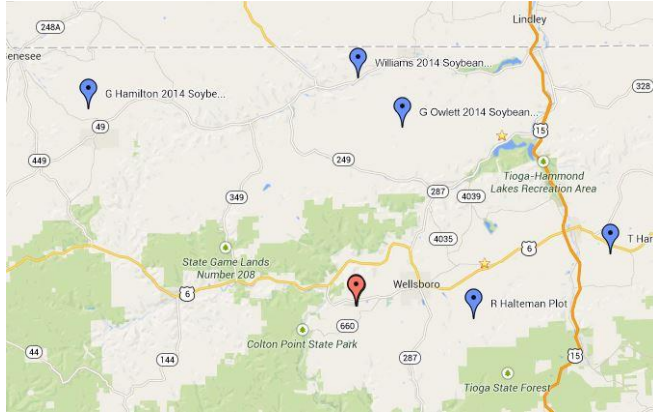


NE PA Region Final Year Soybean Crop Tour and Crop Conferences

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Final year report of the 6 soybean plots in Tioga and Potter Counties. 2-24-15



Description of Approach

1. Identify the top three limiting factors in yield production

Methods:

6 farmers across the Northern Tier each planted a 7 variety soybean plot along with their commercial soybean fields. All plots were planted in the same order.

The Plots are Doeblers 1713, TA Seeds 1719, Seedway 1932, Seedway 2013, Chemgro 2146, Doeblers 2212, Pioneer 22T41

Detailed Research approach:

1. PSU extension is documenting and following all production factors on the field level , including soil type, soil nutrients variety traits, pest and disease pressure, field mapping, combine losses, etc.
2. **Final**, we have gathered the following data and have followed with weekly field visits.
 - a. 5 plots were harvested with grain cart, and one plot never was weight harvested
 - b. Plot elevation ranged from 1200 to 2200 Feet.
 - c. 6 fields plots have been planted averaging about 3 acres in plot size per farm
 - d. 3 plots were planted May-31 to June 5th, while the other 3 were planted June 16-20th

- e. 2 plots are grain drill planted and 4 are corn planter (30 Inch rows)
 - f. 3 plots are No-tilled and 3 are disked and one was plowed/disked.
 - g. 5 out of 6 plots had corn and the Prior crop.
 - h. 3/6 plots had manure applied (1 is Hog Manure)
 - i. 3/ 6 plots applied fertilizer at soybean planting time. (4/6 applied a broad cast fertilizer before planting)
- 2 of 6 plots hosted a late summer/ fall field day for the formal education of the soybean plot progress and yield. PSB was highlighted as the major Sponsor of this project. PSB was referenced in all media and field days and the sponsor of the project.
 - PSB was highlighted during the Tioga County Fair Ag 5K

PSB was listed online with the PSU UAV online web cast and for a 2 weeks on the Front of the PSU university web page. <http://news.it.psu.edu/article/penn-state-crop-educator-explores-drone-driven-crop-management> This report gained too much attention to the project.

Summary Documents:

- Northern Tier soybean results are being used in the 2015 meeting season on the PSU/ PSB soybean factsheets.
- Plot results are presented at 2015 crop days
- UAV Fly over video and pictures did occur: These Flights were late August and September 2014 -Remote fly over video mapping: <http://www.remote-intelligence.com/> & A.R. Parrot.
- PA Onestop Maps were conducted on all farms to document the soil types-

Earlier fields planted “A” fields produced ~5 more bushel than the later planted “B” Fields but one of earlier planted fields never recovered from Inoculation problems. (Farm1,5,2)

Fields generally yielded better with 12-32 lbs of N fertilizer applied (commercial or manure) on the later planted fields. (Farm 3,4)

Pre inoculated seed still needs more inoculate on new soybean fields in northern tier.

Summary Yield data chart:

Tioga Soybean plots	Farmer Fields and Yields										Rank Average	Yield Average
	A Notill G. Drill No Fert Repeat Field		A till, C. Planter w/ Fert New Field		B notill C. Planter w/ Fert New Field		B Notill C. Planter w/ Hog Fert. Repeat Field		A Notill G. Drill No Fert Repeat Field			
Variety	Farm 1		Farm 2		Farm 3		Farm 4		Farm 5			
Doeblers 1713	43.76	3	25.17	4	35.89	6	30.22	7	45.28	7	5.4	30.05
TA Seeds 1719	47.92	2	18.02	7	22.91	7	37.15	6	56.06	2	4.8	30.34
Seedway 1932	43.63	5	18.07	6	46.72	1	42.65	2	53.33	3	3.4	34.07
Seedway 2013	51.67	1	18.21	5	45.81	2	39.46	5	58.67	1	2.8	35.64
Chemgro 2146	25.98	7	32.23	3	41.51	4	42.53	3	47.29	6	4.6	31.59
Doeblers 2212	43.69	4	33.03	2	42.64	3	47.18	1	54.46	5	3	36.83
Pioneer 22T41	42.71	6	42.38	1	40.9	5	41.94	4	55.15	4	4	37.18
Ave Yield of 7 Plot only	42.77		26.73		39.48		40.16		52.89			33.67

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