

# 2.2.7 Cultural Control



## Funding



United States  
Department of  
Agriculture

National Institute  
of Food and  
Agriculture

Specialty Crop Research Initiative  
Grant #2011-01413-30937

## Collaborating Institutions



Cornell University



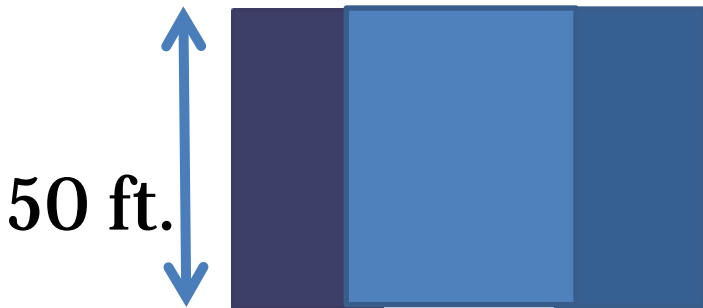
Virginia Tech



High densities of BMSB have been observed on both sunflower and sweet corn



# Trap cropping experiment – 2012



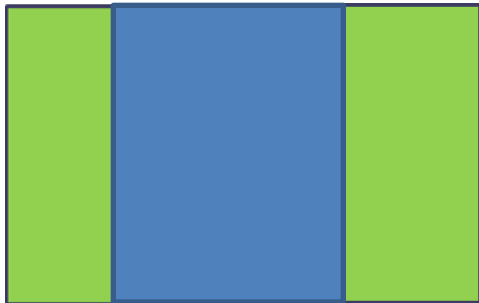
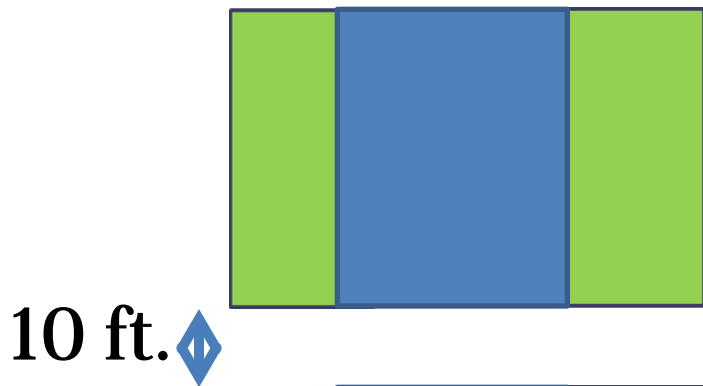
- 3 locations in southwest Virginia

- First planting- **3 June**

- Protected crop – bell pepper (2 internal rows)

– Trap crop (1 row on each side)

- Bell pepper
- Sunflower (multiple plantings)
- Sweet corn (multiple plantings)





# Data collection

- Weekly BMSB counts
  - Beginning 2 July - ten plants per row for each plot.
    - All life stages and species (9 weeks).
- Bimonthly pepper harvest
  - Beginning 2 August - 25 peppers per row (50 total) were picked and assessed for damage (3 – 4 times).

# Mean # SBs for 9 sampling periods on 20 plants (n = 3 locations).

	Sunflower/Pepper		Sweet Corn/Pepper		Pepper	
Life Stage	Sunflower	Pepper	Sweet Corn	Pepper	Border Pepper	Internal Pepper
Adults	7.3 ± 4.8	0.3 ± 0.3	6.3 ± 0.9	2.3 ± 0.7	1.3 ± 0.3	0.7 ± 0.7
Nymphs	13 ± 5.7	15.3 ± 12.5	9.0 ± 7.0	9.7 ± .8	17.3 ± 11.9	11.0 ± 11.0
Egg Masses	0.0 ± 0.0	0.7 ± 0.7	0.3 ± 0.3	1.0 ± 0.0	0.3 ± 0.3	1.0 ± 0.6

\* No significant difference between crops for all life stages.

# % stink bug damaged fruit (n=50)

				Pepper	
Date	Location	Sunflower	Corn	Border	Internal
6-Aug	Kentland 1	40	42	28	28
17-Aug	Kentland 1	64	44	40	46
10-Sep	Kentland 1	34	14	30	28
28-Aug	Kentland 1	28	28	26	24
Mean % SB damaged pepper		41.5 ± 7.9	32.0 ± 7.0	31 ± 3.1	31.5 ± 4.9
6-Aug	Kentland 2	18	22	28	30
17-Aug	Kentland 2	38	44	28	58
10-Sep	Kentland 2	30	48	44	40
28-Aug	Kentland 2	32	42	40	42
Mean % SB damaged pepper		29.5 ± 4.2	39 ± 5.8	35.0 ± 4.1	42.5 ± 5.8
2-Aug	Glenvar	36	46	56	46
16-Aug	Glenvar	50	22	38	36
29-Aug	Glenvar	22	40	34	42
Mean % SB damaged pepper		36.0 ± 8.1	36.0 ± 7.2	42.7 ± 6.8	41.3 ± 2.9

\* No significant difference between crops.

