VC Peanut News – Winter 2018

South Carolina Annual Meeting, January 25, 2018
The Annual South Carolina State Peanut Growers' Meeting will be held on January 25th at the Santee Conference Center.

List of speakers to include Albert Culbreath, David Jordan, Dell Cotton, Maria Balota, Tyron Spearman and Clemson University specialists.

Registration and industry exhibits begin at 8:30 am. Stop by for the latest peanut production information and market updates. Contact Dan Anco at 803-284-3343 x261 or danco@clemson.edu with questions about the meeting or if you would like to be a sponsor.

The Santee Conference Center is located at 1737 Bass Drive/SC-15, Santee, SC 29142 and has plenty of room for parking.

Dan Anco
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All in all, 2017 was a welcomed sight after two years of challenging weather back-to-back. Individual fields always vary, but for the most part fairly frequent rains were forgiving, temperatures generally didn't remain excessively high, and South Carolina was spared the brunt of several hurricanes and tropical storm systems. It was also nice to see contract prices better than they had been in 2016. South Carolina acres were up this year at just over 120,000 acres, and our state average yield is looking to come in around 4,000 lb/A.

Late Leaf Spot

Late leaf spot pressure was higher again this year for many fields, particularly many Virginia type varieties. This is coming from a number of different sources, and while this will be one of the topics we'll visit more during our winter meetings, one of the points to mention now is how increased acres of peanut production in the state over the years has increased the availability of spores for initiating infections in the spring and summer. This means that while some things stay the same (think the value of rotating away from peanut for multiple years, two to three at a minimum, scouting and being vigilant against volunteer peanuts), other things will need to change if we want to preserve yield productivity. Changing game plans is as situational as anything, along the lines of "if it ain't broke don't fix it." That being said, in two different fields where we had early-season and elevated late leaf spot pressure combined with susceptible varieties (Gregory and Emery), starting a five-spray straight Bravo/tebuconazole program at 45 days after planting didn't provide commercially acceptable control and had more than 50% defoliation come digging time. Certainly, this same program in a lower pressure field combined with a less susceptible variety (Georgia 06G) had less than 5% defoliation at the end of the season. Paired with a susceptible variety (Gregory) in a fourth test in the same lower disease pressure field, Bravo and tebuconazole in a 6 spray program had about 10% defoliation at the end of the season. All this to say that the same or very similar programs can perform quite differently under different pressures and situations.

For high late leaf spot pressure scenarios, adding a premium product at 60 DAP often helped, but it often wasn't enough to prevent significant defoliation, typically also having defoliation in and around 30%. In addition to varietal resistance, crop rotation, and early planting, one of the things that helped against high late leaf spot pressure was programs that had effective systemic fungicide protection earlier than 60 DAP. In a season long Bravo-teb program, applying 4.3 fl oz/A Proline at 45 DAP (37% defoliation) typically had less defoliation than programs that included one to two applications of 10.7 fl oz/A Provost Opti and/or 8 oz/A Elatus at 60 and 90 DAP (> 58% defoliation) (high pressure field). In several high pressure tests on late leaf spot, Elatus appeared to not perform much better than Bravo + tebuconazole. Provost Opti wasn't far behind Elatus in terms of late leaf spot control but in some cases was significantly better than Elatus, making it still a beneficial product to have as a rotational chemistry class. Not too long ago Elatus looked excellent for managing late leaf spot, so it is a bit sad to see it be less effective in this year's tests. Nevertheless, Elatus has maintained excellent white mold activity and continues to be a good tool for managing white mold. Propulse in-furrow at planting (followed by a straight Bravo program, Table 1) was another treatment with significantly reduced

defoliation compared to a straight Bravo program, 28% defoliation with Propulse in-furrow compared to straight Bravo's ~65% defoliation. Miravis is a new product scheduled to become available in 2019. Since this is still another year away from being accessible, I won't spend too much time on it, but needless to say it is exciting and has been looking exceptional against late leaf spot in multiple tests.

For many fields, particularly when growing a susceptible variety, South Carolina is at the tipping point of regularly incorporating earlier fungicide applications into the management program. We saw volunteers with late leaf spot lesions in the first week of June in several fields, which was about 28 DAP for nearby peanuts. That means the spores that caused those infections were around by at least 21 DAP. Does this mean we should all start spraying at 21 DAP? No, it does not, but it does illustrate how earlier protection around 30 to 40 DAP could help prevent early infections, particularly if recent rotations have been skimpy or volunteer peanuts are present. Always good to know your field, or someone else's field for that matter if you are the one managing it.

Varieties

In the past five years more than 11 commercial peanut varieties have been released. After becoming released and named, it still ends up taking another few years to ramp up seed production enough before new varieties become available to most growers. That being said, our variety performance trial this year has some familiar standbys and some newer ones that may not yet be household names. Generally, all the runners examined in this test yielded greater, sometimes significantly greater, at 150 DAP than they did at 139 DAP. The reverse was often the case with the Virginia types, yielding substantially better at 139 DAP than at 150 DAP (Table 2). Some of the top performing runners included ACI 3312, FloRun 331, Georgia 12Y, Georgia 16HO (high-oleic version of Georgia 06G), and TUFRunner 297. All these varieties yielded greater than 6000 lb/A at 150 DAP. For the Virginia types, there were no significant differences between varieties in this trial at the 139 DAP timing, with all varieties yielding well between 5000 and 5500 lb/A. So far Bailey II, the high-oleic version of Bailey, has been looking very similar with respect to disease performance as the original Bailey, with Bailey II showing a slight yield advantage over Bailey in several tests (only about 100 lb/A here).

Table 3 summarizes this year's disease screen trial (fungicide inputs limited to three Bravo applications). The varieties in the grouping with the least late leaf spot defoliation were TifNV-High O/L, FloRun 157, ACI 1501, Georgia 12Y and ACI 2070 (all < 27% defoliation). All Virginia types examined were in the upper grouping for defoliation, as was ACI 1850, TUFRunner 511, FloRun 107 and Georgia 13M (all > 72% defoliation). White mold pressure was fairly low in this trial, not exceeding 8% severity. For tomato spotted wilt, most varieties had 10% or less stunting in this trial. The grouping with the most TSW stunting included FloRun 157 (33% stunting) and TUFRunner 511 (26% stunting). The second highest grouping also contained ACI 789 (25% stunting) and ACI 2070 (20% stunting).

Back to thinking about late leaf spot management, how much a particular management plan might need to be changed depends a lot on field pressure, and as we can see from the variety disease performance data, how susceptible each grown variety is to the disease as well. I look forward to seeing many of you during our production meetings this winter.

Table 1. 2017 fungicide trial at Blackville, SC.

Program	Late leaf spot defoliation (%)	Grouping	White mold severity (%)	Grouping	Yield (lb/A)	Grouping
Bravo (5 sprays at 24 fl oz/A)	64.4	A	12.9	A	3762.93	D
Bravo program with Elatus 9.5 oz/A at 60 and 75 DAP	54.6	A	2.4	C	4208.44	ABC
Bravo program with Miravis 3.5 fl oz/A at 60 and 75 DAP	5.6	D	11.3	AB	4206.2	ABC
Bravo program with Provost Opti 10.7 fl oz/A at 60 and 75 DAP	33.2	B	4.2	BC	4244.46	ABC
Propulse 13.7 fl oz/A in-furrow + Bravo program	28.0	B	15.3	A	4028.4	CD
Propulse in-furrow + Bravo program + Elatus at 60 and 75 DAP	23.4	BC	3.7	BC	4450.79	A
Propulse in-furrow + Bravo program + Miravis at 60 and 75 DAP	5.0	D	15.0	A	4295.91	ABC
Propulse in-furrow + Bravo program + Provost Opti at 60 and 75 DAP	16.8	C	1.3	C	4443.21	AB

Table 2. 2017 variety trial yields at Blackville, SC.

Market type	Variety	Yield (lb/a) 139 DAP	Grouping	Yield (lb/a) 150 DAP	Grouping
Runner	ACI 3312	5936.38	BCD	6280.7	AB
	ACI 789	4012.83	J	5246.73	EFG
	AU-NPL 17	5464.43	CDEF	5630.49	CDE
	FloRun 107	4660.95	HI	5204.95	EFG
	FloRun 157	4353.93	IJ	4142.66	J
	FloRun 331	6031.15	ABC	6291.75	AB
	Georgia 06G	4348.08	IJ	4435.74	IJ
	Georgia 09B	5595.47	CDE	5623.9	CDE
	Georgia 12Y	5978.44	BCD	6323	AB
	Georgia 13M	4838	GHI	5480.23	CDEF
	Georgia 14N	4347.07	IJ	4979.36	FGH
	Georgia 16HO	6083.21	ABC	6664.83	A
	TUFRunner 297	6022.54	ABC	6424.27	AB
	TUFRunner 511	5382.82	DEFG	5851.84	BCD
	TifNV-High O/L	5615.09	CDE	5883.41	BCD
Virginia	Bailey II	5412.57	A	4938.34	AB
	Bailey	5335.62	A	4599.21	BC
	Emery	5085.88	AB	4256.58	C
	Sullivan	5416.56	A	4322.77	C
	Wynne	5106.99	A	4420.67	C

Table 3. 2017 disease screen trial performance, Blackville, SC.

Variety	Tomato spotted wilt stunting (%)	Grouping	Late leaf spot defoliation (%)	Grouping	White mold severity (%)	Grouping
ACI 1501	2.9	H	23.3	KL	0.8	B
ACI 1850	6.9	EFGH	78.3	ABC	1.7	B
ACI 1989	6.9	EFGH	53.3	EFGH	2.5	B
ACI 2070	19.5	BC	10.0	L	1.7	B
ACI 3312	5.2	FGH	45.0	FGHI	4.2	AB
ACI 789	24.7	B	58.3	DEFG	4.2	AB
AU-NPL 17	4.0	GH	35.0	IJK	3.3	AB
Bailey	4.0	GH	85.0	A	0.0	B
Bailey II	6.9	EFGH	86.7	A	1.7	B
Emery	9.8	DEFGH	85.0	A	0.8	B
FloRun 107	11.5	DEFG	73.3	ABCD	0.0	B
FloRun 157	33.3	A	25.0	JKL	1.7	B
FloRun 331	13.8	CDE	46.7	EFGHI	0.8	B
Georgia 06G	10.3	DEFGH	63.3	BCDE	2.5	B
Georgia 09B	16.7	CD	38.3	HIJK	7.5	A
Georgia 12Y	4.0	GH	21.7	KL	0.8	B
Georgia 13M	9.2	DEFGH	73.3	ABCD	0.8	B
Georgia 14N	5.7	FGH	41.7	GHIJ	0.0	B
Georgia 16HO	8.6	EFGH	63.3	BCDE	2.5	B
Sullivan	6.3	EFGH	80.0	AB	0.0	B
TUFRunner 297	3.4	H	61.7	CDEF	3.3	AB
TUFRunner 511	26.4	AB	75.0	ABCD	0.8	B
TifNV-High O/L	8.0	EFGH	26.7	JKL	7.5	A
Wynne	12.6	CDEF	83.3	A	0.8	B