

**2014 Spring and Fall Squash and Zucchini Trial Report Provided  
by The University of Georgia, Tifton, GA.**



## Trial Report: Squash and Zucchini Variety Evaluation Spring and Fall 2014

Conducted by:

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### Methods

Location: Tifton, GA

Planting Date: Two-week old transplants planted on 28 Mar. and 18 Aug. 2014

Plant Spacing: 6' centers plastic mulch, 12" in-row spacing (7,260 per acre population)

Plot size: 12 plants per plot with 5 foot alleys between adjacent plots

Plastic mulch: Black, TIF plastic in spring, White on black, TIF plastic in fall

Fumigation: Pic-Chlor 60 applied in February and July when plastic was laid

Fertility: 1000 lbs/acre 5-10-15 preplant in spring and 10-10-10 in fall. Then 7-0-7 weekly at 12 lbs N/acre per week starting 1 week after planting. Total for the season was 146 lbs N/acre in spring and 172 lbs N acre in fall.

Herbicide: Between rows- Dual II Magnum + Curbit (Sonalan) + Valor + Round Up

Pest Control: Weekly fungicide sprays according to UGA recommendations (+ copper), Imidacloprid at planting (spring), Venom and Coragen and Agrimek (spring only) applied during growth.

Bees: 3 honeybee hives located approximately 500 feet from planting.

Stand Count conducted: 22-May and 13 Oct. 2014

Harvests (12) Dates: Spring 5, 7, 10, 12, 14, 16, 19, 21, 23, 26, 28, 30 May; Fall 8, 10, 12, 15, 17, 19, 22, 24, 26, 30, Sept. and 3, 6 Oct.

Grading: Squash graded into Fancy (US no. 1) and Medium size categories. Fancy squash weighed approximately 0.35 lb each, while medium fruit weighed approximately 0.65 lb each. Fruit we culled for misshapeness, virus symptoms, disease (choanephora rot), and poor color. Cull rates were high in fall primarily due to misshapen fruit. Cull rates escalated near harvest number 5 in the fall, remaining high until termination.

**Table 1. Entries included in the 2014 trials.**

<b>Abbott and Cobb</b>	<b>Harris Moran</b>	<b>Seminis</b>	<b>Syngenta</b>
Cosmos	Lioness	Conqueror III	Gentry
Precious II	Cheetah	SV6009YG	Enterprise
Solstice	Esteem	Justice III	Gold Star
	Respect		Spineless King
	Reward		Spineless Beauty
			Paycheck
			Payload

## Results

Spring yields were higher for both squash and zucchini than in fall. This was due to the higher cull rates in the fall, which were generally the result of virus damage, which was minimal except for Precious II and Gentry or misshapen fruit. Misshapen fruit were more prevalent in the fall. For yellow squash, Gentry was the highest yielder in both spring and fall, followed by Solstice. Respect was the highest yielding zucchini the fall and was attractive throughout. Reward also looked promising, but in both seasons poor germination limited the planting to a single replication. Yield data are presented as fruit per acre. Yield over time is presented as number of Fancy fruit per acre per harvest.

Weather Data in Appendix A.

**Table 1. Yellow squash yields for spring 2014 in Tifton, GA.**

Variety <sup>z</sup>	Total Yield		Fancy Yield		Medium Yield		Cull	
			(fruit/acre) <sup>z</sup>				(%) <sup>y</sup>	
Gentry	120290	a	92900	a	27390	a	5.5	b
Solstice	108900	ab	84580	ab	24320	ab	7.1	ab
Precious II	99620	bc	76750	bc	22870	ab	9.5	a
Cosmos	97730	bc	67310	c	30420	ab	7.9	ab
Conqueror III	91480	bc	67700	c	23780	ab	5.7	b
Gold Star	88560	c	67620	c	20950	b	8.8	ab
Lioness	88390	c	62620	c	25780	ab	7.4	ab
Cheetah	86860	c	62200	c	24660	ab	7.4	ab
Enterprise	84780	c	62700	c	22080	ab	9.7	a

<sup>z</sup>Yield based on average fancy fruit medium fruit graded and counted. Yield determined by dividing the fruit harvested by the plot stand (12 plants) and multiplying by a plant population 7260 plants per acre. 12 harvests were conducted. Due to conserving significant digits and rounding total number of fruit may not be the exact sum of fancy and medium fruit.

<sup>x</sup>Cull percentage based on number of cull fruit divided by total number of fruit harvested.

**Table 2. Yellow squash yields for Fall 2014 in Tifton, GA.**

Variety <sup>z</sup>	Total Yield		Fancy Yield		Medium Yield		Cull		Reason for culling <sup>x</sup>
			(fruit/acre) <sup>z</sup>				(%) <sup>y</sup>		
Gentry	93070	a	77940	a	15140	ab	17.2	ef	viral symptoms
Solstice	79780	b	61680	b	18100	ab	17.2	ef	shape
Conqueror III	78050	bc	58320	bc	19720	a	18.8	def	“sutures” on fruit
Cosmos	71900	bcd	56550	bcd	15350	ab	27.9	b	shape
Gold Star	65770	cde	53390	bcd	13380	b	13.2	f	sponginess in tip
Enterprise	63370	de	79710	cde	13670	b	25.1	bcd	poor shape, ridging
Lioness	61710	de	46590	de	15130	ab	25.9	bc	shape – ridging and <i>significant</i> crooking
Cheetah	54460	e	40100	ef	14370	ab	20.0	cde	shape
Precious II	40980	f	33590	f	7380	c	49.9	a	significant viral symptoms

<sup>z</sup>Yield based on average fancy fruit medium fruit graded and counted. Yield determined by dividing the fruit harvested by the plot stand (12 plants) and multiplying by a plant population 7260 plants per acre. 12 harvests were conducted. Due to conserving significant digits and rounding total number of fruit may not be the exact sum of fancy and medium fruit.

<sup>y</sup>Cull percentage based on number of cull fruit divided by total number of fruit harvested.

<sup>x</sup>Culls were higher in fall than in spring, consistent reasons for culling were noted.

**Table 3. Zucchini yields for Spring 2014 in Tifton, GA.**

Variety	Total Yield		Fancy Yield		Medium Yield		Cull	
			(fruit/acre) <sup>z</sup>				(%) <sup>y</sup>	
<b>SV6009YG</b>	77890	a	48200	a	29700	a	8.3	ab
<b>Respect</b>	67090	ab	45090	a	22000	ab	12.8	a
<b>Justice III</b>	55960	b	37850	a	18110	bc	11.1	a
<b>Esteem</b>	37030	c	26140	b	10890	c	1.9	c

<sup>z</sup>Yield based on average fancy fruit medium fruit graded and counted. Yield determined by dividing the fruit harvested by the plot stand (12 plants) and multiplying by a plant population 7260 plants per acre. 12 harvests were conducted. Due to conserving significant digits and rounding total number of fruit may not be the exact sum of fancy and medium fruit.

<sup>x</sup>Cull percentage based on number of cull fruit divided by total number of fruit harvested.

**Table 4. Zucchini yields for Fall 2014 in Tifton, GA.**

Variety <sup>z</sup>	Total Yield		Fancy Yield		Medium Yield		Cull		Reasons for culling <sup>w</sup>
			(fruit/acre) <sup>y</sup>				(%) <sup>x</sup>		
<b>Respect</b>	66930	a	47440	a	19500	a	12.9	d	some bulbing at tip
<b>SV6009YG</b>	58900	b	40604	b	17490	ab	15.0	cd	some bulbing at tip
<b>Payload</b>	57120	b	42280	ab	14850	abc	18.1	bcd	
<b>Paycheck</b>	48400	c	32370	c	16030	ab	22.0	bc	ridging and pale late
<b>Esteem</b>	41700	cde	28350	c	13350	bc	21.0	bc	
<b>Justice III</b>	39630	def	26620	dc	13010	bc	34.3	a	pointed tip, shape
<b>Spineless King</b>	34580	ef	19340	de	15250	abc	35.6	a	shape (ridging), curving
<b>Spineless Beauty</b>	32110	f	21330	de	10780	c	27.9	b	shape (ridging) , curving, pale color late

<sup>z</sup>The variety *Reward* was also included in this trial but due to seed issues only 1 replication was included and therefore the data was not included in the statistical analysis. The total yield of this 1 plot was 28,710 lbs/acre with 16,520 lbs/acre fancy fruit.

<sup>y</sup>Yield based on average fancy fruit medium fruit graded and counted. Yield determined by dividing the fruit harvested by the plot stand (12 plants) and multiplying by a plant population 7260 plants per acre. 12 harvests were conducted. Due to conserving significant digits and rounding total number of fruit may not be the exact sum of fancy and medium fruit.

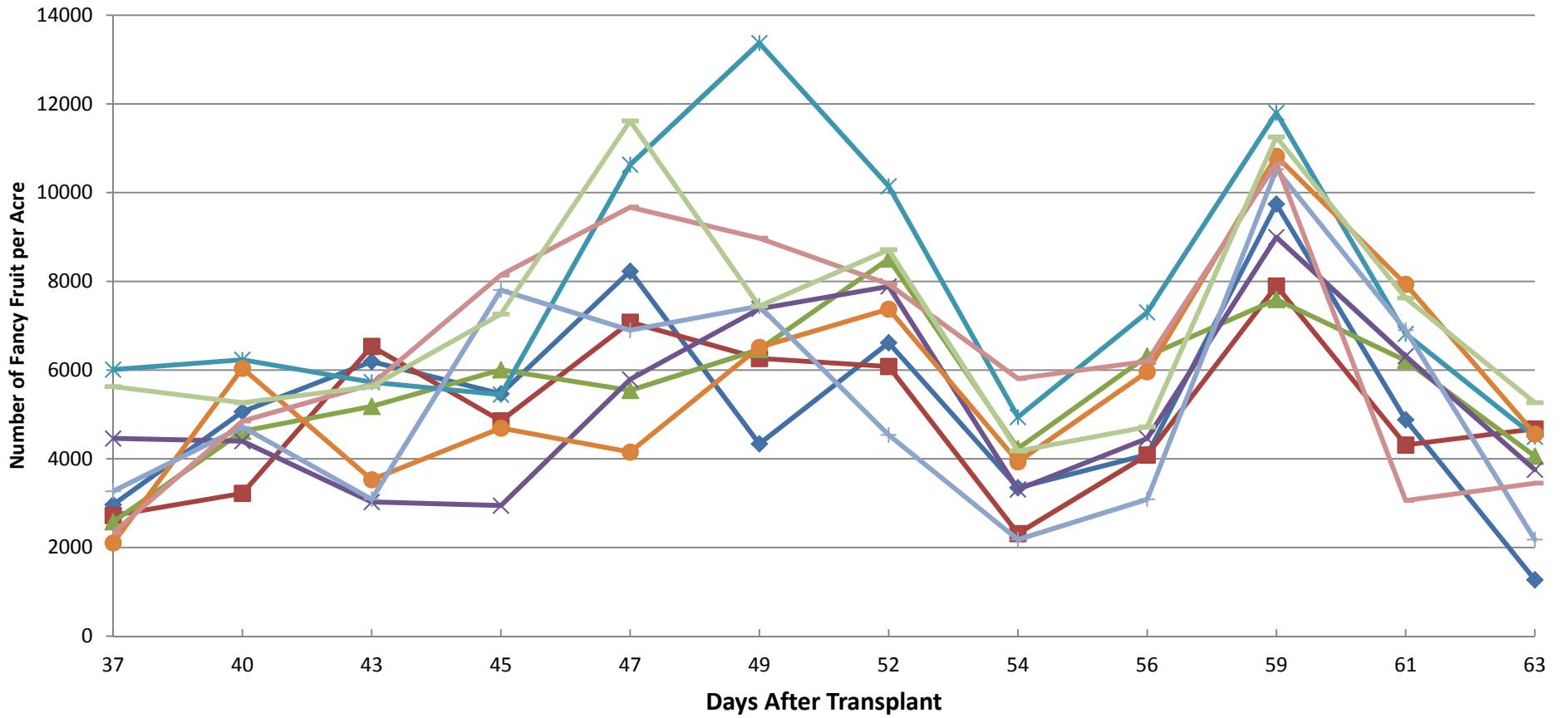
<sup>x</sup>Cull percentage based on number of cull fruit divided by total number of fruit harvested.

<sup>w</sup>Culls were higher in fall than in spring, consistent reasons for culling were noted.

**Table 5. Plant Characteristics for squash and zucchini varieties grown in Fall 2014.**

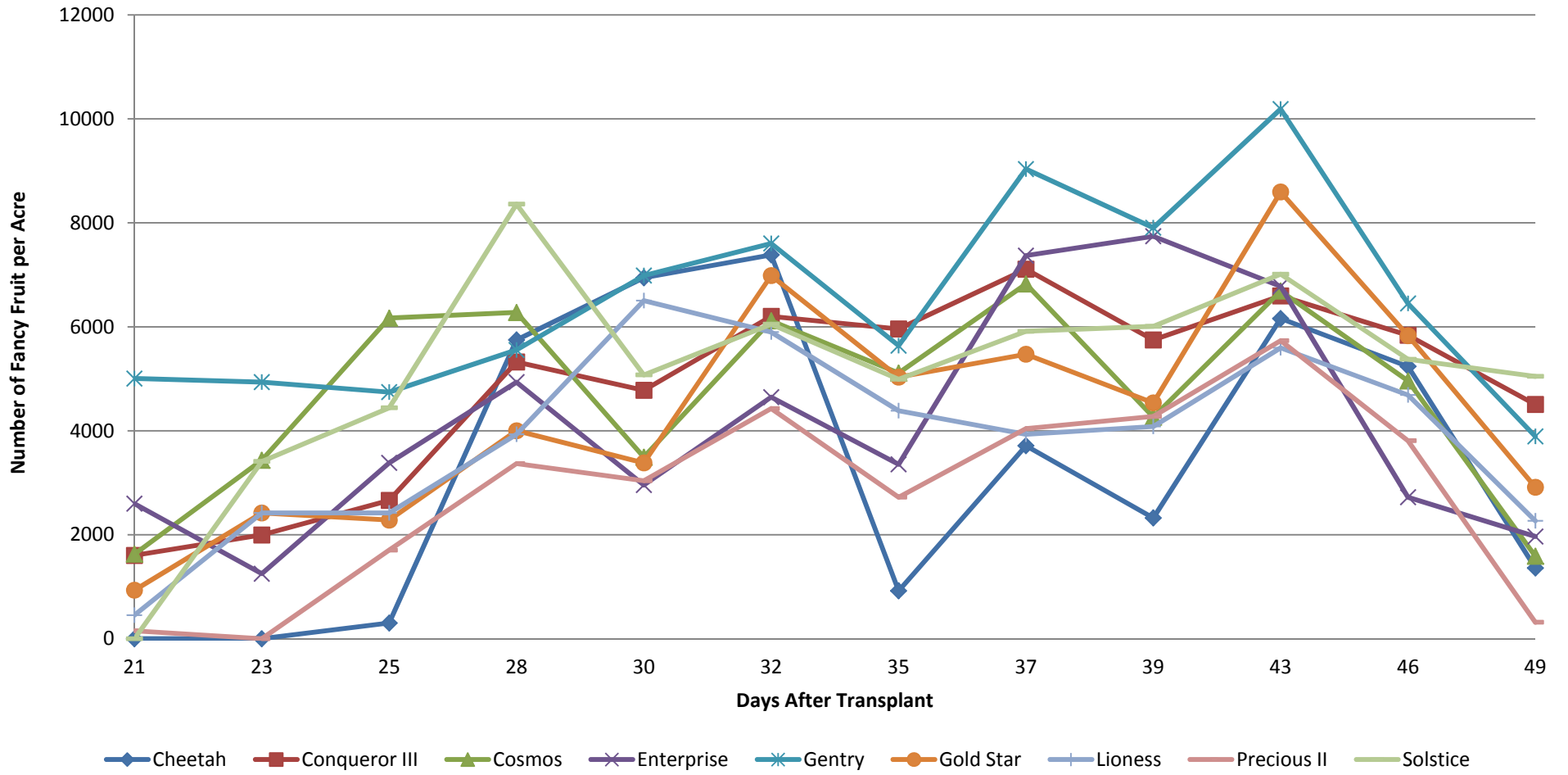
	Spines	Plant Habit
<b>Variety</b>	(1-9) <sup>z</sup>	(1-5) <sup>y</sup>
<i>Yellow Squash</i>		
Cheetah	3	3
Conqueror III	5	2
Cosmos	3	4
Enterprise	4	4
Gentry	6	3
Gold Star	4	4
Lioness	5	4.5
Precious II	3	3
Solstice	2	3
<i>Zucchini</i>		
Esteem	8	2
Justice III	7	1
Paycheck	7	2
Payload	8	2
Respect	6	2
Reward	6	2
Spineless Beauty	9	3
Spineless King	9	3.5
SV6009YG	7	2
<sup>z</sup> Spine rankings on a 1-9 scale where 1= extremely spiny and 9= spineless and smooth. <sup>y</sup> Plant habit based on a 1-5 scale where 1 = upright and compact, 3 = average semi-vine, 5 = strongly vining.		

### Spring Yellow Squash Yield Over Time

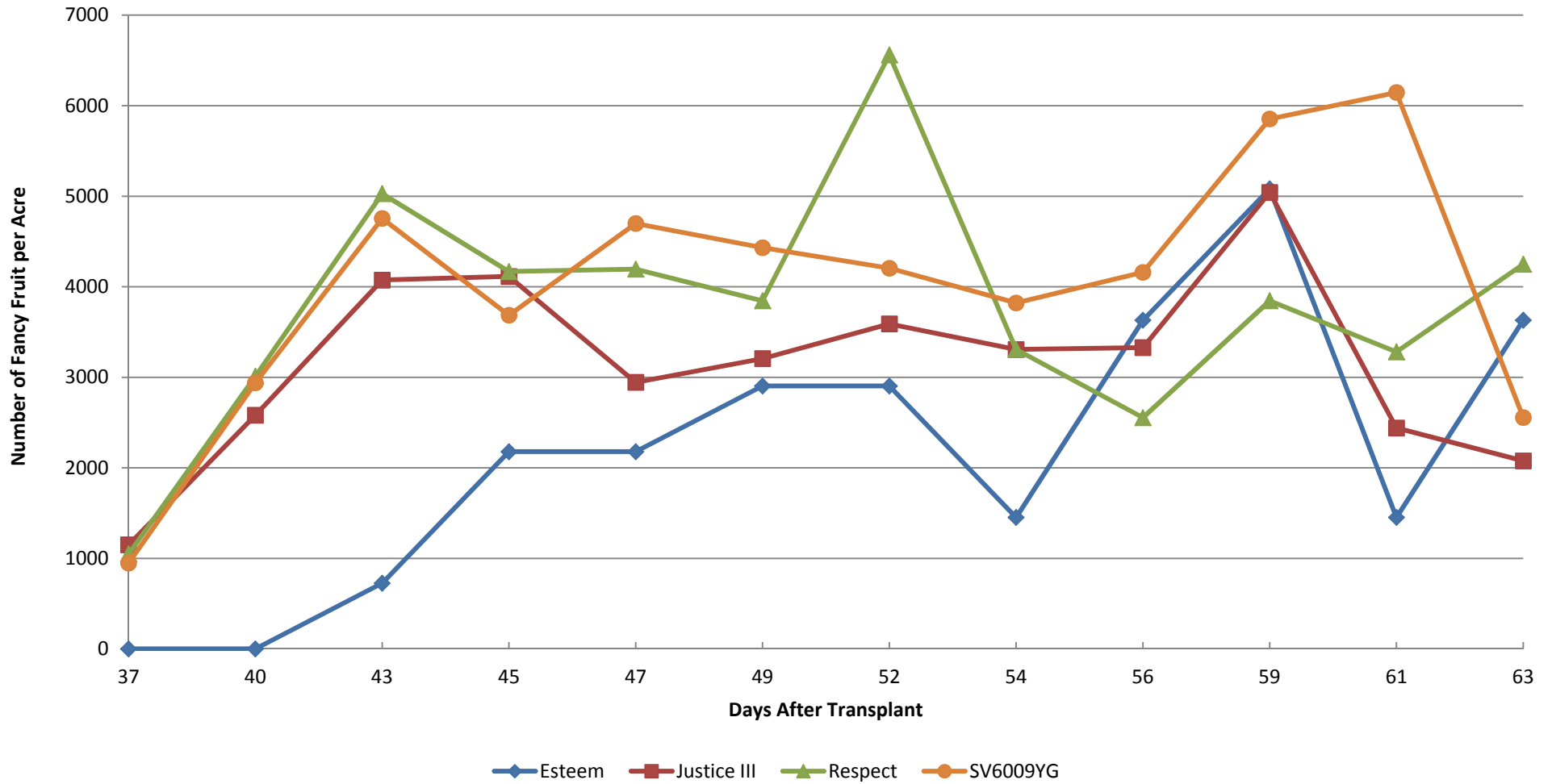


◆ Cheetah   ■ Conqueror III   ▲ Cosmos   ✕ Enterprise   ✖ Gentry   ● Gold Star   + Lioness   — Precious II   — Solstice

### Fall Yellow Squash Yield Over Time

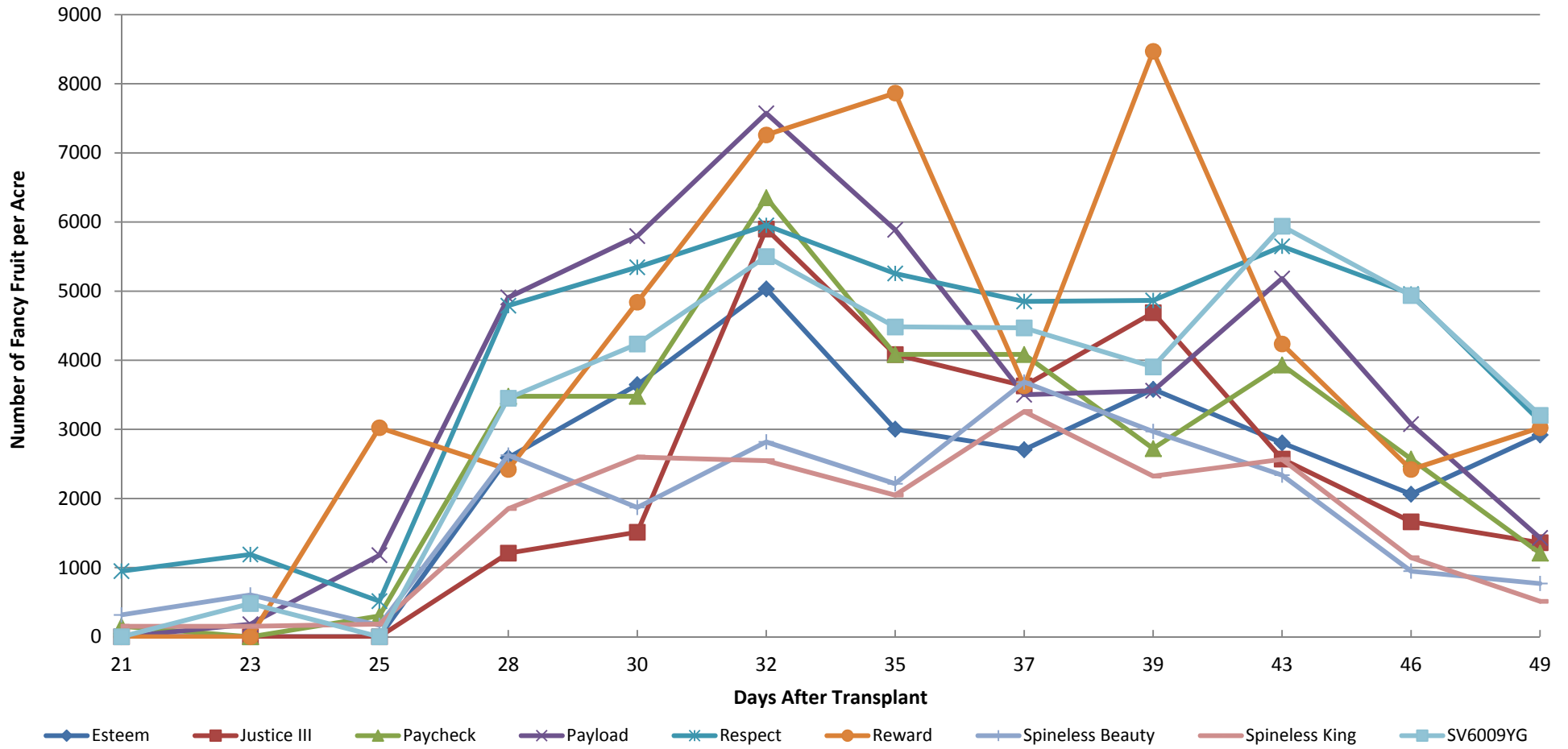


### Spring Zucchini Yield Over Time





### Fall Zucchini Yield Over Time



2014 Squash and Zucchini Varieties





Gold Star



Cosmos



Solstice



Enterprise





Reward



Respect



Spineless Beauty



Esteem



Appendix A: Weather conditions for Tifton, GA research site.

Date	Max Temp.	Min. Temp.	Rainfall (in.)	Date	Max Temp.	Min. Temp.	Rainfall (in.)
Mar 28, 2014	65.5	56.8	0.08	May 14, 2014	86.0	67.1	3.22
Mar 29, 2014	74.8	53.2	0.26	May 15, 2014	70.9	54.3	2.08
March 30, 2014	67.3	45.1	0.00	May 16, 2014	74.7	48.9	0.00
Mar 31, 2014	77.9	42.6	0.00	May 17, 2014	78.6	50.2	0.00
Apr 1, 2014	80.4	48.9	0.00	May 18, 2014	82.8	57.7	0.00
Apr 2, 2014	80.4	49.8	0.00	May 19, 2014	80.4	59.2	0.00
Apr 3, 2014	82.8	55.8	0.00	May 20, 2014	83.1	61.0	0.00
Apr 4, 2014	80.1	58.6	0.00	May 21, 2014	85.8	63.0	0.00
Apr 5, 2014	76.1	61.3	0.03	May 22, 2014	87.8	65.1	0.00
Apr 6, 2014	64.6	58.6	0.76	May 23, 2014	90.1	67.8	0.00
Apr 7, 2014	70.9	62.4	2.25	May 24, 2014	88.9	68.2	0.00
Apr 8, 2014	67.6	54.1	0.02	May 25, 2014	91.8	68.2	0.00
Apr 9, 2014	69.6	48.2	0.00	May 26, 2014	87.6	64.9	0.00
Apr 10, 2014	74.1	47.1	0.00	May 27, 2014	84.6	66.7	0.00
Apr 11, 2014	75.6	50.4	0.00	May 28, 2014	88.2	69.1	0.08
Apr 12, 2014	80.8	54.3	0.00	May 29, 2014	87.8	67.8	0.00
Apr 13, 2014	80.8	59.0	0.00	May 30, 2014	88.3	67.8	0.94
Apr 14, 2014	80.6	63.7	0.00	May 31, 2014	88.0	68.5	0.01
Apr 15, 2014	68.9	43.2	1.14				
Apr 16, 2014	61.7	37.4	0.00				
Apr 17, 2014	66.9	46.0	0.00				
Apr 18, 2014	59.2	53.6	2.82				
Apr 19, 2014	58.8	52.3	0.20				
Apr 20, 2014	66.2	51.3	0.01				
Apr 21, 2014	76.5	49.1	0.00				
Apr 22, 2014	78.3	55.4	0.00				
Apr 23, 2014	80.6	60.4	0.00				
Apr 24, 2014	83.3	60.3	0.00				
Apr 25, 2014	80.8	62.4	0.01				
Apr 26, 2014	83.1	57.7	0.00				
Apr 27, 2014	82.9	61.3	0.00				
Apr 28, 2014	83.8	64.8	0.00				
Apr 29, 2014	72.1	64.0	0.57				
Apr 30, 2014	72.3	64.8	0.90				
May 1, 2014	65.5	57.0	0.36				
May 2, 2014	67.1	56.1	0.01				
May 3, 2014	74.7	54.7	0.00				
May 4, 2014	84.0	55.9	0.00				
May 5, 2014	87.4	59.5	0.00				
May 6, 2014	84.6	60.8	0.00				
May 7, 2014	86.7	58.8	0.00				
May 8, 2014	86.5	64.4	0.00				
May 9, 2014	84.2	67.5	0.00				
May 10, 2014	83.8	67.1	0.50				
May 11, 2014	87.6	67.6	1.21				
May 12, 2014	87.1	66.6	0.00				
May 13, 2014	86.4	65.1	0.00				

Date	Max.Temp.	Min.Temp.	Rain (in)
Aug 18, 2014	91.2	71.1	0.23
Aug 19, 2014	89.8	71.6	0.12
Aug 20, 2014	92.7	70.2	0.16
Aug 21, 2014	95.7	70.2	0.00
Aug 22, 2014	96.1	69.6	0.00
Aug 23, 2014	97.5	74.5	0.00
Aug 24, 2014	92.1	73.2	0.00
Aug 25, 2014	87.8	70.2	0.00
Aug 26, 2014	89.6	68.4	0.00
Aug 27, 2014	90.1	65.1	0.00
Aug 28, 2014	92.8	66.2	0.00
Aug 29, 2014	95.2	67.8	0.00
Aug 30, 2014	93.0	74.5	0.28
Aug 31, 2014	93.6	72.0	0.19
Sep 1, 2014	94.5	72.0	0.00
Sep 2, 2014	94.3	72.1	0.83
Sep 3, 2014	90.9	69.8	1.32
Sep 4, 2014	91.4	70.2	0.01
Sep 5, 2014	90.9	72.3	0.00
Sep 6, 2014	86.7	72.1	0.02
Sep 7, 2014	89.4	69.8	1.70
Sep 8, 2014	81.9	71.6	0.01
Sep 9, 2014	86.5	70.3	0.34
Sep 10, 2014	89.1	70.9	0.01
Sep 11, 2014	92.3	73.4	0.00
Sep 12, 2014	93.4	72.0	0.00
Sep 13, 2014	91.9	72.7	0.05
Sep 14, 2014	90.5	71.2	0.20
Sep 15, 2014	89.8	71.6	0.01
Sep 16, 2014	86.4	71.4	0.49
Sep 17, 2014	89.2	67.5	0.01
Sep 18, 2014	85.6	65.8	0.00
Sep 19, 2014	83.5	68.9	0.48
Sep 20, 2014	82.4	67.3	0.00
Sep 21, 2014	86.5	59.9	0.00
Sep 22, 2014	87.4	63.1	0.16
Sep 23, 2014	78.3	65.5	0.01
Sep 24, 2014	66.7	57.4	0.00
Sep 25, 2014	72.7	60.6	0.00
Sep 26, 2014	80.4	63.3	0.01
Sep 27, 2014	75.7	67.3	0.00
Sep 28, 2014	77.4	69.8	0.00
Sep 29, 2014	75.0	69.3	0.29
Sep 30, 2014	76.8	65.1	0.00
Oct 1, 2014	83.8	61.0	0.01
Oct 2, 2014	86.2	66.4	0.00
Oct 3, 2014	81.9	69.6	0.37
Oct 4, 2014	72.1	49.6	0.01
Oct 5, 2014	70.9	44.2	0.00
Oct 6, 2014	78.4	48.7	0.00