

# Trial Report: Yellow Squash and Zucchini Spring and Fall Variety Evaluation 2015

Conducted by:

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## Production

Location: Tifton, GA

Entries: 8 yellow squash, 13 zucchini (spring) 16 zucchini (fall)

Planting Date: Seeded on into 200 cell trays 31 Mar. and 5 Aug. transplant 14 Apr. and 14 Aug.

Plant Spacing: 6' centers black TIF plastic mulch (spring), white TIF plastic mulch (fall) 12" in-row spacing (7260 per acre pop.)

Plot size: 12 plants per plot with 4' alleys between adjacent plots.

Fumigation: Trifecta applied in Feb. when plastic laid for spring and Pic-Chlor 60 in July when plastic laid for fall.

Fertility: 1000 lbs/acre 5-10-15 preplant under plastic with weekly fertigations with 7-0-7 of 12 lbs/N acre for a total of 134 lb/acre N. Irrigation: 1 inch per week.

Herbicide: Between rows: Dual Magnum + Curbit + Valor + Goal 2XL

Pest Control: Weekly fungicide sprays according to UGA recommendations (+ copper for *Pseudomonas* after transplanting in spring).

Pollination Services: 2 bumblebee quads located in planting and 6 honeybee hives located approximately 500 feet from planting.

## Data Collection

Harvests: 13 Spring and 10 Fall

Grading: Squash graded into Fancy (US no. 1) and Medium size categories by count. Sampling of random fruit showed that fancy squash weighed approximately 0.35 lb each, while medium fruit weighed approximately 0.60-0.65 lb each. Fruit were culled for misshapeness, virus symptoms, disease (choanephora rot), and poor color. Yields are presented per ½ bushel box (21 lbs) - this was estimated to contain 36 medium fruit and 60 fancy fruit based on average fruit weight and size.

**Table 1. Entries in the 2015 squash trials**

Abbott and Cobb	Bejo (Fall only)	Enza Zaden	Harris Moran	Seminis	Syngenta
Cosmos	BE 2959	Green Machine	Lionness	Conqueror III	Enterprise
Solstice	BE 3043		Esteem	Justice III	Gentry
Symphony	Modena		Respect	SV0474	Gold Prize
			Reward	SV0914	Gold Star
				SV6009	Payload
					Spineless Beauty
					Spineless King
					Spineless Perfection

**Results (See tables and figures for results)**

As expected spring yields were greater than those in the fall. This was due to 3 additional harvests in spring as well. The presence of *Erwinia carotovora* soft rot, which invaded open wounds from fruit removal (primarily on zucchini) during a prolonged wet and cloudy period in the fall, reduced the number of fall harvests.

*Yellow Squash.* Solstice and Gentry were the highest yielding yellow squash varieties in spring and fall. In 2014 trials both of these varieties performed well. Conqueror III was the sixth highest yielding squash in the spring but the third highest yielder in the fall. This is consistent with previous trial results as well. As expected, cull rates for yellow squash were higher in the fall and were largely due to the presence of viral symptoms on fruit. Approximately 5% of fruit were culled due to being misshapen or “doubles”. Fruit harvested in fall tended to be longer and straightneck varieties Conqueror III and Lionness had significantly increased crooking in fall. Varieties were evaluated for spines (1-9 scale) and plant habit (1-5 scale). In general yellow squash had greater spines and were much more vigorous than zucchini. Cosmos and Enterprise were generally rated as the spiniest, with Gentry, Gold Star, and Lionness being the least spiny. Gold Star and Lionness were the most vigorous plants. Gentry, Enterprise, and Cosmos were the earliest yielding varieties in the spring trial. Gentry has typically been the earliest variety in trials in Tifton.

*Zucchini Squash.* Respect was the highest yielding variety in terms of total yield and yield of fancy fruit in spring and fall. SV0474 was a high yielder in the spring, but dropped slightly in the fall. A fall-only entry BE2959 yielded well in the fall. Cull rates and yields were lowest in Symphony and Spineless King. As expected Spineless King, Spineless Perfection, and Spineless Beauty had the lowest spine rating. However, SV0914 and Symphony also displayed very few spines. Respect and Green Machine tended to be the spiniest. Respect generally had the most compact plants when evaluated for vigor. In the spring Esteem had the largest, most vigorous plants, although in the fall, Green Machine was *by far* the largest and most vigorous zucchini variety, reaching heights in excess of 4 feet. Green Machine was the earliest zucchini variety in spring based, though Reward, Respect, and Spineless Beauty also yielded well early.

**Table 2. Yellow squash yields for Spring 2015 in Tifton, GA.**

Variety <sup>z</sup>	(1/2 bushel boxes/acre) <sup>z</sup>						Cull
	Total Yield		Fancy Yield		Medium Yield		(%) <sup>y</sup>
Solstice	2640	a	1840	a	800	a	5.1 b
Gentry	2540	ab	1880	a	660	ab	9.3 a
Cosmos	2150	bc	1380	bc	770	a	10.9 a
Enterprise	2110	c	1440	b	660	ab	10.0 a
Lionness	1950	cd	1190	bc	760	ab	8.7 ab
Conqueror III	1920	cd	1200	bc	730	ab	10.0 a
Gold Prize	1870	cd	1160	bc	710	ab	10.1 a
Gold Star	1680	d	1130	c	550	b	7.6 ab

<sup>z</sup>Yield based on average fancy fruit medium fruit graded and counted. Yields are presented per ½ bushel box (21 lbs) - this was estimated to contain 36 medium fruit and 60 fancy fruit based on average fruit weight and size.

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

**Table 3. Yellow squash yields for Fall 2015 in Tifton, GA.**

Variety <sup>z</sup>	(1/2 bushel boxes/acre) <sup>z</sup>						Cull
	Total Yield		Fancy Yield		Medium Yield		(%) <sup>y</sup>
Solstice	1920	a	1610	a	310	a	6.9 c
Gentry	1680	ab	1510	ab	170	a	7.0 c
Conqueror III	1460	bc	1160	cd	300	a	9.6 bc
Cosmos	1440	bcd	1230	bc	210	a	16.7 ab
Enterprise	1350	bcd	1110	cd	240	a	16.8 b
Lionness	1250	cd	1000	cd	260	a	14.9 abc
Gold Star	1200	cd	990	cd	210	a	10.1 bc
Gold Prize	1120	d	830	d	290	a	19.6 a

<sup>z</sup>Yield based on average fancy fruit medium fruit graded and counted. Yields are presented per ½ bushel box (21 lbs) - this was estimated to contain 36 medium fruit and 60 fancy fruit based on average fruit weight and size.

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

**Table 4. Zucchini squash yields for Spring 2015 in Tifton, GA.**

Variety <sup>z</sup>	(1/2 bushel boxes/acre) <sup>z</sup>			Cull
	Total Yield	Fancy Yield	Medium Yield	(%) <sup>y</sup>
Respect	1840 a	1100 a	740 a	12.0 bcd
SV0474	1770 ab	1010 ab	760 a	7.4 d
Reward	1700 abc	1010 ab	700 a	12.2 bcd
Green Machine	1680 abc	920 bc	770 a	11.9 bcd
SV6009	1620 bcd	980 ab	650 ab	9.5 d
SV0914	1600 b-e	900 bcd	700 a	8.9 d
Spineless Beauty	1570 b-e	800 cde	770 a	14.8 abc
Payload	1550 cde	910 bcd	650 ab	12.0 bcd
Justice III	1450 def	770 c-f	680 a	17.7 a
Spineless Perfection	1420 def	700 ef	720 a	17.4 a
Esteem	1400 ef	730 def	660 ab	11.0 cd
Symphony	1300 fg	670 ef	630 ab	19.9 a
Spineless King	1130 g	620 f	510 b	16.5 ab

<sup>z</sup>Yield based on average fancy fruit medium fruit graded and counted. Yields are presented per ½ bushel box (21 lbs) - this was estimated to contain 36 medium fruit and 60 fancy fruit based on average fruit weight and size.

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

**Table 5. Zucchini squash yields for Fall 2015 in Tifton, GA.**

Variety <sup>z</sup>	(1/2 bushel boxes/acre) <sup>z</sup>			Cull
	Total Yield	Fancy Yield	Medium Yield	(%) <sup>y</sup>
Respect	1210 a	840 a	380 ab	8.1 de
BE2959	1150 ab	710 abc	440 a	11.4 de
Justice III	1090 ab	640 cd	440 a	17.0 bcd
Reward	1080 ab	750 abc	330 a-d	10.4 de
Payload	1060 ab	710 abc	350 abc	12.8 cde
BE3043	1060 ab	380 bc	380 ab	10.9 de
Green Machine	1050 ab	700 abc	350 abc	12.3 de
SV0474	1050 ab	800 ab	240 b-e	6.3 e
SV6009	980 bc	730 abc	250 b-e	12.1 de
Spineless Beauty	770 cd	500 e	270 b-e	23.3 ab
SV0914	710 de	510 de	200 de	9.8 de
Spineless Perfection	680 de	390 ef	290 b-e	24.2 ab
Esteem	650 de	420 ef	230 cde	9.4 de
Spineless King	640 de	390 ef	250 b-e	23.0 ab
Modena	620 de	380 ef	240 cde	22.0 abc
Symphony	510 e	330 f	180 e	27.9 a

<sup>z</sup>Yield based on average fancy fruit medium fruit graded and counted. Yields are presented per ½ bushel box (21 lbs) - this was estimated to contain 36 medium fruit and 60 fancy fruit based on average fruit weight and size.

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

**Table 6. Yellow squash plant data for Spring and Fall 2015 in Tifton, GA.**

Variety <sup>z</sup>	Spring		Fall	
	Spines (1-9) <sup>z</sup>	Habit (1-5) <sup>y</sup>	Spines (1-9)	Habit (1-5)
Gentry	5.0 a	3.6 a-d	3.8 bc	3.0 d
Gold Star	4.3 a	4.8 a	4.0 abc	4.9 a
Lionness	4.0 a	4.5 ab	4.7 a	5.0 a
Conqueror III	3.5 ab	2.6 de	4.3 ab	4.7 ab
Gold Prize	3.5 ab	4.1 abc	4.5 ab	4.8 ab
Solstice	2.4 bc	3.1 cde	3.3 cd	3.7 cd
Enterprise	2.3 bc	2.3 e	1.5 e	3.0 d
Cosmos	1.8 c	3.4 b-e	2.7 d	4.2 ab

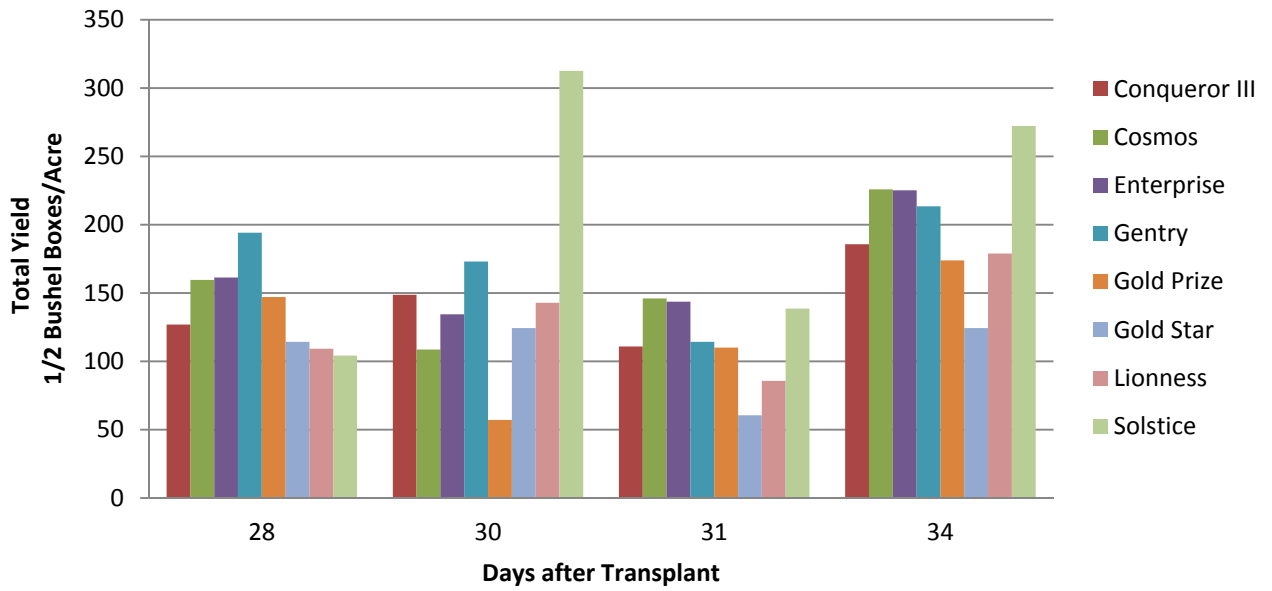
<sup>z</sup>Spines rated on a 1-9 scale with 1=extremely spiny, 5=moderate, 9=complete lack of spines  
<sup>y</sup>Habit rated on a 1-5 scale with 1=compact, 3=average vigor, 5=large bush or strong vines

**Table 7. Zucchini squash plant data for Spring and Fall 2015 in Tifton, GA.**

Variety <sup>z</sup>	Spring		Fall	
	Spines (1-9) <sup>z</sup>	Habit (1-5) <sup>y</sup>	Spines (1-9)	Habit (1-5)
Spineless King	9.0 a	3.1 a-e	9.0 a	3.3 d
Spineless Perfection	9.0 a	3.1 a-e	9.0 a	3.8 bcd
Spineless Beauty	8.8 ab	3.0 b-e	8.7 ab	4.3 ab
Symphony	8.0 bc	3.1 a-e	8.0 bc	3.2 d
SV0914	7.5 cd	3.8 ab	9.0 a	4.0 a-d
SV6009	6.7 de	2.5 def	7.2 cde	4.0 a-d
Reward	6.5 ef	2.4 ef	6.8 de	3.8 bcd
Esteem	6.3 ef	4.0 a	7.7 cd	4.5 ab
Payload	6.1 ef	2.8 c-e	7.0 de	3.3 d
Respect	6.0 ef	2.0 f	6.7 e	3.3 cd
SV0474	5.8 fg	3.4 a-d	7.7 cd	3.8 bcd
Justice III	5.8 fg	3.3 a-e	7.0 de	4.3 abc
Green Machine	5.0 g	3.6 abc	7.0 de	5.0 a
BE2959			7.0 de	4.3 ab
BE3043			6.7 e	3.8 bcd
Modena			7.5 cde	3.7 bcd

<sup>z</sup>Spines rated on a 1-9 scale with 1=extremely spiny, 5=moderate, 9=complete lack of spines  
<sup>y</sup>Habit rated on a 1-5 scale with 1=compact, 3=average vigor, 5=large bush or strong vines

## Spring Earliness (Harvest 1-4) Yellow Squash



## Spring Earliness (Harvest 1-4) Zucchini Squash

