

TIMELY INFORMATION

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PEANUT SCOUTING REPORT-2: THRIPS ABUNDANCE IN BIO-BASED INSECTICIDE REGIMES, PLUS OTHER UPDATES

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Here is another update on thrips populations from a biological control field study currently underway at the Gulf Coast Research and Extension Center, Fairhope, AL. Goal is to reduce dependence on granular insecticides (Temik 15G and Thimet 20G - all restricted use pesticides) for thrips management by integrating alternative insecticides (foliar sprays). Reduced application rates of synthetic insecticides will protect natural enemy populations and prevent ecological backlash. Continuation of the hot, dry weather for the past two weeks has caused heat stress on peanut plants making them more susceptible to thrips injury. Note that BotaniGard ES with BW439 (microbial insecticide with a feeding stimulant), QRD400 (Requiem - botanical insecticide), and Radiant (spinetoram- an isomer of spinosyn) are not currently registered on peanuts but these are registered for thrips management in many vegetable crops, hence of interest to me. Here are some of the thrips numbers to ponder upon.

Table 1. Bio-insecticidal treatments integrated with **Thimet 20G** for managing thrips in peanut, GCREC, 2009

		<i>Full recommended rate of insecticide</i>	<i>Average thrips population per plant</i>	
			<i>May 22, 2009</i>	<i>June 19, 2009**</i>
	<i>Treatment regime*</i>			
1.	Thimet (half rate) only	3.8 lb/A	0.6	3.4
2.	Thimet (half rate) + BotaniGard (half rate with BW439)		-	3.5
3.	BotaniGard (full rate with BW439) only	2 qt/A	-	1.9
4.	Thimet (half rate) + QRD400 (half rate)		-	2.9
5.	QRD400 (full rate) only	2 qt/A	-	1.3
6.	Thimet (half rate) + Radiant (half rate)		-	0.6
7.	Radiant (full rate) only	8 oz/A	-	1.0
8.	Untreated plots		0.9	3.9

* there are 4 replicates per treatment.

**two applications of bio-insecticides have been completed.

Table 2. Bio-insecticidal treatments integrated with **Temik 15G** for managing thrips in peanut, GCREC, 2009

	<i>Treatment regime*</i>	<i>Full recommended rates of insecticide</i>	<i>Average thrips population per plant</i>	
			<i>May 22, 2009</i>	<i>June 19, 2009**</i>
1.	Temik (half rate) only	6.7 lb/A	0.5	3.0
2.	Temik (half rate) + BotaniGard (half rate with BW439)		-	3.4
3.	BotaniGard (full rate with BW439) only	2 qt/A	-	1.9
4.	Temik (half rate) + QRD400 (half rate)		-	3.6
5.	QRD400 (full rate) only	2 qt/A	-	1.3
6.	Temik (half rate) + Radiant (half rate)		-	1.4
7.	Radiant (full rate) only	8 oz/A	-	1.0
8.	Untreated plots		0.9	3.9

* there are 4 replicates per treatment. **two applications of bio-insecticides have been completed.

Table 3. Bio-insecticidal treatments integrated with **Karate Z** for managing thrips in peanut at GCREC, 2009

	<i>Treatment regime*</i>	<i>Full recommended rates of insecticide</i>	<i>Average thrips population per plant</i>	
			<i>May 22, 2009</i>	<i>June 19, 2009**</i>
1.	Karate Z (full rate) only	2 oz/A	-	2.6
2.	Karate Z (full rate) alternated with BotaniGard (full rate with BW439)		-	2.2
3.	BotaniGard (full rate with BW439) only	2 qt/A	-	1.9
4.	Karate Z (full rate) alternated with QRD400 (full rate)		-	2.6
5.	QRD400 (full rate) only	2 qt/A	-	1.3
6.	Karate Z (full rate) alternated with Radiant (full rate)		-	0.9
7.	Radiant (full rate) only	8 oz/A	-	1.0
8.	Untreated plots		0.9	3.9

* there are 4 replicates per treatment. **thrips populations after one complete insecticidal rotation.

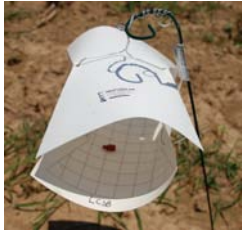
Preliminary observations have suggested an inverse relationship between thrips numbers and the rate of granular insecticides (see archived scouting report-1). Ground moisture at planting seemed sufficient for activation of granular insecticides. In the recent observations, the untreated plots have high thrips infestation levels (~4 thrips per plant). Although not conclusive at this point, data trends indicate that some reduced-risk insecticides may be usable in conjunction with reduced rates of granular products (Temik/Thimet). Thus, the trends in data are interesting but trends need to be interpreted carefully because this is first year, one location data. Observations from the Wiregrass Research Station are forthcoming.

I have also observed a lagging population of minute pirate bug (pictured on right) in some of the plots with reduced rates of RUPs (~1 to 3 bugs/plot); however, data is too inconsistent to be of any value. This doesn't mean that natural enemies are to be ignored because predatory insects have been shown as effective suppressors of thrips populations (Funderburk 2009). So watch over your natural enemy populations in the field and give them a fighting chance.



Pheromone traps at GCREC have indicated high moth activity of lesser cornstalk borer, corn earworm, tobacco budworm, and beet armyworm (BAW

caterpillars are abundant). The lesser cornstalk borer (a dry season pest) numbers exceeded 17 per trap. Corn rootworm population appears to be low from the trap counts.



For full information on Alabama IPM Pheromone Trap Network, please visit <https://sites.aces.edu/group/crops/peanut/default.aspx> and then click on 'IPM Pheromone Trap Network'. For assistance related to insect issues in peanuts or to provide feedback, please contact Ayanava Majumdar, cell phone: 251-331-8416, linc# 7*333, e-mail: azm0024@auburn.edu.

Picture sources: University of Georgia Extension, Ontario Ministry of Agriculture

Reference cited:

- Funderburk, J. 2009. Management of the western flower thrips (Thysanoptera: Thripidae) in fruiting vegetables. Florida Entomologist. 92: 1-6.