Varieties

Sometimes to see how good something is, it needs to be put to the test, and that's just what this Variety Trial was. To see what kind of performance we could anticipate from different varieties, we compared runner and Virginia-type peanut performance under favorable conditions including irrigation and aggressive disease management. While grades in the trial were somewhat lower in 2016 compared to previous years, the overall rankings were generally consistent with previous years. Fortunately, grade reports from most of the state have been coming back fairly good considering the year we've had.

While each variety may be at optimal maturity at slightly different times after planting, as a compromise among the earlier and later maturing varieties, peanuts were harvest at two target digging dates: 138 and 152 DAP. These targets ended up with actual dig dates of 139 and 156 DAP. The table results reflect the digging date where yield and acre value were greatest for each variety. The Virginia-type varieties characteristically performed better at the earlier digging date; moderate-maturity runners that also performed better at 139 DAP were TUFRunner 297, Georgia 09B and FloRun 157. Runners yielding better at 156 DAP were FloRun 107, Florida-07, Georgia 06G, Georgia 12Y, Georgia 13M, Georgia 14N, TUFRunner 511, TUFRunner 727 and TifNV-High O/L. While it was interesting to see the moderate maturity Georgia 06G and TUFRunner 511 perform slightly better at 156 DAP in this trial, the difference between the two dates was relatively small, and these two should still be considered moderate maturity varieties. Georgia 06G yielded ~150 lb/A more, TSMK graded half a point lower and acre value was ~$15.5/A more at 156 DAP than at 139 DAP. For TUFRunner 511, yield at 156 DAP was 90 lb/A greater, TSMK was half a point higher and acre value was $6/A higher than at 139 DAP – fairly modest differences. This goes back to maturity guidelines being just that, guidelines that can bend a little under different growing conditions.

The highest yielding runner was TUFRunner 297, which also had the highest acre value ($962/A) and grade. Georgia 06G graded just as well as TUFRunner 297, but this year it yielded noticeably less than many runners, including Georgia 12Y, Georgia 13M and TUFRunner 511. Bailey was the top yielding Virginia, with Sullivan the next highest. Sullivan was valued at $807/A, which while ~$110/A less than Bailey, this was greater than more than half of the runners in the trial. Wynne was not far behind Sullivan, while Sugg and CHAMPS values were significantly less the other Virginia-types.

Variety trial yield and grade results, 2016.[†]

Runners	Yield (lb/A)	TSMK %	ELK %	OK %	Net loan value ($/ton)	Acre value ($/A)
TUFRunner 297	5583 a	70.8 a	0.0	4.0 bcde	344	962 a
Georgia 12Y	5203 ab	66.8 cdef	0.0	3.9 cde	327	852 ab
Georgia 13M	5249 ab	65.9 def	0.0	4.3 bcd	323	848 ab
TUFRunner 511	5054 ab	69.3 ab	0.0	3.2 efg	334	846 ab
TifNV-High O/L	5076 ab	68.8 abc	0.0	2.6 g	330	837 bc
Florida-07	4966 bc	66.7 cdef	0.0	2.7 fg	321	798 bcd
Georgia 14N	4725 bcd	66.4 def	0.0	3.6 def	324	767 bcde
TUFRunner 727	4481 cde	67.9 b-f	0.0	4.1 bcd	330	739 cdef
Georgia 06G	4203 ef	70.6 a	0.0	2.6 g	341	717 def
Georgia 09B	4062 ef	69.3 ab	0.0	4.7 bc	336	685 ef
FloRun 107	4202 def	64.8 f	0.0	3.8 cde	315	665 f
FloRun 157	3495 g	68.0 bcde	0.0	4.8 b	329	575 g
Virginias						
Bailey	5381 a	66.9 a	41.1	2.6	340	916 a
Sullivan	4911 b	64.2 bc	41.1	3.0	328	807 b
Wynne	4845 b	62.5 c	40.3	2.7	320	775 b
Sugg	4029 c	66.1 ab	42.4	2.3	336	679 c
CHAMPS	3746 c	62.5 c	39.3	2.8	319	599 d

[†]Values within each column and section followed by the same letter are not significantly different ($\alpha = 0.05$).

Late Leaf Spot

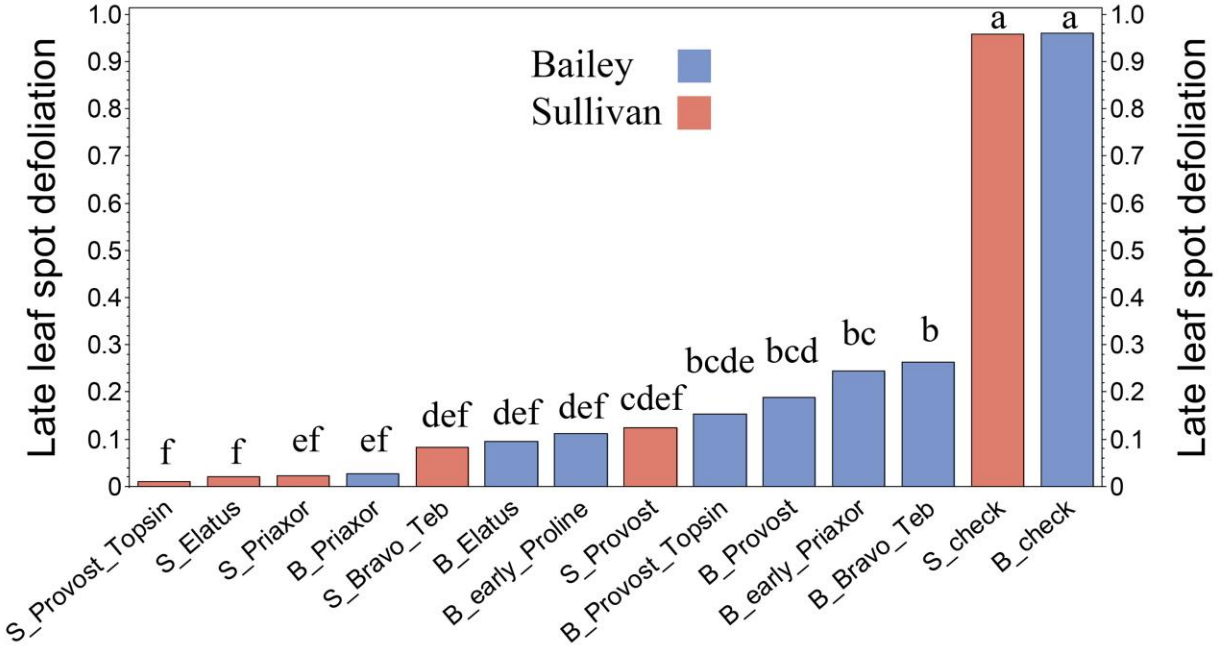
For South Carolina peanuts, late leaf spot is our most consistent and economically important foliar fungal disease. Many probably remember when tebuconazole was effective in managing late leaf spot, but as we know too well, late leaf spot has since largely become resistant to tebuconazole. To keep late leaf spot at bay, growing Bailey peanuts has been an ace in the hole for a good stretch of time, and for the most part we could see minimal disease and get good yields using only a chlorothalonil fungicide management program (including tebuconazole for soil disease like white mold). Now we have been seeing much more late leaf spot on Bailey this year than we have in the past. This includes programs above and beyond chlorothalonil + tebuconazole. What might be happening? Could this fungus be starting to overcome Bailey as it did tebuconazole? Did some fields receive questionable generic chlorothalonil products? While the absolute reason is likely a combination of factors, what's important now is what might we be able to do going forward. As far as Bailey is concerned, the industry appears to be moving towards other Virginia-type varieties that are high-oleic (e.g., Sullivan and Wynne) and have better handling and shell integrity characteristics. How much of this transition will occur in 2017 remains to be seen, but it looks like we will see noticeably less total acres of Bailey. Depending on contracts and seed availability, many of us may be again growing Bailey in 2017.

To help sort out which programs may be more effective for managing late leaf spot on Bailey and Sullivan, which is probably the available high-oleic variety most similar to Bailey, we compared fungicide programs. This trial contained programs (based on 5 applications of Bravo +

tebuconazole) ranging in cost from about $45 (5 applications of Bravo + tebuconazole) to $61/A/season (5 applications of Bravo + tebuconazole with an early shot of Proline applied 30 DAP). With the exception of early product applications (30 DAP applications of Proline at 2.6 fl oz/A and Priaxor at 4 fl oz/A), premium product substitutions occurred at 60 DAP (the one other exception to this was in the Provost + Topsin program where Provost was applied 60 DAP and Topsin + Bravo + tebuconazole at 75 DAP). Remaining product rates were applied as follows: Bravo at 1.5 pt/A, Elatus at 9.5 oz/A, Priaxor at 6 fl oz/A, Provost at 10.7 fl oz/A, tebuconazole at 7.2 fl oz/A and Topsin at 10 fl oz/A.

From the defoliation results, the programs with the statistically least defoliation (< 13%) were Sullivan + Provost + Topsin, Sullivan + Elatus, Sullivan + Priaxor, Bailey + Priaxor, Sullivan + Bravo + tebuconazole, Bailey + Elatus, Bailey + Proline at 30 DAP and Sullivan + Provost. In this test over all treatments, Sullivan collectively had ~8% less defoliation than Bailey, and of the eight treatments in this lowest statistical grouping, five of them were with Sullivan. Bailey managed only by Bravo + tebuconazole had ~26% defoliation, which is more than we would like to see near harvest time. Looking at the yield results, the programs with the statistically greatest yields were Bailey with the early shot of Priaxor, Sullivan + Elatus, Sullivan + Provost + Topsin, Bailey + Elatus, Sullivan + Priaxor, Bailey + Priaxor and Bailey + Provost. It was interesting to see that while Bailey + Priaxor at 30 DAP had the numerically greatest yield, it still had ~25% defoliation. This is right around the point where we can start seeing considerable yield loss, and so another look from a separate field-year will help firm up its consistency. While we didn't have enough room to include plots of Sullivan with early shots of Priaxor or Proline, when looking at the treatments in common for both Bailey and Sullivan, these conditions resulted in Sullivan yielding ~380 lb/A more than Bailey. If we look back at the Variety Trial results, Bailey yielded ~470 lb/A more than Sullivan. To keep this in perspective, the Variety Trial was managed with a much heavier program (~$84/A) and consequently had less late leaf spot disease. These results support Sullivan as being less susceptible to yield loss in the presence of late leaf spot than Bailey. Elatus and Priaxor performed well with both varieties, while Provost + Topsin performed well with Sullivan and slightly less well with Bailey. The standard Bravo + tebuconazole program provided good control of defoliation in Sullivan and less control in Bailey, but it was not associated with yields as good as the best performing treatments.

I hope 2017 is a good year for everyone, and I look forward to seeing you at the State Peanut Growers' Meeting in January (the 26th) and the following County Production Meetings in February and March.


Late leaf spot defoliation
Bailey
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S_Provost_Topsin
S_Elatus
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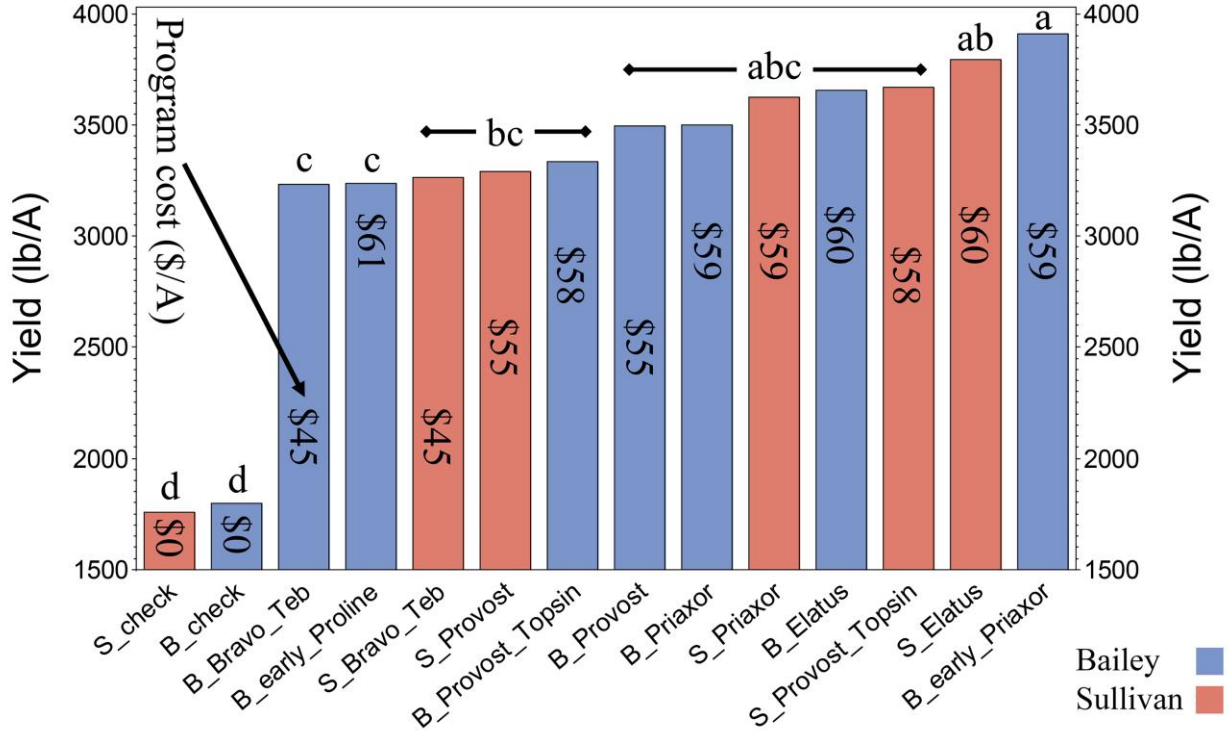
Yield (lb/A)
Program cost ($/A)
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S_check
B_check
B_Bravo_Teb
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Bailey
Sullivan