

### Summary #3

## “On-Farm Field Trials to Test the Effectiveness of Seed Nematocides for Managing Reniform and Root-Knot Nematodes on Cotton in Alabama - 2008”

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### Introduction:

Cotton yield reducing levels of both reniform and root-knot nematodes continue to infest and grow in all major cotton growing areas of Alabama. Cotton yield loss is variable but is documented to be significant. Except in severe stress conditions, yield loss from nematode damage is not visible. The seed applied nematocide treatments are gaining popularity with growers as they have only been commercially available for 3 and 4 years respectively for Aeris and Avicta. The question remains: “Are the seed applied nematocides a viable alternative to the proven and traditional nematocides of 3-5 gallons of Telone and 5lbs Temik in furrow?”

On-Farm Large Plot Cotton Nematode Trials give growers, Extension, consultants and suppliers a basis for making nematode management decision when conducted with objective and non biased tests.

Fields for these trials with selected Farmer Cooperators were sampled prior to planting to confirm nematode pressure. All trial fields chosen had very high populations of either reniform or root-knot nematodes, except the EV Smith Trial which was medium. Seed from the same seed lot was used for all treatments within each trial. Gaucho Grande was included as an “Untreated Check” treatment with no nematicide claims. All test treatments were planted in 3-4 randomized replications per location. Due to stand problems following flooding conditions, the EV Smith Trial was not weighed at harvest. In general all locations had enough soil moisture to achieve an adequate stand; all locations had varied dry conditions that dictated the crop response to the late summer tropical moisture.

### County

1. Barbour
2. Elmore
3. Elmore
4. Elmore
5. Macon

### Farmer-Cooperator

- Walt Corcoran  
Richard Edgar  
Carl and Paul Taylor  
Mark and Dale Taylor  
EV Smith –Greg Pate

### Extension Agronomist

- William Birdsong/Brandon Dillard  
Leonard Kuykendall  
Leonard Kuykendall/Jeff Clary  
Leonard Kuykendall/Jeff Clary  
Leonard Kuykendall/Jeff Clary

Farmer Cooperator	County	Variety	Nematode Species	Nematodes per 100 cc soil	Planting Date	Harvest Date
Walt Corcoran	Barbour	DP555BR	Root-knot		4/23/08	10/21/08
Richard Edgar	Elmore	DP143B2RF	Reniform	1030	5/6/08	10/20/08
Carl & Paul Taylor	Elmore	DP164B2RF	Reniform	3686	4/22/08	10/29/08
Mark & Ron Taylor	Elmore	DP164B2RF	Reniform	2282	4/22/08	10/3/08
EV Smith	Macon	DP555BR	Root-knot	55	5/22	NA

**Pounds Lint Cotton / Acre  
Change from UTC (Untreated Check)**

	<b># Randomized Reps</b>	<b>Gaucho UTC</b>	<b>Aeris</b>	<b>Avicta</b>	<b>5 lbs. Temik</b>
<b>Richard Edgar</b>	<b>3</b>	<b>548</b>	<b>-12</b>	<b>+ 9</b>	<b>+ 9</b>
<b>Carl &amp; Paul Taylor</b>	<b>4</b>	<b>996</b>	<b>+ 4</b>	<b>+ 19</b>	<b>- 28</b>
<b>Mark &amp; Ron Taylor</b>	<b>3</b>	<b>1417</b>	<b>+ 48</b>	<b>- 5</b>	<b>- 25</b>
<b>Walt Corcoran</b>	<b>4</b>	<b>936</b>	<b>+117</b>	<b>-28</b>	<b>+62</b>
<b>Average</b>			<b>+ 39</b>	<b>-1</b>	<b>+5</b>
<b>*2 year Average</b>			<b>+ 61</b>	<b>+ 17</b>	<b>+6</b>

**\*Same field in 2007, except Edgar is adjoining field**

**Discussion:**

Cotton yields ranged from below average to outstanding. The Walt Corcoran and the Mark and Ron Taylor Trials exhibited a numerical spread of 145 and 73 pounds lint cotton respectively between the treatments. The Richard Edgar and Carl and Paul Taylor showed little change between the treatments with lint cotton yield. The 2 year average does show an advantage of the seed nematacide treatments when compared to the standard 5lbs of Temik and untreated check treatments. Longer term studies over many years and trials still favors the proven and traditional nematacide treatments of 5lbs Temik and 3-5 gallons of Telone when compared to an untreated non-nematacide check. However this data gives more promise to the seed nematacide treatments as an alternative to the traditional proven nematacide treatments.

**Acknowledgement:**

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