

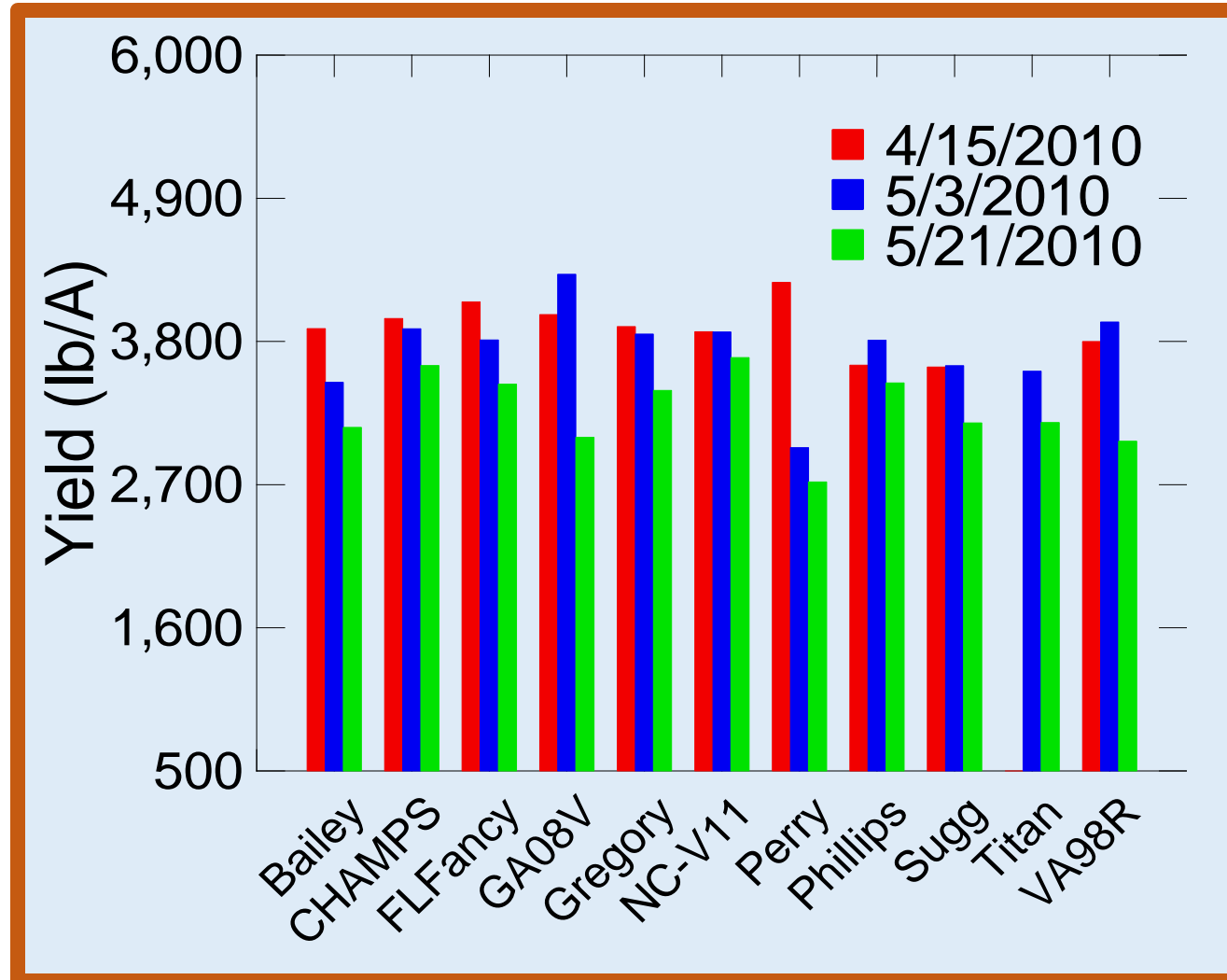
Effect of planting time on disease, yield, and crop value at Suffolk, VA

Data from 2009 through 2012

2009 was a relatively cool and wet year with 17 inches of rainfall till the end of August. Under these conditions, mid-May plantings produced the greatest yield.

Planting date	Disease (TSWV, SB, and CBR)	Yield	Crop value
	counts	lb/A	\$/A
4/20/2009	6.9 a	4922 b	885 b
5/01/2009	6.5 a	5127 b	920 b
5/15/2009	3.3 b	5703 a	1012 a

2010 was hot and dry, with less than an inch precipitation from June 1st through end of August, but good rainfall in May. In this year April plantings produced greatest yield. But always early plantings come with the risk of thrips damage and development of Tomato Spotted Wilt virus later in the season. Maybe now, with the tolerant genetics to TSW, this might be not such a big problem.



2011 Comparison of Planting Date and Seed Population (*Vapam* & *Temik* in Furrow) Conventional Till

Plant Date	Seed Rate	%	%	%	%	Yield lb/A	Value \$/A	Thrips		Stand Count	TSWV	
		Fancy	ELK	DK	SMK			5/26	6/10		6/13	8/5
4/25	3	89 ab	38 a	2.8 a	61 a	4516 a	727 a	2.60 a	0.90 a	205.8 c	2.60 a	7.80 a
	5	90 a	37 a	3.9 a	60 a	4978 a	772 a	2.50 a	0.95 a	249.4 b	3.00 a	9.20 a
	6	88 b	38 a	3.7 a	61 a	4777 a	747 a	2.30 a	0.85 a	278.4 a	1.40 a	8.40 a
	Mean	89	38	3.5	61	4757 A	749 A	2.47	0.90	247.5	2.33	8.47
	Seed Rate											
5/5	3	90 a	39 a	4.0 a	60 a	4859 a	752 a	0.35 a	0.95 a	215.6 b	0.80 a	8.20 a
	5	91 a	40 a	4.0 a	63 a	4965 a	793 a	0.30 a	0.95 a	271.2 a	0.60 a	5.80 a
	6	89 a	39 a	3.0 a	62 a	5115 a	842 a	0.35 a	0.85 a	297.0 a	0.60 a	6.60 a
	Mean	90	39	3.5	62	4980 A	796 A	0.33	0.92	261.3	0.67	6.87
	Seed Rate											
5/23	3	93 ab	33 a	4.1 a	58 a	4592 b	689 b	--	0.50 a	215.0 c	--	8.20 a
	5	94 a	38 a	3.3 a	60 a	5145 a	806 a	--	0.50 a	260.8 b	--	4.00 a
	6	88 b	35 a	3.5 a	60 a	5130 a	786 ab	--	0.50 a	286.0 a	--	5.60 a
	Mean	91	36	3.6	59	4956 A	760 A	--	0.50	253.9	--	5.93

2011 Comparison of Planting Date and Plant Population (*Orthene, Proline, Optimize LIFT in Furrow*)

	Seed Rate	%	%	%	%	Yield lb/A	Value \$/A	Thrips		Stand Count	TSWV	
		Fancy	ELK	DK	SMK			5/26	6/10		6/13	8/5
4/25	3	88 a	34 a	4.5	59 a	4567 a	673 a	1.95 a	1.10 a	182.4 a	3.80 a	11.80 a
	5	88 a	35 a	3.9	60 a	4963 a	763 a	2.00 a	1.15 a	238.4 a	3.60 a	11.60 a
	6	87 a	33 a	4.1	60 a	4517 a	683 a	1.75 a	1.15 a	238.2 a	5.00 a	12.60 a
	Mean	87	34	4.2	59	4652 A	701 A	1.9	1.13	219.7	4.13	12.00
	Seed Rate											
5/5	3	90 a	37 a	4.0 a	61 a	4554 b	716 a	0.25 a	0.95 a	227.6 a	3.80 a	10.40 a
	5	89 a	30 a	3.2 a	61 a	4988 a	791 a	0.35 a	0.90 a	259.6 a	3.00 ab	10.00 a
	6	78 a	37 a	3.2 a	61 a	4745 ab	756 a	0.35 a	0.95 a	282.0 a	1.80 b	9.60 a
	Mean	86	35	3.5	61	4762 A	754 A	0.32	0.93	256.4	2.87	10.00
	Seed Rate											
5/23	3	90 a	31 a	3.9 a	57 a	4512 a	664 a	--	0.50 a	231.2 c	--	9.00 a
	5	90 a	32 a	3.6 a	58 a	4806 a	717 a	--	0.50 a	249.6 b	--	8.20 a
	6	89 a	29 a	4.0 a	58 a	4706 a	693 a	--	0.50 a	283.0 a	--	10.60 a
	Mean	90	31	3.8	58	4675 A	692 A	--	0.50	248.6	--	9.27

2012 Comparison of Planting Date and Seed Population (Conventional Till: Metam & Temik)

Plant Date	Seed Rate	Fancy (%)	ELK (%)	DK (%)	SMK (%)	Yield (lb/A)	Value (\$/A)	Stand Count
4/30	3	83	41	1.4	69	4875 a	885	180
	5	82	43	1.1	69	4835 a	888	224
	6	83	41	1.0	69	4736 b	873	221
	Mean	83	42	1.2	69	4815 B	882	208
5/12	3	85	52	1.6	68	6156 a	1118	180
	5	81	50	2.2	67	6153 a	1109	217
	6	84	51	1.9	67	6212 a	1128	243
	Mean	83	51	1.9	67	6173 A	1118	213
5/23	3	85	50	2.0	66	4949 b	889	164
	5	88	49	2.8	66	5443 ab	964	198
	6	88	52	1.2	68	5761 a	1059	237
	Mean	87	50	2.0	67	5384 AB	971	200

2012 Comparison of Planting Date and Seed Population (Conventional Till: Proline & Orthene)

Plant Date	Seed Rate	Fancy	ELK	DK	SMK	Yield lb/A	Value \$/A	Stand Count
4/30	3	89	45	1.3	69	5158	949	164
	5	85	46	1.5	69	5183	948	193
	6	87	45	1.1	70	5125	951	208
	Mean	87	45	1.5	69	5155 B	949	188
5/12	3	87	52	2.0	67	6257	1120	189
	5	86	53	2.1	67	6188	1119	205
	6	85	54	2.2	66	6223	1110	237
	Mean	86	53	2.1	67	6223 A	1116	210
5/23	3	88	50	2.0	67	5337	953	170
	5	88	50	2.0	66	5550	982	205
	6	89	52	2.2	66	5617	1003	227
	Mean	88	51	2.0	66	5501 AB	979	201

2012 Comparison of Planting Date and Seed Population (Strip Till: Metam & Orthene)

Plant Date	Seed Rate	Fancy	ELK	DK	SMK	Yield lb/A	Value \$/A	TSWV 9/3	SB 9/3	Stand Count
5/1	3	92 a	50	2.1	69 a	4858 b	883 b	2.33 a	0.00 b	189.2 c
	5	92 a	62	1.7	69 a	5209 ab	956 a	2.50 a	0.33 ab	247.0 b
	6	90 a	54	1.6	70 a	5281 a	979 a	2.50 a	0.50 a	272.5 a
	Mean	91	52	1.8	69	5116	939	2.44	0.28	236
5/12	3	91 a	56 a	1.7	68 a	5145 a	981 a	1.50 a	0.67 a	186.2 c
	5	90 a	56 a	1.8	68 a	5314 a	940 a	1.33 a	0.17 b	243.3 b
	6	89 a	56 a	1.6	69 a	5170 a	953 a	2.33 a	0.00 b	273.3 a
	Mean	90	56	1.7	68	5209	958	1.72	0.28	231
6/1	3	88 a	54 a	1.7	68 a	4827 a	883 a	0.33 a	0.17 ab	169.7 b
	5	86 a	52 a	1.8	68 a	4465 a	817 a	0.33 a	0.00 b	217.5 a
	6	88 a	52 a	1.6	67 a	4479 a	814 a	0.67 a	0.50 a	240.7 a
	Mean	87	53	1.7	68	4590	838	0.44	0.22	209

Comparisons of Planting Formulations, Planting Dates & Seeding Rate

Planting formulation	Yield			Value		
	lb/A			\$/A		
<u>2011 (4/25; 5/5; 5/23) CHAMPS</u>	End-April	Early May	End-May	End-April	Early May	End-May
Conv. Till; Metam & Temik	4757	4980	4956	749	796	760
Conv. Till; Proline & Orthene	4652	4762	4675	701	754	692
Strip Till; Metam & Orthene	3927	4454	5305	568	702	826
<u>2012 (5/1; 5/12; 6/1) Bailey</u>						
Conv. Till; Metam & Temik	4815	6173	5384	882	1118	971

Planting Dates & Seed Population - Summary of 2011 & 2012

- Planting time: optimum time 5/5 – 5/20; planting early will have lower yields due to thrips and, depending on the season and planting formulation, reduced germination; later plantings will drop yield due to poor germination
- In-furrow control: Orthene & Proline do not always have more thrips and TSWV symptomatic plants than Metam & Temik (temperature at soil gasification)
- Seed population: increase to 5 seeds/ft. when planting outside the optimum planting window and