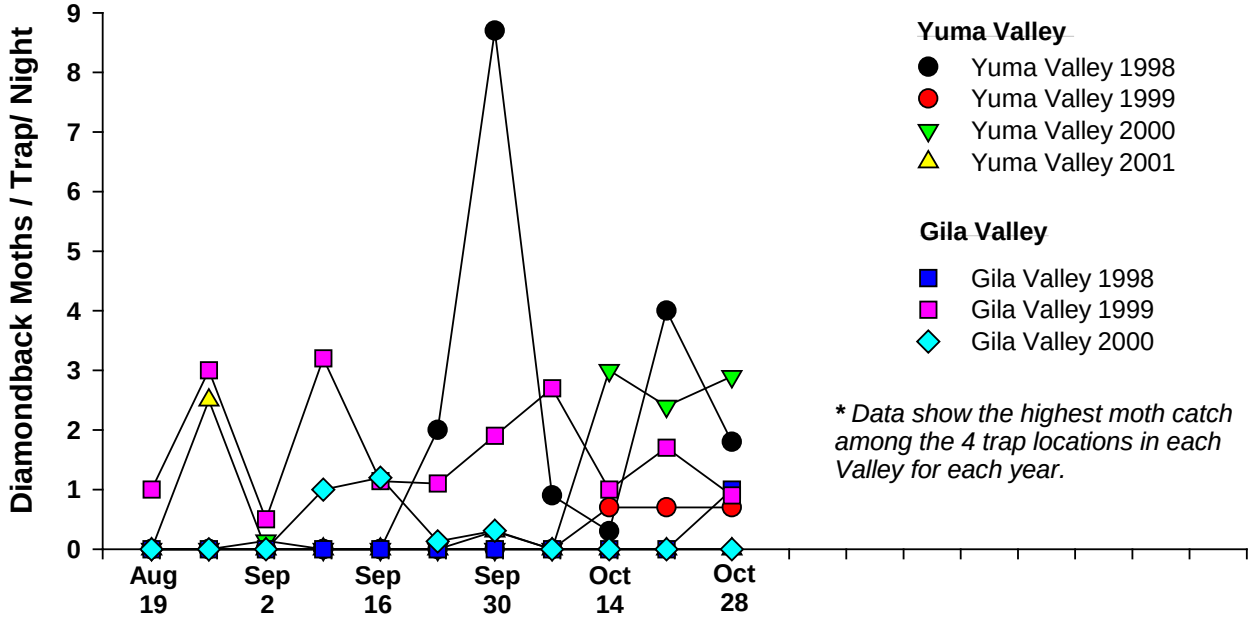
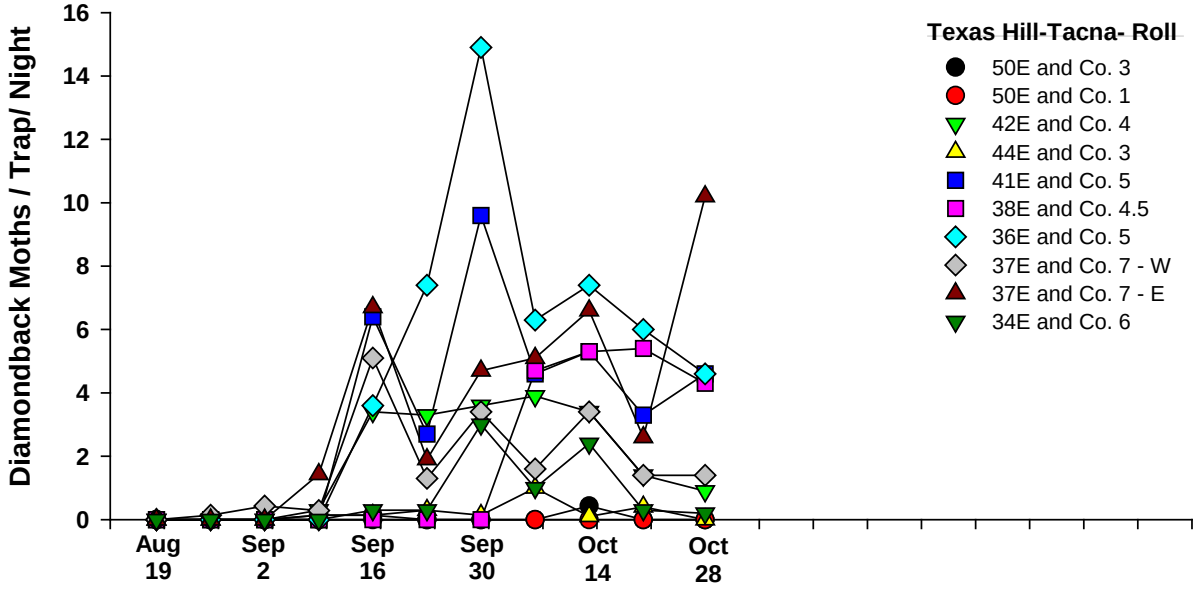
				Diamondback Moths / Trap / Week			
	Area	Location	Crop	7-Oct	14-Oct	21-Oct	28-Oct
1	Texas Hill	50E and Co. 2.5	Cabbage TP	0	3	0	0
2	Texas Hill	50E and Co. 1	Cabbage TP	0	0	0	0
3	Tacna	42E and Co. 4.5	Cauliflower TP	27	24	10	8
4	Tacna	44E and Co. 3	Cauliflower TP	7	1	3	0
5	Tacna	41E and Co. 5	Flower/Broccoli	32	37	23	41
6	Roll	38E and Co. 4.5	Broccoli	33	37	38	39
7	Roll	36E and Co. 5	Broccoli	44	52	42	41
8	Roll	37E and Co. 6.5-E	Cauliflower TP	11	24	10	13
9	Roll	37E and Co. 6.5-W	Cauliflower TP	36	46	18	92
10	Roll	34E and Co. 6	Fallow	7	15	2	2
11	Wellton	30E and Co. 9	Cabbage TP	5	3	2	0
12	Wellton	27E and Co. 10	Cotton	0	0	3	20
13	Dome Valley	22E and Co. 8	Cauliflower TP	19	7	7	15
14	Dome Valley	21E and Co. 8	Cotton, Sudan	0	3	0	11
15	Dome Valley	19E and Co. 7	Cauliflower TP	23	7	10	23
16	Dome Valley	17E and Co. 5	Broccoli	3	0	0	18
17	Dome Valley	18E and Co. 5.5	Broccoli	12	3	3	16
18	Dome Valley	16E and Co. 4	Cauliflower TP	12	9	10	0
19	Gila Valley	10.5E and Hwy 95	Cotton	7	12	24	40
20	Gila Valley	7E and Co. 8	Cauliflower TP	0	7	3	4
21	Gila Valley	7E and Co. 3	Cotton	3	3	9	20
22	Gila Valley	6E and Hwy 95	Fallow	32	12	20	68
23	Gila Valley	Pacific and Co. 10	Cabbage TP	2	0	0	6
24	Gila Valley	3E and Co. 10	Broccoli	5	26	32	45
25	Yuma	2.5E and 24th St-W	Cauliflower TP	0	15	0	0
26	Yuma	2.5E and 24th St-E	Cauliflower TP	0	2	0	1
27	Yuma Valley	Co 14 and Ave C.	Kale	86	50	43	50
28	Yuma Valley	Co. 14 and Ave D	Fallow	0	0	down	0
29	Yuma Valley	Co 18 and Ave D	Cauliflower TP	20	41	21	40
30	Yuma Valley	Co. 17 and Ave F	Cauliflower TP	7	7	5	75
31	Yuma Valley	Co. 16.5 and Ave G	Caulfilower TP	19	45	38	92
32	Yuma Valley	Co. 16.5 and Ave G.5	Cabbage TP	8	19	9	16
33	Yuma Valley	Co. 22 and 4th Ave	Broccoli	14	8	6	10
34	Yuma Valley	Co. 21 and Hwy 95	Fallow	0	7	5	9
35	Yuma Valley	Co. 20 and Ave H	Cauliflower	16	56	98	144
36	Yuma Valley	Co. 19 and Ave I	Broccoli	48	25	63	70
37	Yuma Valley	Co. 17th and Ave J	Cauliflower TP	23	11	21	20
38	Yuma Valley	Co. 15th and River	Fallow	0	60	57	73
39	Yuma Valley	Co. 15.5 and Ave G.5	Cauliflower	-	-	-	Set

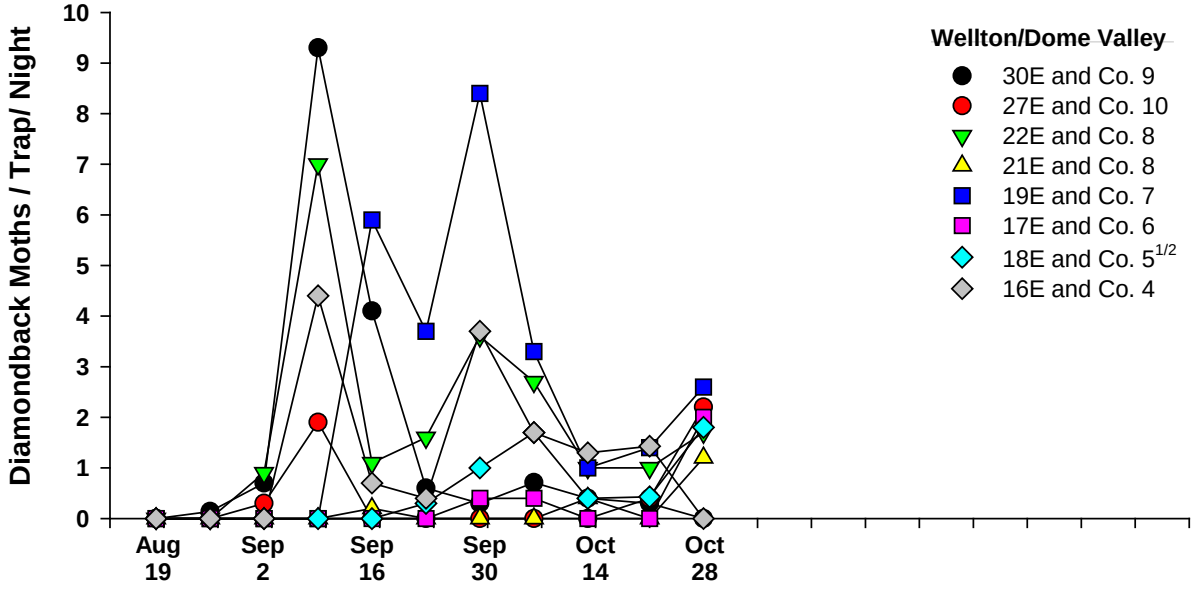
Trapping Data – by Location and Crop

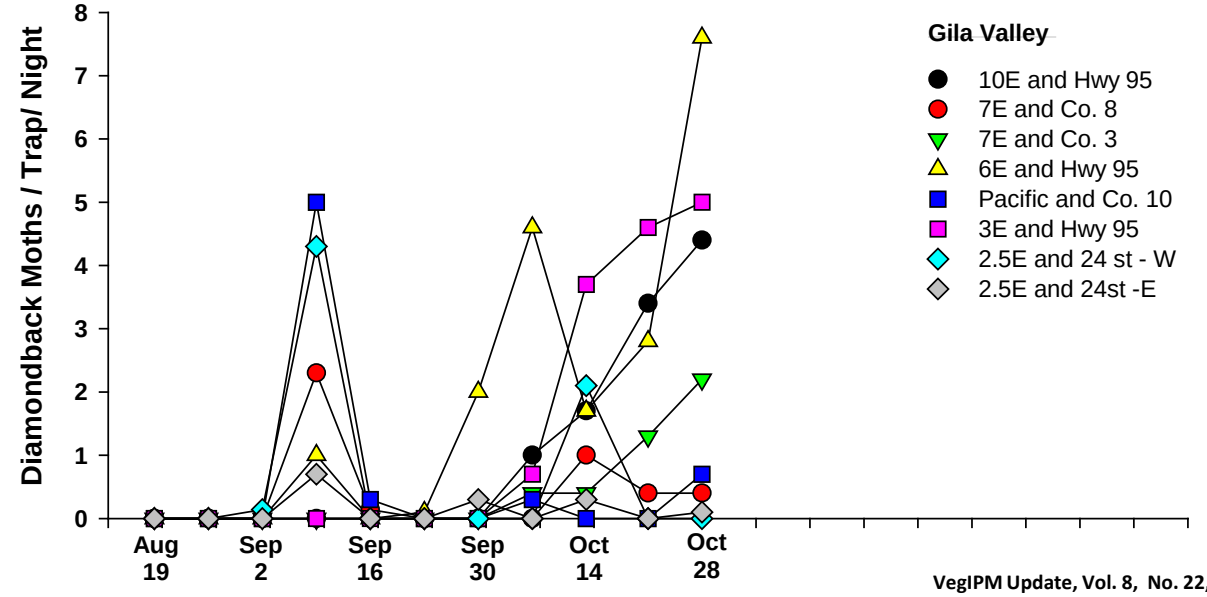
				Diamondback Moths / Trap / Week			
	Area	Location	Crop	7-Oct	14-Oct	21-Oct	28-Oct
39	Yuma Valley	Co. 13 and Ave G	Cauliflower TP	11	18	10	55
40	Yuma Valley	Co. 13th and Ave H	Fallow	7	3	5	14
41	Yuma Valley	Co. 12th and Ave G	Fallow	2	2	0	14
42	Yuma Valley	Co. 11 and Ave F	Brassicas	7	5	3	6
43	Yuma Valley	Co. 11 and Ave F1/2	Cauliflower TP	26	17	15	43
44	Yuma Valley	Co 11 and Fortuna	Cabbage TP	30	8	5	20
45	Yuma Valley	Co. 8.5 and Ave F	Cauliflower TP	6	28	13	65
46	Yuma Valley	Co. 8 and Ave E	Fallow	1	1	3	0
47	Yuma Valley	YAC (Hope Ave)	Cauliflower TP	55	14	28	161
48	Yuma Valley	Co. 7 and Ave C	Cauliflower TP	-	-	4	12
49	Bard/Winterha	Ross Rd and Perez	Cauliflower TP	7	3	7	11
50	Bard/Winterha	Flood and Hoppe	Broccoli	19	3	3	3
51	Bard/Winterha	Indian Rock/ Horne	Cauliflower	16	20	5	30
52	Bard/Winterha	Indian Rock/Picacho	Broccoli	down	6	3	33
53	Bard/Winterha	Ross and Picacho	Kale	71	112	65	52
54	Bard/Winterha	Horne and Arnold	Cauliflower	18	down	10	69
55	Bard/Winterha	Yuma and Rodenbagh	Broccoli	28	20	6	47

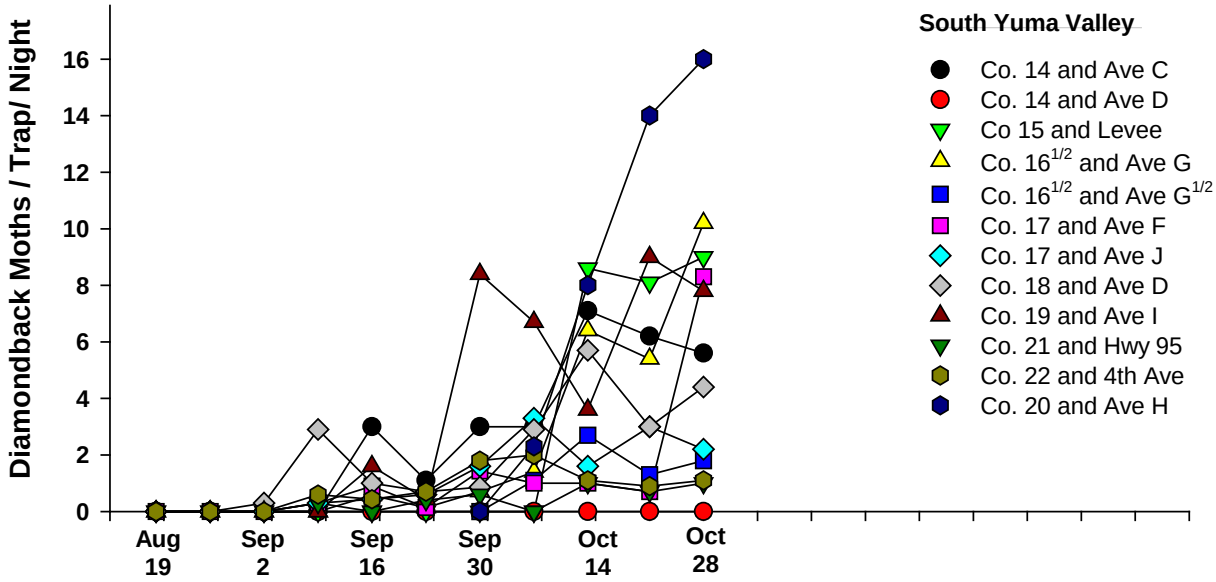
Historic DBM Trap Data – 1998-2001

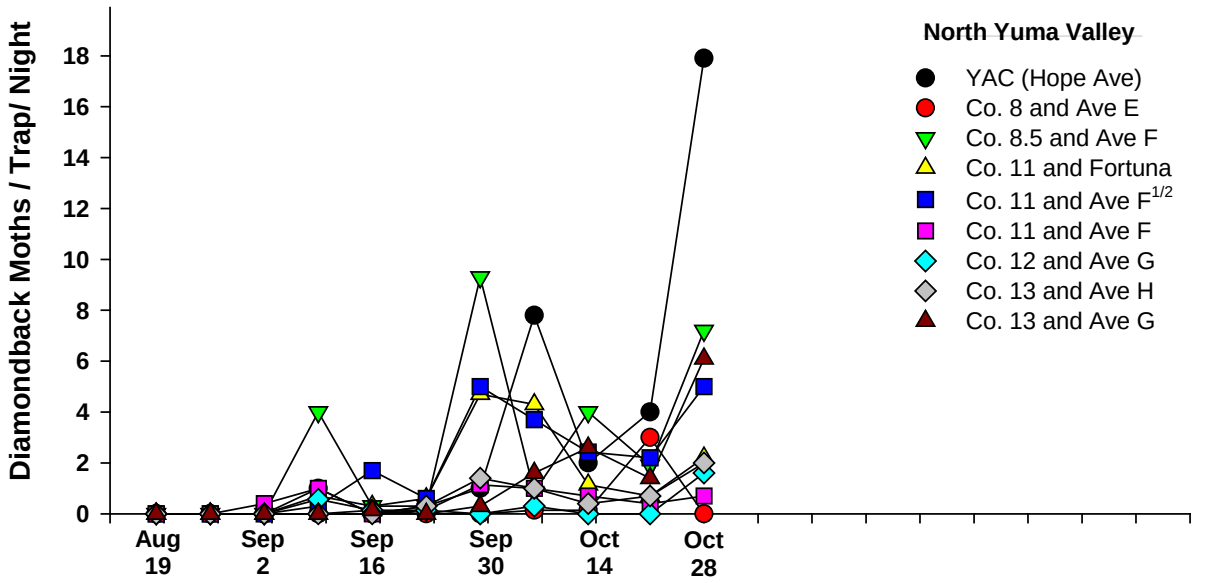


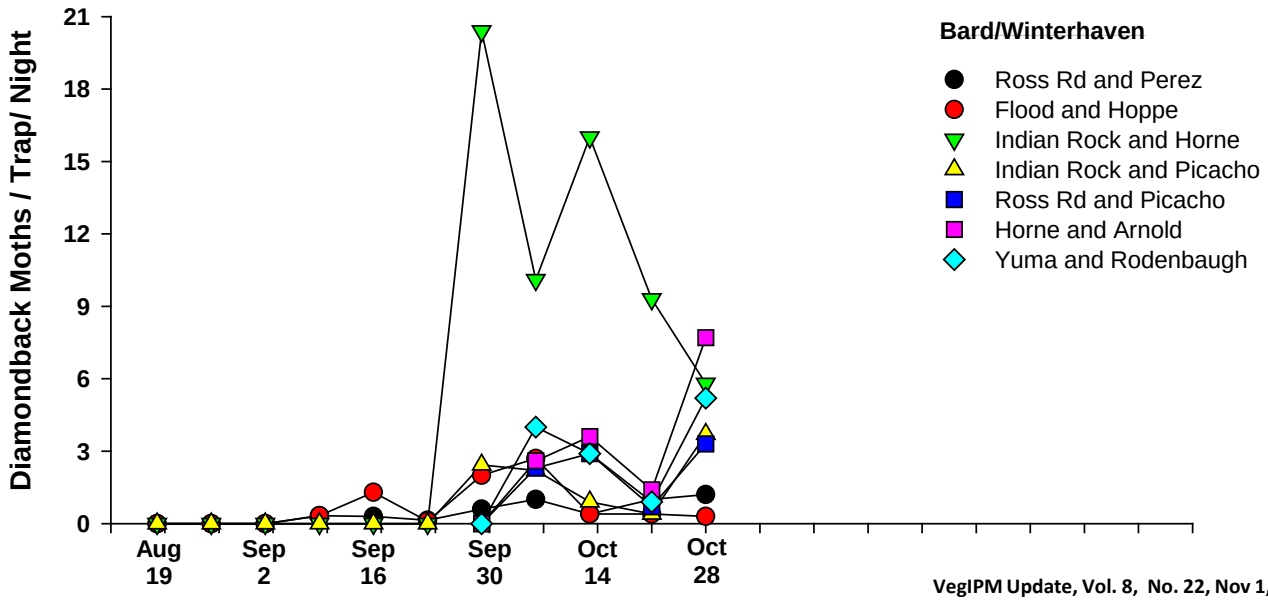

Diamondback Moths / Trap/ Night
16
14
12
10
8
6
4
2
0
Aug 19
Sep 2
Sep 16
Sep 30
Oct 14
Oct 28
Texas Hill-Tacna- Roll
50E and Co. 3
50E and Co. 1
42E and Co. 4
44E and Co. 3
41E and Co. 5
38E and Co. 4.5
36E and Co. 5
37E and Co. 7 - W
37E and Co. 7 - E
34E and Co. 6


Diamondback Moths / Trap/ Night
10
9
8
7
6
5
4
3
2
1
0
Aug 19
Sep 2
Sep 16
Sep 30
Oct 14
Oct 28
Wellton/Dome Valley
30E and Co. 9
27E and Co. 10
22E and Co. 8
21E and Co. 8
19E and Co. 7
17E and Co. 6
18E and Co. 5 1/2
16E and Co. 4


Diamondback Moths / Trap/ Night
8
7
6
5
4
3
2
1
0
Aug 19
Sep 2
Sep 16
Sep 30
Oct 14
Oct 28
Gila Valley
10E and Hwy 95
7E and Co. 8
7E and Co. 3
6E and Hwy 95
Pacific and Co. 10
3E and Hwy 95
2.5E and 24 st - W
2.5E and 24st -E


Diamondback Moths / Trap/ Night
0
2
4
6
8
10
12
14
16
Aug 19
Sep 2
Sep 16
Sep 30
Oct 14
Oct 28
South Yuma Valley
Co. 14 and Ave C
Co. 14 and Ave D
Co 15 and Levee
Co. 16 1/2 and Ave G
Co. 16 1/2 and Ave G 1/2
Co. 17 and Ave F
Co. 17 and Ave J
Co. 18 and Ave D
Co. 19 and Ave I
Co. 21 and Hwy 95
Co. 22 and 4th Ave
Co. 20 and Ave H


Diamondback Moths / Trap/ Night
0
2
4
6
8
10
12
14
16
18
Aug 19
Sep 2
Sep 16
Sep 30
Oct 14
Oct 28
North Yuma Valley
YAC (Hope Ave)
Co. 8 and Ave E
Co. 8.5 and Ave F
Co. 11 and Fortuna
Co. 11 and Ave F 1/2
Co. 11 and Ave F
Co. 12 and Ave G
Co. 13 and Ave H
Co. 13 and Ave G


Diamondback Moths / Trap/ Night
0
3
6
9
12
15
18
21
Aug 19
Sep 2
Sep 16
Sep 30
Oct 14
Oct 28
Bard/Winterhaven
Ross Rd and Perez
Flood and Hoppe
Indian Rock and Horne
Indian Rock and Picacho
Ross Rd and Picacho
Horne and Arnold
Yuma and Rodenbaugh