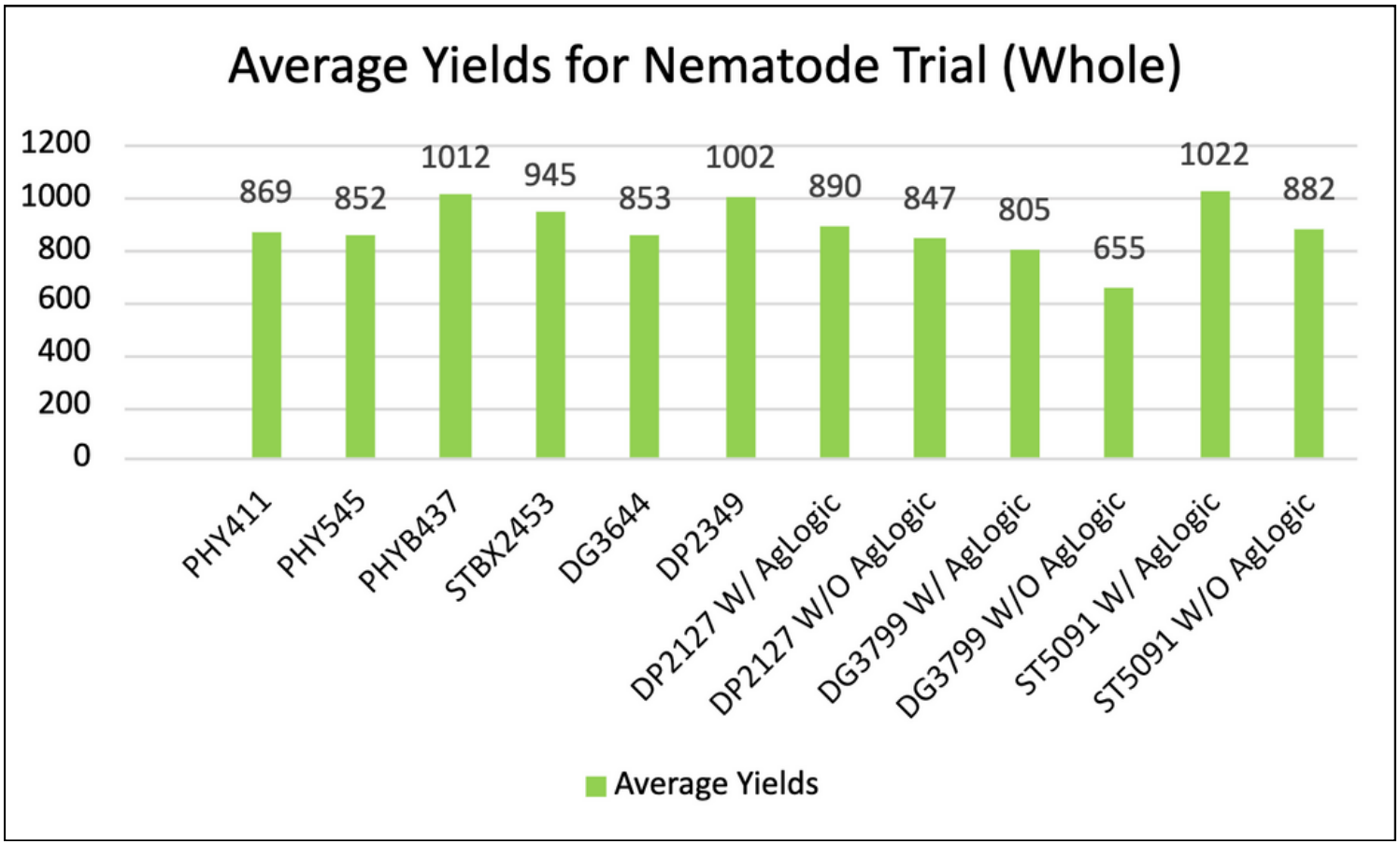
Cotton Trial Results: Effingham/Screven Counties

Screven County Nematode Trial Results '23



Overall Trial Details:

Plant Date: May 16th/17th
Harvest Date: Oct. 18th

- Four Rows/Variety, replicated four times across the field
- On average: 920-1900 row ft were harvested
- Non-nematode cotton (ST5091) was planted year before with 5lbs AgLogic

Management Plan

2 tons of litter in March
60 units of N just before bloom
100 pounds of kmag (21units)
2 shots of pix(12,16)
No fungicides
Burndown: paraquat
After planting: warrant and diuron
1st Post- Liberty/dual,
2nd Post- Liberty/warrant
Layby: dual, diuron, roundup

Zone Sample Study Details:

Using a method similar to zone sampling and the management zone recommendations in the cotton production guide, the added element to this year's trial was to look at the varieties at different pressures to see what the effect on yields would be. The study was implemented within rep 3 of the trial as a whole. using GPS coordinates, nematode samples were taken in three 100ft zones per variety/treatment in May after planting and again in September. Before the harvest of the full trial, 10ft of row was randomly selected from each zone and hand picked to interpret the yields.

Screven County Nematode Trial Results '23

RKN Counts May and Sept.

	5/30/2023	9/27/2023
PHY411	36	3
	6	0
	12	0
PHY454	7	0
	48	0
	17	0
PHYB437	11	129
	2	76
	3	0
STBX2453	8	23
	5	4
	21	37
DG3644	4	13
	11	26
	33	0
DP2349	9	30
	2	7
	32	1
DP2127 W/AgLogic	19	528
	28	711
	62	421
DP2127 W/O AGLOGIC	8	333
	2	597
	6	654
DG3799 W/ AGLOGIC	2	994
	6	1307
	3	1128
DG3799 W/O AGLOGIC	1	1455
	2	1372
	5	1064
ST5091 W/ AGLOGIC	10	7
	14	18
	1	129
ST5091 W/O AGLOGIC	5	151
	24	210
	32	120

Variety	avg % Change in RK Counts
PHY411	-97
PHY454	-100
PHYB437	1558
STBX2453	81
DG3644	87
DP2349	129
DP2127 W/AgLogic	1899
DP2127 W/O AgLogic	14871
DG3799 W/ AGLOGIC	36261
DG3799 W/O AGLOGIC	78360
ST5091 W/ AGLOGIC	4266
ST5091 W/O AGLOGIC	1323

Connecting Letters Report AVG Yield/10FT OF ROW

Level		Mean
PHYB437	A	365.91333
STBX2453	A	333.45667
DP2349	A	330.33000
DP2127 W/O AgLogic	A B	302.79333
PHY411	A B	283.59667
ST5091 W/O AgLogic	A B	279.86000
ST5091 W/ AgLogic	A B	270.70000
DP2127 W/ AgLogic	A B	269.66000
PHY545	A B	268.61333
DG3644	A B	255.34333
DG3799 W/O AgLogic	A B	245.16667
DG3799 W/ AgLogic	B	188.07333

Levels not connected by same letter are significantly different.

*DG3799 W/ AgLogic was seen to have a large amount of boll lock during the hand harvesting

Conclusions:

In the overall trial ST5091 W/ AgLogic, PHYB437 (475), and DP2349 were not statistically different and yielded the highest. When viewing the Zone Results, you can see that the yields of PHYB437 and DP2349 were again at the top along with STBX2453. Though it is worth noting that statistically only DG3799 W/AgLogic was different than the top yielders.

The biggest takeaway from the zone trial work would be the nematode populations at the end of the season. Samples were taken after planting and showed minimal numbers in the zones, but by September the nematode populations were significantly higher in some treatments than others. Some populations can be tied to the yields seen as well as other in field stress that was observed. Timing of samples, variety selection, and management strategies should not be after thoughts. These may not result in yield differences this year, but nematode population management is key to sustainable production year after year.

UNIVERSITY OF GEORGIA
EXTENSION