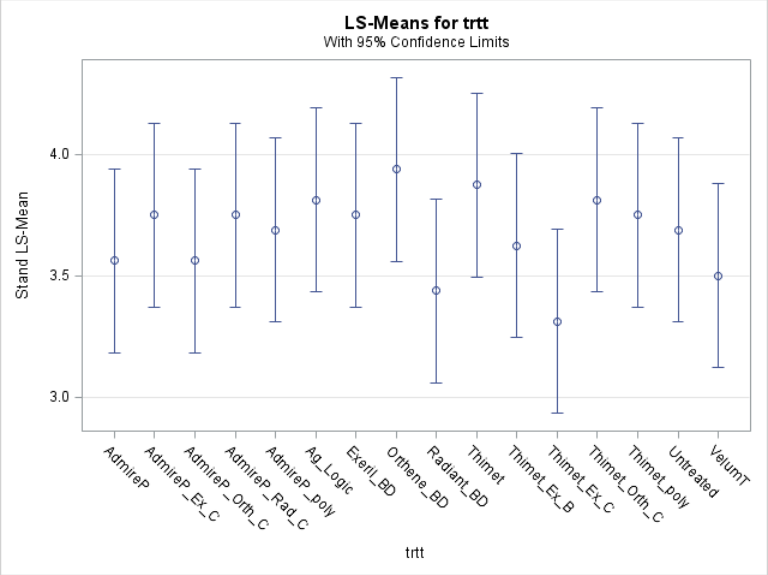
Thrips/TSW Trial 2017
Blackville, South Carolina
Dan Anco, James Thomas

TUFRunner 511 peanuts were planted 27 April 2017 at a rate of 5.8 seed/ft and depth of 2" in bedded single rows spaced 38". Plots were four rows by 40'. Treatments were replicated four times and arranged according to a randomized complete block design. The field has been in a three-year rotation (two years out of peanut). The field was not irrigated. GPS coordinates: 33.3560 N, -81.3089 E and 33.3572 N, -81.3091 E.

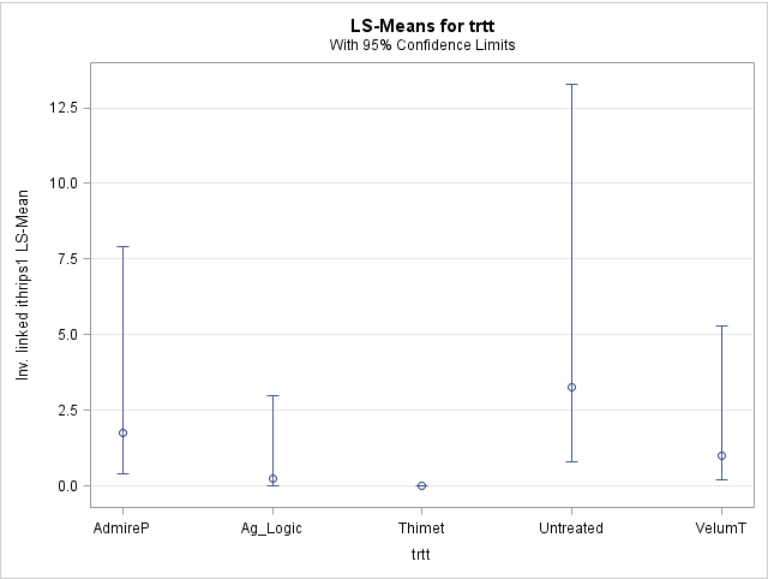
No.	Name	Rate	Unit	Timing[†]
10	Radiant	1.5	fl oz/a	BD
11	Orthene	12	oz wt/a	BD
12	Exeril	13.5	fl oz/a	BD
	Velum			
15	Total	18	fl oz/a	A
14	Admire Pro	10	fl oz/a	A
	Polyacryate	2	lb/a	A
			oz wt/1000 row-	
5	Thimet	5.5	ft	A
	Orthene	12	oz wt/a	C
			oz wt/1000 row-	
16	Thimet	5.5	ft	A
	Exeril	13.5	fl oz/a	B
9	Admire Pro	10	fl oz/a	A
	Exeril	13.5	fl oz/a	C
			oz wt/1000 row-	
13	Thimet	5.5	ft	A
	Polacrylate	2	lb/a	A
8	Admire Pro	10	fl oz/a	A
	Radiant	1.5	fl oz/a	C
7	Admire Pro	10	fl oz/a	A
	Orthene	12	oz wt/a	C
4	Admire Pro	10	fl oz/a	A
3	Ag Logic	5	lb/a	A
			oz wt/1000 row-	
6	Thimet	5.5	ft	A
	Exeril	13.5	fl oz/a	C
1	Untreated			
			oz wt/1000 row-	
2	Thimet	5.5	ft	A

[†]Timing: A in-furrow, B at crack 7-10 DAP, C 21 DAP, D 14 days post B.

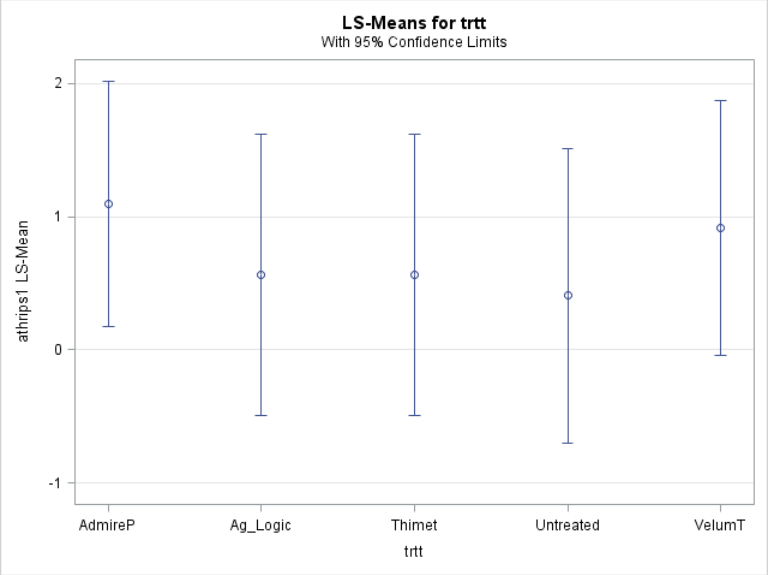


Stand/ft 32 DAP (29 May) was not significant among treatments at $P = 0.612$.

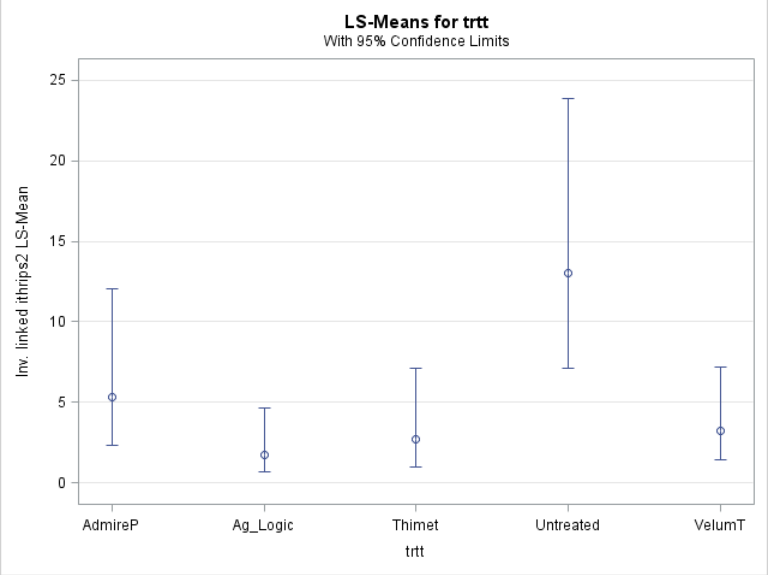
Thrips were collected and counted (immature and adult thrips/10 tetrafoliate leaflets, ithrips1-3 and athrips1-3) 20 DAP (17 May), 28 DAP (25 May), and 33 DAP (30 May). More often than not, the AgLogic treatment was associated with the lowest thrips counts.



Ithrips1 estimates, $P = 0.432$.

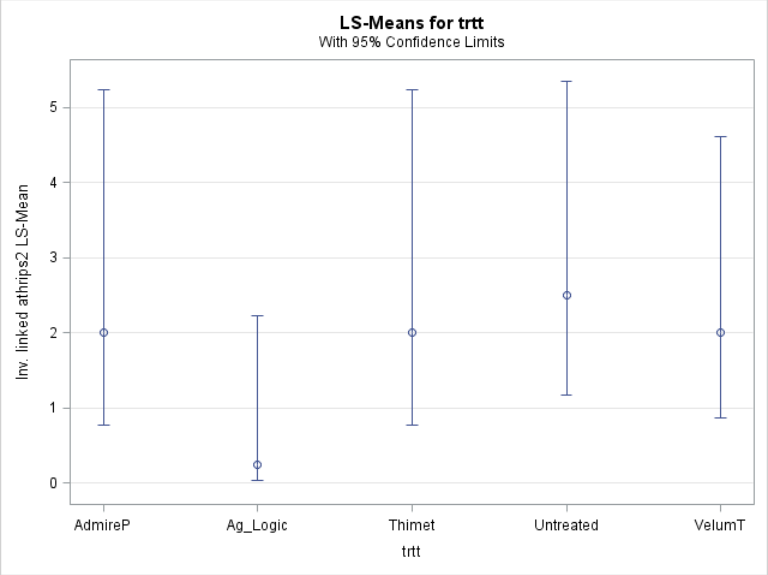


Athrips1 estimates, not significantly different at $P = 0.819$.

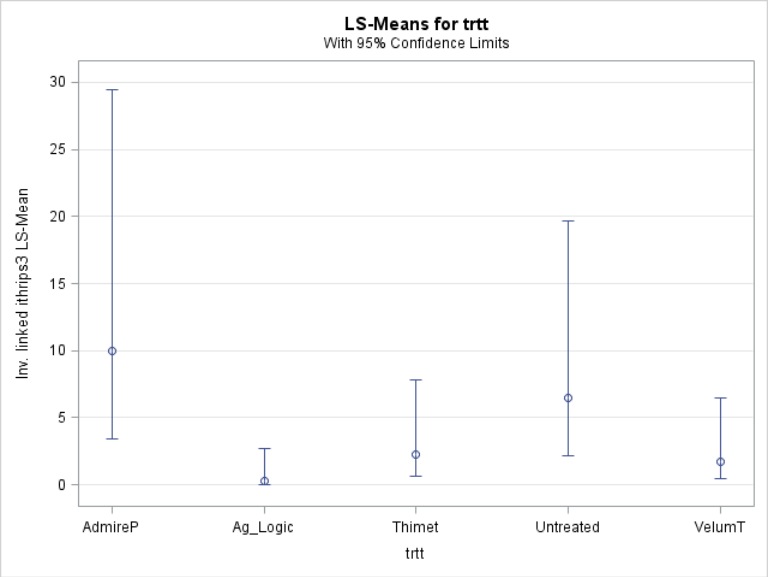


Ithrips2 estimates were significantly different at $P = 0.0110$.

trtt	Estimate (link-scale)	Count/10 tetrafoliates	Grouping	
Untreated	2.5649	13.0		A
AdmireP	1.674	5.3	B	A
VelumT	1.1787	3.3	B	
Thimet	0.9808	2.7	B	
Ag_Logic	0.5596	1.7	B	

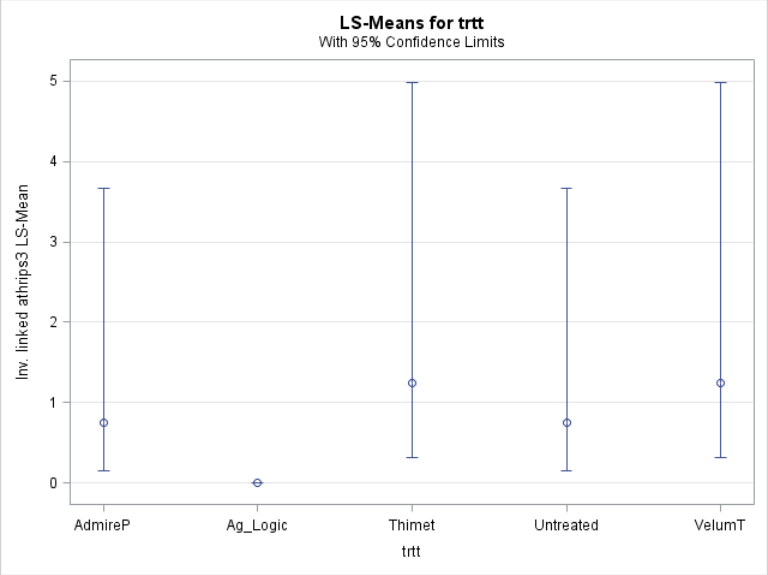


Athrips2 estimates not significantly different at $P = 0.374$.



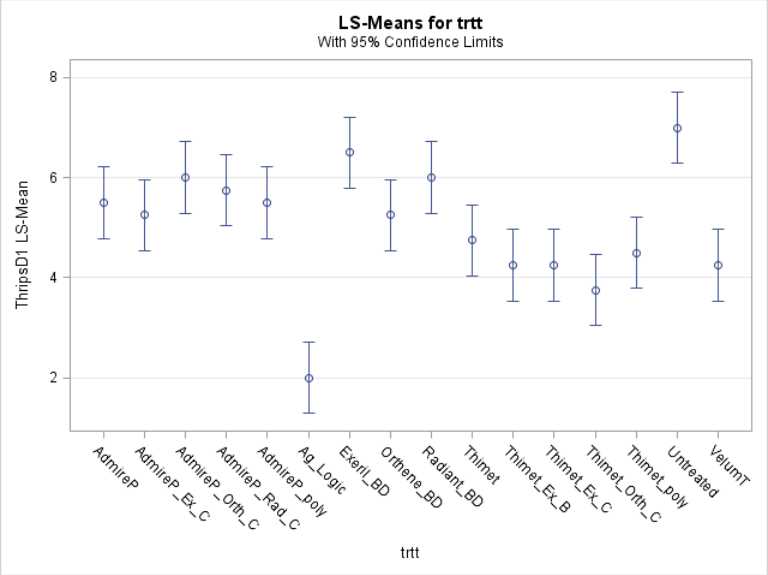
Ithrips3 estimates significantly different at $P = 0.0404$.

trtt	Estimate (link-scale)	Count/10 tetrafoliates	Grouping		
AdmireP	2.3026	10.0		A	
Untreated	1.8718	6.5	B	A	
Thimet	0.8109	2.2	B	A	C
VelumT	0.5596	1.7	B		C
Ag_Logic	-1.3863	0.2			C



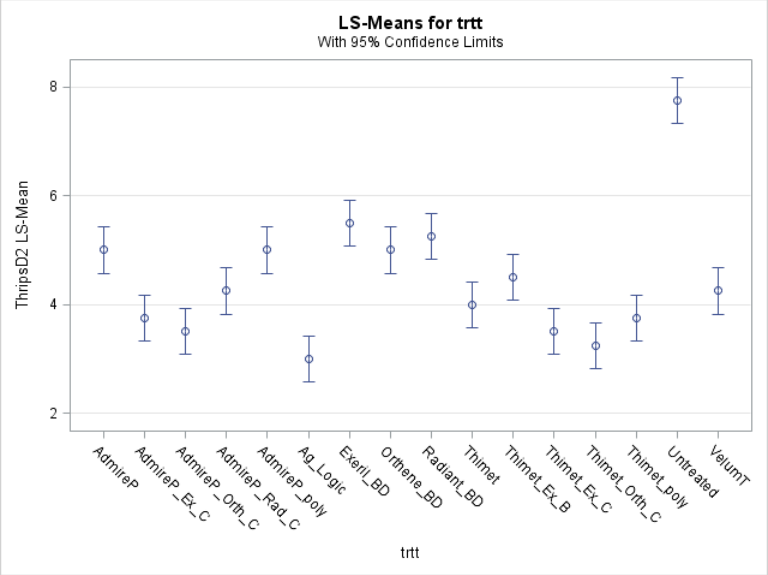
Athrips3 estimates not significantly different at $P = 0.967$.

Thrips damage (0 – 10 scale) (thripsdam1-3) was rated during the same dates as thrips collections were taken.

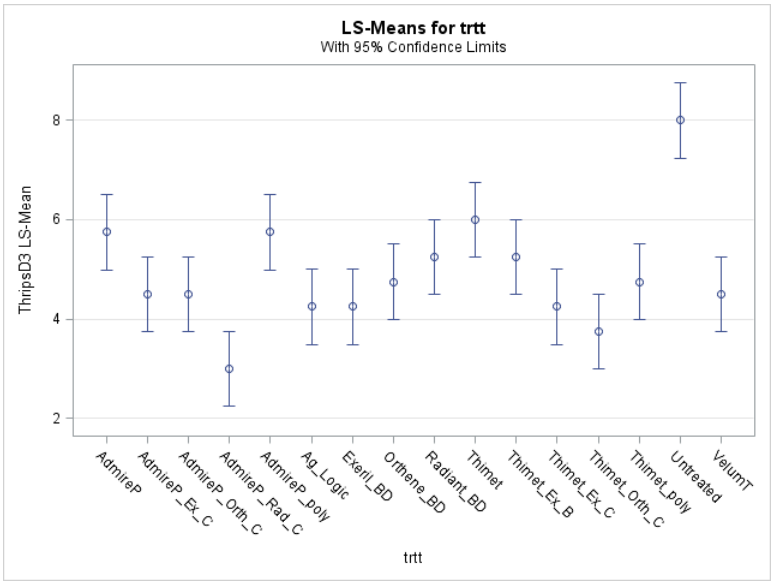


ThripsDam1 $P < 0.0001$ (same for all ratings). The untreated control had the most damage, whereas the AgLogic treatment had the least damage. The same general trend was also observed in the latter two thrips damage ratings, with Admire Pro + Radiant and Thimet + Orthene having the lowest damage ratings during the final assessment. Radiant, Orthene and Exirel performed fairly similar with regards to thrips damage.

trtt	Damage (0 – 10 scale)	Grouping		
Untreated	7		A	
Exeril_BD	6.5	B	A	
Radiant_BD	6	B	C	
AdmireP_Orth_C	6	B	C	
AdmireP_Rad_C	5.75	B	C	
AdmireP_poly	5.5	D	C	
AdmireP	5.5	D	C	
AdmireP_Ex_C	5.25	D	C	E
Orthene_BD	5.25	D	C	E
Thimet	4.75	D	F	E
Thimet_poly	4.5	G	F	E
VelumT	4.25	G	F	
Thimet_Ex_B	4.25	G	F	
Thimet_Ex_C	4.25	G	F	
Thimet_Orth_C	3.75	G		
Ag_Logic	2		H	

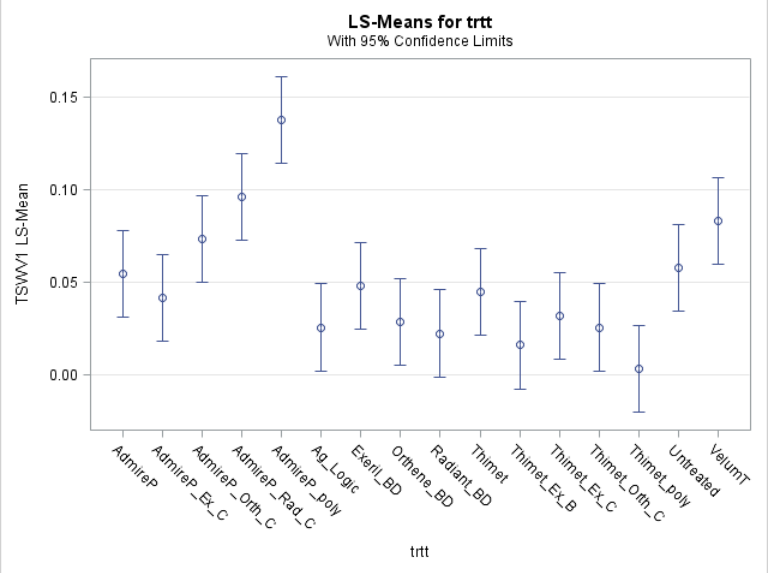


trtt	Estimate	Grouping		
Untreated	7.75		A	
Exeril_BD	5.5		B	
Radiant_BD	5.25		B	
Orthene_BD	5	C	B	
AdmireP_poly	5	C	B	
AdmireP	5	C	B	
Thimet_Ex_B	4.5	C	D	
VelumT	4.25	E	D	
AdmireP_Rad_C	4.25	E	D	
Thimet	4	E	D	F
Thimet_poly	3.75	E	G	F
AdmireP_Ex_C	3.75	E	G	F
Thimet_Ex_C	3.5	H	G	F
AdmireP_Orth_C	3.5	H	G	F
Thimet_Orth_C	3.25	H	G	
Ag_Logic	3	H		

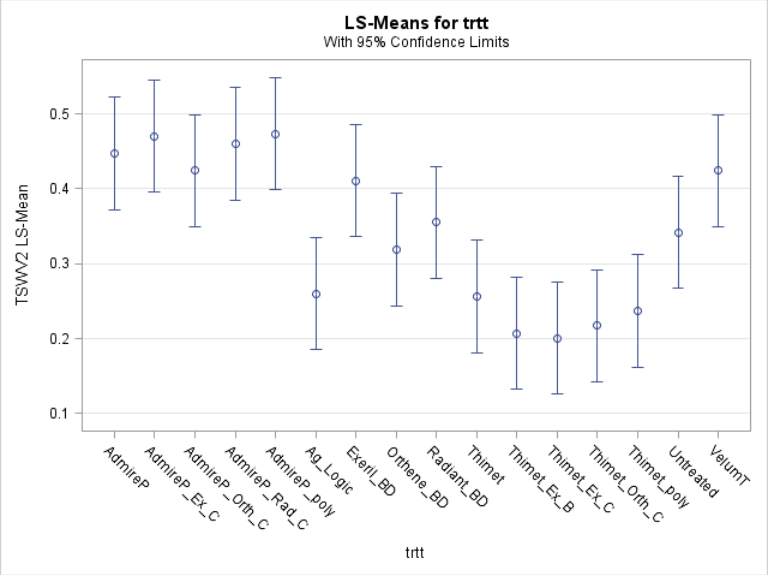


trtt	Estimate	Grouping		
Untreated	8		A	
Thimet	6		B	
AdmireP	5.75	C	B	
AdmireP_poly	5.75	C	B	
Thimet_Ex_B	5.25	C	B	D
Radiant_BD	5.25	C	B	D
Orthene_BD	4.75	C	E	D
Thimet_poly	4.75	C	E	D
VelumT	4.5		E	D
AdmireP_Ex_C	4.5		E	D
AdmireP_Orth_C	4.5		E	D
Thimet_Ex_C	4.25		E	D
Exeril_BD	4.25		E	D
Ag_Logic	4.25		E	D
Thimet_Orth_C	3.75	F	E	
AdmireP_Rad_C	3	F		

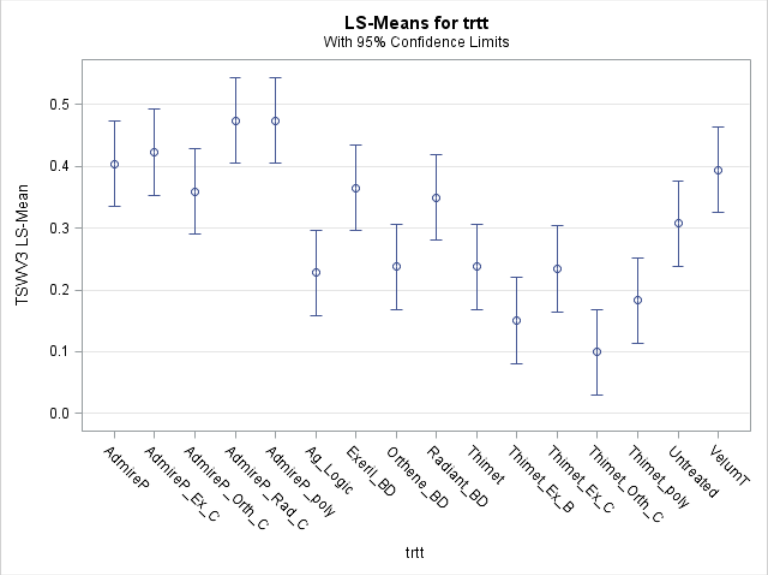
Tomato spotted wilt stunting was rated at 12 June, 5 July and 7 Sep (133 DAP). There was some drought stress during the 7 Sep rating which confounded ratings during that time; thus the second rating would generally be regarded as more representative. Treatments were significantly different during all assessments, $P < 0.0001$. During the second rating, the statistically lowest TSW stunting (< 26%) was observed in the Thimet treatments, as well as with AgLogic. The upper grouping with the most stunting (> 41%) were the imidacloprid-based treatments, as well as the two-broadcast-application Exirel treatment. The untreated control exhibited 34% stunting. The inclusion of the polymer marginally increased stunting with Admire Pro and marginally decreased stunting with Thimet, though these differences were not significant.



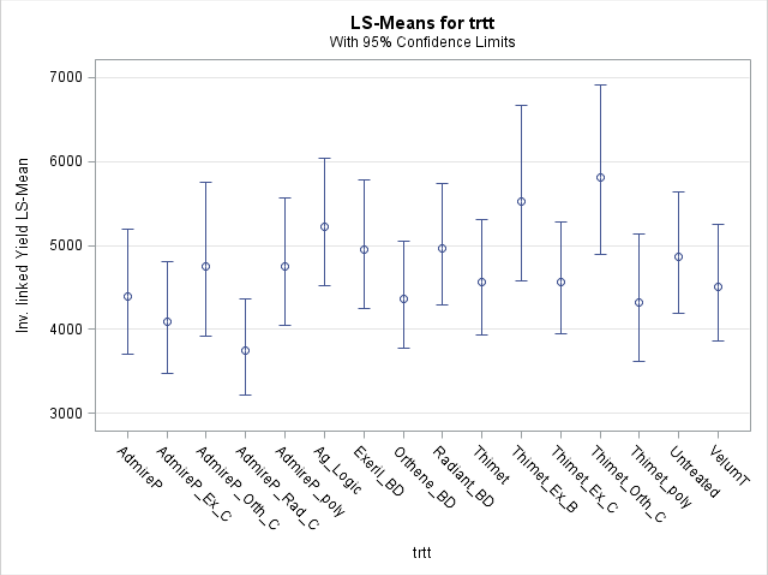
trtt	Stunting (proportion)	Grouping				
AdmireP_poly	0.1378				A	
AdmireP_Rad_C	0.09615				B	
VelumT	0.08333		C		B	
AdmireP_Orth_C	0.07372		C		B	D
Untreated	0.05769		C		E	D
AdmireP	0.05449		C	F	E	D
Exeril_BD	0.04808		G	F	E	D
Thimet	0.04487	H	G	F	E	D
AdmireP_Ex_C	0.04167	H	G	F	E	
Thimet_Ex_C	0.03205	H	G	F	E	I
Orthene_BD	0.02885	H	G	F	E	I
Thimet_Orth_C	0.02564	H	G	F		I
Ag_Logic	0.02564	H	G	F		I
Radiant_BD	0.02244	H	G			I
Thimet_Ex_B	0.01603	H				I
Thimet_poly	0.00321					I



trtt	Stunting (proportion)	Grouping			
AdmireP_poly	0.4737			A	
AdmireP_Ex_C	0.4704			A	
AdmireP_Rad_C	0.4605			A	
AdmireP	0.4474	B		A	
AdmireP_Orth_C	0.4243	B		A	C
VelumT	0.4243	B		A	C
Exeril_BD	0.4112	B	D	A	C
Radiant_BD	0.3553	B	D	E	C
Untreated	0.3421		D	E	C
Orthene_BD	0.3191	F	D	E	
Ag_Logic	0.2599	F		E	G
Thimet	0.2566	F		E	G
Thimet_poly	0.2368	F			G
Thimet_Orth_C	0.2171	F			G
Thimet_Ex_B	0.2072				G
Thimet_Ex_C	0.2007				G



trtt	Stunting (proportion)	Grouping		
AdmireP_poly	0.4744		A	
AdmireP_Rad_C	0.4744		A	
AdmireP_Ex_C	0.4231	B	A	
AdmireP	0.4038	B	A	C
VelumT	0.3942	B	A	C
Exeril_BD	0.3654	B		C
AdmireP_Orth_C	0.359	B		C
Radiant_BD	0.3494	B		C
Untreated	0.3077		D	C
Orthene_BD	0.2372	E	D	
Thimet	0.2372	E	D	
Thimet_Ex_C	0.234	E	D	
Ag_Logic	0.2276	E	D	
Thimet_poly	0.1827	E	F	
Thimet_Ex_B	0.1506	E	F	
Thimet_Orth_C	0.09936		F	



Yield was significantly different among treatments at $P = 0.012$.

trtt	Yield (link-scale)	Yield (lb/A)	Grouping (α = 0.05)				Grouping (α = 0.10)			
Thimet_Orth_C	8.6676	5812			A				A	
Thimet_Ex_B	8.6165	5522	B		A				A	
Ag_Logic	8.5621	5230	B		A	C	B		A	
Radiant_BD	8.5097	4963	B	D	A	C	B		A	C
Exeril_BD	8.5081	4955	B	D	A	C	B		A	C
Untreated	8.4886	4859	B	D	A	C	B		A	C
AdmireP_poly	8.465	4746	B	D	A	C	B	D	A	C
AdmireP_Orth_C	8.4647	4744	B	D	A	C	B	D	A	C
Thimet	8.4275	4571	B	D		C	B	D		C
Thimet_Ex_C	8.4267	4567	B	D		C	B	D		C
VelumT	8.4134	4507	B	D	E	C	B	D		C
AdmireP	8.3863	4387	B	D	E	C		D	E	C
Orthene_BD	8.3818	4367		D	E	C		D	E	C
Thimet_poly	8.3696	4314		D	E	C		D	E	C
AdmireP_Ex_C	8.3171	4093		D	E			D	E	
AdmireP_Rad_C	8.2296	3750			E				E	

There was a fair amount of variability in the yield data from this study. The numerically highest treatment was Thimet + post-emergence Orthene, followed by Thimet + Exirel at crack and then AgLogic (all > 5200 lb/A). Also in the upper grouping were the repeat treatments of Radiant and Exirel, Admire Pro + polymer (which was not statistically different from Admire Pro alone) and Admire Pro + Orthene 21 DAP. The untreated control also fell into the upper statistical grouping for yield. The lowest grouping (< 4510 lb/A) was comprised of Velum Total, Admire Pro, two applications of Orthene, Thimet + polymer (which was not statistically different from Thimet alone), and Admire Pro paired with either Exirel or Radiant 21 DAP.