

2016 Zucchini Squash Cultivar Evaluations



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General Cultural Practices

The squash trials were established on black plastic mulch. Pesticides used on all plots were chemicals labelled for that crop, 2016 North Carolina Agricultural Chemicals Manual, (<https://content.ces.ncsu.edu/north-carolina-agricultural-chemicals-manual>).

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Disclaimer

This publication presents data from the cultivar evaluation trials conducted during 2016. Information in this report is believed to be reliable but should not be relied upon as a sole source of information. Limited accompanying detail is included but excludes some pertinent information, which may aid interpretation.

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Zucchini Squash Cultural Practices for 2016 Cultivar Trials, Central Crops Research Station; Clayton, NC

Introduction

In 2016, summer squash production totaled 2,700 acres in North Carolina. Summer squash remains an important crop to North Carolina producers as the state ranked 7th among those states that produced the crop nationwide in 2013. Summer squash ranks among the top 10 vegetables grown in North Carolina. Squash represents significant economic importance to North Carolina growers with a crop value of \$4.6 million in 2013. North Carolina growers have maintained their competitiveness through producing squash varieties that are highly desired by the consumer. In an effort to remain competitive in the marketplace and maximize profitability growers seek to grow squash varieties that will provide them with the highest yields and greatest overall fruit quality. The zucchini market in North Carolina has typically been supplied with a medium green fruit, however, some markets have seen increased demand for cultivars that produce a darker green fruit. Summer squash plantings in North Carolina typically experience higher incidence of disease and insect pressure as they are harvested in the fall when environmental factors favor increased presence of these plant pests. In 2016 the field trial was planted on 28 July and we began harvesting on 31 August. The squash were rated for marketable and nonmarketable yields, for early and late production, and for consistency of production throughout the harvest period. Quality measurements were collected and average plant stand counts were calculated to conduct the most complete evaluation of each cultivar in the field trial. We again included the number of fruit produced per plant over various harvest intervals, and for the entire production season to compliment the yield data.

Materials and Methods

Seeds were sown on 28 July 2016. Hills with seed skips were replanted one week after planting to maximize plant stand counts in each plot. Final stand counts were taken on 31 August (approx. 4 weeks after initial planting). This trial was planted into existing plastic mulch from a preceding squash trial. The herbicide Paraquat was applied to row middles at 3pt/acre on 28 July. Row middles were again cleaned up with Paraquat on 15 August. The insecticides Asana XL, Belt SC, FanFare 2EC, Perm-Up 2EC were rotated and applied as a preventative measure beginning 10 August and on the following dates: 19, 24 and 31 August; 7 and 14 September. The following fungicide products were used: Bravo, Maneb 75 DF, Prevacur Flex, Procure and Torino; and applied on the following dates: 31 August; 7, 14 and 26 September. Fertilizer was applied through drip irrigation on the following dates: 31 August; 7, 14, 21, and 28 September. Harvests were conducted three times per week with a total of 15 harvests for the trial. The first harvest was 31 August and the final harvest (#15) was completed on 3 October. Most fruit were harvested when the blossom was detached from the fruit and categorized as marketable or nonmarketable. Fruit that were small or undersized, or were misshapen, were categorized as culls (non-marketable). Graded fruit were weighed and counted for each category and plot. The trial design was a randomized complete block with four replications. Other quality measurements taken were: percent plant stand, average fruit length and width. Overall, plant stands were excellent (94%) and nearly all plots contained at least 8 plants. The one exception was advanced line 15S.49004, which had only a 30% stand.

It should be noted the plant vegetative growth was initially limited early in the cropping season. Leaf edges of some plants showed some browning/necrosis and this was likely due to high temperatures coupled with limited moisture under the plastic. We hypothesize that the soil under the plastic dried considerably after a previous squash planting and prior to planting this study. To overcome the challenge of adding additional soil moisture the black plastic mulch was removed to allow water to percolate into the plant beds for the remainder of the growing season.

The highest yields were obtained during harvests 6 through 10, nearly 200% greater than yields obtained from harvests 1 through 5, or harvests 11 through 15 (Table 1). Virus generally did not occur during the first 10 harvests, while five entries had 10 or more boxes of fruits with virus symptomatic fruit.

Most fruit, across all entries produced more than 90% marketable fruit (Table 2). The exceptions were 15S.49004 (62%), E 282.00628 (89%), SV6009YG (88%), and Bejo 3043 (87%). The entry with the highest yielding US #1 marketable fruit was E 282.00628 (823 boxes per acre), the lowest was 15S.49004 (85 boxes per acre). The low yields were mainly due to inferior plant stand.

The majority of fruits produced across all harvests or cultigens classified as US #1 marketable fruit were 50% or better (Table 3). The percentage of US #1 marketable fruit was especially high for 10607 during harvests 1 through 5 (81.4%) and Spineless Perfection (82.3%); SV0914YG during harvests 6 through 10 (80.5%); and 10569 during harvests 11 through 15 (87.4%), E 282.00628 (82.4%), Bejo 3043 (87.6%) and Respect (85.7%).

The number of fruit per plant for each entry during three harvest intervals is shown in Table 4. The highest number of fruits produced per plant was during harvests 6 through 10 (middle harvests) when about one fruit was produced per individual harvest for E 282.00628, SV9043YG, and Green Machine. Cumulative marketable fruit weight per plant over all harvests (15) averaged 91.2% (Table 5), while cumulative marketable fruit number per plant averaged 86.3% (Table 6).

The cumulative number of fruits per acre for each cultigen across all harvest (15) and for each grade are provided in Table 7, while the number of fruits per acre for each cultigen for harvests 1 through 5 (early season), harvests 6 through 10 (mid-season) and harvests 11 through 15 (late season) are provided in Table 8, with corresponding percentages in Table 9.

Limited data outside of yields were obtained, however, percentage plant stand and average fruit length and widths were determined (Table 10). Longer fruits were generally obtained with E 282.00628, SV9043YG, Spineless Beauty and Spineless Perfection. Plant stands across all plots averaged 94%.

Table 1. Zucchini Squash cultigen trial yields¹, number of 20 lb boxes per acre, per indicated harvests for replicated treatments. Clayton, NC, 2016.

		Number of 20 pound boxes per acre														
Cultivar	Company	Marketable ²						Culls ³			Virus ⁴			Total		
		1 - 5		6 - 10		11 - 15		(1 - 5)	(6 - 10)	(11 - 15)	(1 - 5)	(6 - 10)	(11 - 15)	(1 - 5)	(6 - 10)	(11 - 15)
		#1	#2	#1	#2	#1	#2									
10569	Rijk Zwaan	90	26	323	77	145	9	3	10	4	0	1	8	119	411	166
10607	Rijk Zwaan	157	40	322	200	88	41	3	34	8	0	0	5	200	555	142
10609	Rijk Zwaan	62	15	333	133	78	27	7	3	0	0	0	12	84	469	117
15S.49004	Rijk Zwaan	10	4	51	42	24	21	3	44	18	0	0	0	17	137	63
E28Z.00569	Enza	139	52	293	148	85	26	29	40	4	0	0	1	221	481	117
E28Z.00628	Enza	151	54	456	129	216	32	39	60	14	0	1	1	244	645	262
SV0474YG	Seminis	141	91	362	131	120	55	19	32	4	3	0	0	254	525	179
SV0914YG	Seminis	17	10	259	56	87	35	1	6	16	0	0	25	28	321	163
SV6009YG	Seminis	192	68	341	258	91	51	24	57	28	0	0	29	283	656	200
SV9043YG	Seminis	139	64	460	172	115	40	22	35	10	0	0	0	225	666	166
Bejo 3043	Bejo	145	58	326	156	162	19	20	13	7	0	0	1	223	495	189
Green Machine	Enza	87	39	198	96	62	14	13	38	10	0	0	10	138	332	95
Modena	Bejo	63	52	377	180	167	60	3	36	6	0	2	5	118	595	237
Respect	HMClause	233	64	399	185	191	29	10	27	8	0	0	0	307	610	227
Spineless Beauty	Syngenta	148	35	401	183	101	44	5	15	23	0	0	4	188	599	172
Spineless Perfection	Syngenta	167	40	417	167	108	89	2	31	15	0	0	14	208	614	227
Average		121	44	332	144	115	37	13	30	11	0	0	7	179	507	170
LSD (0.05)		77	38	187	84	95	34	15	37	17	*	*	28	93	220	NS

¹ Total of 15 harvests. Planting was July 28, 2016. Harvests 1-5 occurred on 31 August; 2, 5, 7 and 9 September; Harvests 6-10 occurred on 12, 14, 16, 19 and 21 September; Harvests 11-15 occurred on 23, 26, 28 and 30 September; 3 October.

² Marketable fruit are graded into U.S. No. 1 (requires younger and more tender squash than U.S. No. 2 which are permitted to be more mature and allows greater surface area to be affected by defects).

³ Culls consisted primarily of misshaped fruit.

⁴ Fruit were discolored or rough/disfigured due to virus.

*virus incidence was low in harvests weeks (1-5) and (6-10); these data were not statistically different, therefore, they are only presented as observations.

NS indicates data were not statistically different.

Table 2. Zucchini Squash cultigen trial yields, cumulative boxes, (20 lbs.), per acre, among all harvests¹. Clayton, NC, 2016.

Cultivar	Marketable ²		Culls ³	Virus ⁴	Total	Percent		
	#1	#2				Marketable	Cull	Virus
10569	558	112	17	9	695	97	2	1
10607	567	280	45	5	898	95	5	1
10609	473	175	10	12	670	97	2	1
15S.49004	85	68	65	0	218	62	38	0
E28Z.00569	518	226	74	1	818	91	9	0
E28Z.00628	823	215	113	1	1152	89	11	0
SV0474YG	623	277	56	3	958	93	7	0
SV0914YG	363	101	23	25	512	92	5	3
SV6009YG	624	376	109	29	1139	88	9	2
SV9043YG	714	276	68	0	1057	94	6	0
Bejo 3043	346	149	61	10	565	87	11	1
Green Machine	822	277	45	0	1144	96	4	0
Modena	634	233	40	1	907	95	5	1
Respect	649	262	43	4	958	95	5	1
Spineless Beauty	692	296	48	14	1049	95	4	1
Spineless Perfection	606	292	46	7	951	95	5	1
Average	569	226	54	8	856	91	8	1
LSD (0.05)	302	109	47	15	26	15	13	*

¹ Total of 15 harvests.

² Marketable fruit are graded into U.S. No. 1 (requires younger and more tender squash than U.S. No. 2 which are permitted to be more mature and allows greater surface area to be affected by defects).

³ Culls consisted of primarily misshaped fruit.

⁴ Fruit were discolored or rough/disfigured due to virus.

*Virus incidence was low in harvests weeks (1-5) and (6-10); these data were not statistically different, therefore, they are only presented as observations.

Table 3. Zucchini Squash cultigen trial yields¹. Percentage marketable, cull, and virus symptomatic fruit per indicated harvests by fruit yield for replicated treatments, Clayton, NC, 2016.

		Percentage of yield based upon grade.														
		Marketable ²						Culls ³						Virus ⁴		
Cultivar	Company	#1			#2			Culls ³			Virus ⁴					
		1 - 5	6 - 10	11 - 15	1 - 5	6 - 10	11 - 15	1 - 5	6 - 10	11 - 15	1 - 5	6 - 10	11 - 15			
10569	Rijk Zwaan	70.9	76.3	87.4	26.5	22.0	7.4	2.5	1.5	2.1	0.0	0.2	3.2			
10607	Rijk Zwaan	81.4	58.3	64.8	16.8	36.2	24.0	1.8	5.5	6.6	0.0	0.0	4.6			
10609	Rijk Zwaan	74.0	68.8	59.6	15.7	30.2	36.2	10.3	1.0	0.0	0.0	0.0	4.2			
15S.49004	Rijk Zwaan	50.0	31.0	33.4	25.0	30.7	26.0	25.0	38.3	40.6	0.0	0.0	0.0			
E28Z.00569	Enza	63.0	63.6	66.0	23.1	28.6	27.6	13.9	7.8	5.5	0.0	0.0	1.0			
E28Z.00628	Enza	62.0	69.5	82.4	22.7	18.7	11.0	15.3	11.6	6.4	0.0	0.2	0.2			
SV0474YG	Seminis	52.5	67.1	68.8	36.0	25.9	29.2	9.9	7.0	2.1	1.6	0.0	0.0			
SV0914YG	Seminis	78.8	80.5	60.6	17.1	16.7	20.5	4.2	2.8	8.2	0.0	0.0	10.7			
SV6009YG	Seminis	67.4	51.1	41.8	24.0	40.3	31.6	8.7	8.6	13.1	0.0	0.0	13.5			
SV9043YG	Seminis	61.5	70.0	68.0	28.7	25.3	25.3	9.8	4.7	6.8	0.0	0.0	0.0			
Bejo 3043	Bejo	63.7	66.9	87.6	27.1	30.2	7.6	9.2	3.0	4.5	0.0	0.0	0.3			
Green Machine	Enza	64.5	59.0	66.1	26.1	29.4	11.5	9.4	11.6	13.3	0.0	0.0	9.1			
Modena	Bejo	52.0	64.9	67.7	45.2	28.6	27.6	2.8	6.0	2.9	0.0	0.5	1.7			
Respect	HMClause	76.3	64.8	85.7	20.5	30.8	11.6	3.3	4.4	2.7	0.0	0.0	0.0			
Spineless Beauty	Syngenta	73.9	67.5	57.0	23.8	30.0	25.3	2.3	2.4	14.8	0.0	0.0	2.9			
Spineless Perfection	Syngenta	82.3	65.6	53.3	16.5	28.9	36.1	1.2	5.5	5.6	0.0	0.0	5.0			
Average		67.1	64.1	65.6	24.7	28.3	22.4	8.1	7.6	8.5	0.1	0.1	3.5			
LSD (0.05)		28	19	28	26	15	26	19	13	17	*	*	13			

¹ Total of 15 harvests. Planting was July 28, 2016. Harvests 1-5 occurred on 31 August; 2, 5, 7 and 9 September. Harvests 6-10 occurred on 12, 14, 16, 19 and 21 September. Harvests 11-15 occurred on 23, 26, 28 and 30 September; 3 October.

² Marketable fruit are graded into U.S. No. 1 (requires younger and more tender squash than U.S. No. 2 which are permitted to be more mature and allows greater surface area to be affected by defects).

³ Culls consisted primarily of mishaped fruit.

⁴ Fruit were discolored or rough/disfigured due to virus.

*Virus incidence was low in harvests weeks (1-5) and (6-10); these data were not statistically different, therefore, they are only presented as observations.

Table 4. Zucchini Squash cultigen trial yields¹, average number of fruit per plant, per indicated harvests for replicated treatments, Clayton, NC, 2016.

Cultivar	Number of fruit per plant per harvest period ²															
	Marketable ³						Culls ⁴			Virus ⁵			Total			
	1 - 5		6 - 10		11-15		1 - 5	6 - 10	11 - 15	1 - 5	6 - 10	11 - 15	1 - 5	6 - 10	11 - 15	
	#1	#2	#1	#2	#1	#2										
10569	1.0	0.3	2.5	0.5	1.3	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	1.4	3.1	1.6
10607	1.8	0.4	2.2	1.5	1.2	0.4	0.1	0.3	0.1	0.0	0.0	0.1	2.4	3.9	1.8	
10609	0.8	0.1	2.1	0.8	0.8	0.3	0.2	0.1	0.0	0.0	0.0	0.1	1.1	3.0	1.2	
15S.49004	0.3	0.1	1.4	1.2	0.9	0.5	0.1	0.9	0.4	0.0	0.0	0.0	0.5	3.5	1.8	
E28Z.00569	1.5	0.5	2.4	1.1	1.1	0.3	1.0	0.6	0.2	0.0	0.0	0.0	2.9	4.1	1.5	
E28Z.00628	1.6	0.5	3.4	1.0	2.5	0.3	1.0	0.6	0.3	0.0	0.0	0.0	3.1	5.0	3.1	
SV0474YG	1.4	0.8	2.6	0.9	1.3	0.4	0.4	0.4	0.1	0.0	0.0	0.0	2.6	4.0	1.8	
SV0914YG	0.3	0.1	2.1	0.6	1.2	0.5	0.0	0.1	0.3	0.0	0.0	0.4	0.4	2.9	2.3	
SV6009YG	2.0	0.6	2.4	1.5	0.9	0.6	0.4	0.5	0.4	0.0	0.0	0.3	2.9	4.4	2.3	
SV9043YG	1.5	0.6	3.0	1.2	1.7	0.3	1.0	0.7	0.2	0.0	0.0	0.0	3.1	4.9	2.2	
Bejo 3043	1.3	0.4	1.8	0.7	0.7	0.1	0.6	0.5	0.3	0.0	0.0	0.1	2.2	3.1	1.1	
Green Machine	2.5	0.6	3.3	1.3	1.7	0.3	0.6	0.3	0.1	0.0	0.0	0.0	3.7	4.9	2.1	
Modena	1.4	0.3	2.5	1.2	1.2	0.3	0.1	0.2	0.3	0.0	0.0	0.1	1.8	3.8	1.8	
Respect	1.4	0.4	2.6	1.1	1.1	0.7	0.1	0.2	0.2	0.0	0.0	0.1	1.9	3.9	2.0	
Spineless Beauty	0.8	0.5	2.5	1.0	1.9	0.5	0.1	0.5	0.2	0.0	0.0	0.1	1.4	4.1	2.5	
Spineless Perfection	1.4	0.5	2.6	1.0	1.9	0.2	0.4	0.2	0.1	0.0	0.0	0.0	2.2	3.7	2.3	
Average	1.3	0.4	2.5	1.0	1.3	0.4	0.4	0.4	0.2	0.0	0.0	0.1	2.1	3.9	2.0	
LSD (0.05)	0.8	0.3	1.4	0.6	1.0	0.4	0.4	0.5	0.2	*	*	0.5	1.0	NS	NS	

¹ Total of 15 harvests. Planting was July 28, 2016. Harvests 1-5 occurred on 31 August; 2, 5, 7 and 9 September. Harvests 6-10 occurred on 12, 14, 16, 19 and 21 September. Harvests 11-15 occurred on 23, 26, 28 and 30 September; 3 October.

² Average number of fruit harvested from each plant at each harvest period (i.e.: 1-5; 6-10; 11-15).

³ Marketable fruit are graded into U.S. No. 1 (requires younger and more tender squash than U.S. No. 2 which are permitted to be more mature and allows greater surface area to be affected by defects).

⁴ Culls consisted primarily of misshaped fruit.

⁵ Fruit were discolored or rough/disfigured due to virus.

*Virus incidence was low in harvests weeks (1-5) and (6-10); these data were not statistically different, therefore, they are only presented as observations. NS indicates data were not statistically different.

Table 5. Zucchini squash cultigen trials. Cumulative fruit weight per plant and percent per plant among all harvests¹. Clayton, NC, 2016.

Cultivar	Marketable ²		Culls ³	Virus ⁴	Total	Percent		
	#1	#2				Marketable	Cull	Virus
10569	2.6	0.5	0.1	0.0	3.3	96.8	2.1	1.1
10607	2.8	1.4	0.2	0.0	4.4	94.7	4.6	0.7
10609	2.2	0.8	0.0	0.1	3.1	96.7	2.3	1.0
15S.49004	1.6	1.1	0.9	0.0	3.6	61.8	38.2	0.0
E28Z.00569	2.4	1.0	0.3	0.0	3.8	90.8	9.0	0.1
E28Z.00628	3.8	1.0	0.5	0.0	5.3	88.7	11.2	0.1
SV0474YG	2.9	1.3	0.3	0.0	4.4	92.9	6.7	0.4
SV0914YG	2.3	0.7	0.1	0.2	3.3	91.7	5.0	3.4
SV6009YG	3.0	1.8	0.5	0.1	5.4	88.2	9.4	2.4
SV9043YG	3.5	1.3	0.4	0.0	5.2	94.0	6.0	0.0
Bejo 3043	2.9	1.1	0.2	0.0	4.2	95.3	4.6	0.1
Green Machine	1.8	0.8	0.3	0.1	2.9	87.2	11.4	1.4
Modena	2.8	1.3	0.2	0.0	4.4	94.6	4.6	0.8
Respect	3.8	1.3	0.2	0.0	5.3	96.1	3.9	0.0
Spineless Beauty	3.0	1.2	0.2	0.0	4.4	95.0	4.5	0.5
Spineless Perfection	3.2	1.4	0.2	0.1	4.9	94.5	4.4	1.0
Average	2.8	1.1	0.3	0.0	4.2	91.2	8.0	0.8
LSD (0.05)	NS	0.6	0.5	*	NS	15	13	9

¹ Total of 15 harvests.

² Marketable fruit are graded into U.S. No. 1 (requires younger and more tender squash than U.S. No. 2 which are permitted to be more mature and allows greater surface area to be affected by defects).

³ Culls consisted primarily of mishaped fruit.

⁴ Fruit were discolored or rough/disfigured due to virus.

*Virus incidence was low in harvests weeks (1-5) and (6-10); these data were not statistically different, therefore, they are only presented as observations.

NS indicates data were not statistically significant.

Table 6. Zucchini Squash cultigen trial yields, cumulative fruit number per plant, among all harvests¹. Clayton, NC, 2016.

Cultivar	Marketable ²					Percent		
	#1	#2	Culls ³	Virus ⁴	Total	Marketable	Cull	Virus
10569	4.8	0.9	0.2	0.1	6.1	94.9	3.4	1.7
10607	5.2	2.3	0.6	0.1	8.1	91.9	7.0	1.1
10609	3.6	1.2	0.2	0.1	5.2	92.8	5.6	1.6
15S.49004	2.6	1.8	1.4	0.0	5.7	65.2	34.8	0.0
E28Z.00569	4.9	1.9	1.7	0.0	8.5	78.6	21.1	0.3
E28Z.00628	7.4	1.8	1.9	0.1	11.2	81.4	18.0	0.6
SV0474YG	5.4	2.1	0.9	0.0	8.4	88.2	11.4	0.4
SV0914YG	3.6	1.3	0.4	0.4	5.6	87.5	7.8	4.7
SV6009YG	5.3	2.7	1.3	0.3	9.6	83.7	13.1	3.2
SV9043YG	6.2	2.1	1.9	0.0	10.2	82.0	18.0	0.0
Bejo 3043	5.8	1.7	0.7	0.0	8.2	91.3	8.4	0.3
Green Machine	3.8	1.3	1.4	0.1	6.5	77.2	21.7	1.1
Modena	5.2	2.0	0.8	0.1	8.0	89.5	9.5	1.0
Respect	7.4	2.2	1.0	0.0	10.6	90.6	9.4	0.0
Spineless Beauty	5.0	1.8	0.6	0.1	7.5	91.3	7.4	1.3
Spineless Perfection	5.1	2.2	0.4	0.1	7.8	94.1	5.1	0.8
Average	5.1	1.8	1.0	0.1	8.0	86.3	12.6	1.1
LSD (0.05)	2.8	1.0	0.8	0.7	3.6	13.7	11.8	8.8

¹ Total of 15 harvests.

² Marketable fruit are graded into U.S. No. 1 (requires younger and more tender squash than U.S. No. 2 which are permitted to be more mature and allows greater surface area to be affected by defects).

³ Culls consisted of primarily misshaped fruit.

⁴ Fruit were discolored or rough/disfigured due to virus.

Table 7. Zucchini squash cultigen trials. Cumulative fruit number per acre and percentages, among all harvests¹. Clayton, Fall, 2016.

<u>Cultivar</u>	<u>Company</u>	<u>Marketable²</u>		<u>Culls³</u>	<u>Virus⁴</u>	<u>Total</u>	<u>Percent</u>		
		<u>#1</u>	<u>#2</u>				<u>Marketable</u>	<u>Culls</u>	<u>Virus</u>
10569	Rijk Zwaan	20582	4029	871	545	26027	94.9	3.4	1.7
10607	Rijk Zwaan	21018	9257	2287	327	32888	91.9	7.0	1.1
10609	Rijk Zwaan	15791	5227	980	545	22542	92.8	5.6	1.6
15S.49004	Rijk Zwaan	2831	2287	2287	0	7405	65.2	34.8	0.0
E28Z.00569	Enza	21344	8168	7514	109	37135	78.6	21.1	0.3
E28Z.00628	Enza	32343	7950	8385	218	48896	81.4	18.0	0.6
SV0474YG	Seminis	23305	8930	4029	109	36373	88.2	11.4	0.4
SV0914YG	Seminis	11652	3812	1307	1198	17969	87.5	7.8	4.7
SV6009YG	Seminis	22325	11652	5336	1307	40620	83.7	13.1	3.2
SV9043YG	Seminis	24829	8385	7623	0	40838	82.0	18.0	0.0
Bejo 3043	Bejo	25265	7296	2940	109	35610	91.3	8.4	0.3
Green Machine	Enza	14702	4901	5336	327	25265	77.2	21.7	1.1
Modena	Bejo	22542	8494	3267	327	34630	89.5	9.5	1.0
Respect	HM Clause	32234	9583	4247	0	46065	90.6	9.4	0.0
Spineless Beauty	Syngenta	21889	7732	2396	436	32452	91.3	7.4	1.4
Spineless Perfection	Syngenta	21998	9474	1634	327	33432	94.1	5.1	0.8
Average		20916	7324	3777	368	32384	86.3	12.6	1.1
LSD (0.05)		10546	3299	2527	2962	13213	13.7	11.8	8.8

¹ Total of 15 harvests.

² Marketable fruit are graded into U.S. No. 1 (requires younger and more tender squash than U.S. No. 2 which are permitted to be more mature and allows greater surface area to be affected by defects).

³ Culls consisted of primarily misshaped fruit.

⁴ Fruit were discolored or rough/disfigured due to virus.

Table 8. Zucchini squash cultigen trial yields¹. Number of fruit per acre by grade per indicated harvests for replicated treatments, Clayton, NC, 2016.

Cultivar	Company	Marketable ²						Culls ³			Virus ⁴			Total		
		#1			#2			1-5	6-10	11-15	1-5	6-10	11-15	1-5	6-10	11-15
		1-5	6-10	11-15	1-5	6-10	11-15	1-5	6-10	11-15	1-5	6-10	11-15	1-5	6-10	11-15
10569	Rijk Zwaan	4465	10672	5445	1198	2287	545	327	218	327	0	109	436	5990	13286	6752
10607	Rijk Zwaan	7514	8712	4792	1634	5881	1742	545	1198	545	0	0	327	9692	15791	7405
10609	Rijk Zwaan	3376	8930	3485	545	3594	1089	653	327	0	0	0	545	4574	12850	5118
15S.49004	Rijk Zwaan	436	1416	980	109	1742	436	109	1198	980	0	0	0	653	4356	2396
E28Z.00569	Enza	6316	10454	4574	2287	4574	1307	4138	2723	653	0	0	109	12741	17751	6643
E28Z.00628	Enza	6861	14593	10890	2178	4356	1416	4465	2723	1198	0	109	109	13504	21780	13613
SV0474YG	Seminis	6098	11435	5772	3485	3920	1525	1742	1851	436	109	0	0	11435	17206	7732
SV0914YG	Seminis	980	6752	3920	545	2069	1198	109	327	871	0	0	1198	1634	9148	7187
SV6009YG	Seminis	8276	10128	3920	2505	6425	2723	1525	2178	1634	0	0	1307	12306	18731	9583
SV9043YG	Seminis	5990	12306	6534	2396	4683	1307	4138	2614	871	0	0	0	12524	19602	8712
Bejo 3043	Bejo	5881	11108	8276	2178	4138	980	1525	871	545	0	0	109	9583	16117	9910
Green Machine	Enza	4901	7187	2614	1416	2940	545	2287	2069	980	0	0	327	8603	12197	4465
Modena	Bejo	3485	10890	8168	2069	4465	1960	327	2287	653	0	109	218	5881	17751	10999
Respect	HM Clause	10672	14266	7296	2614	5772	1198	2614	1198	436	0	0	0	15899	21236	8930
Spineless Beauty	Syngenta	6207	10672	5009	1307	5227	1198	327	762	1307	0	0	436	7841	16662	7950
Spineless Perfection	Syngenta	6207	11217	4574	1634	4792	3049	218	762	653	0	0	327	8059	16771	8603
Average		5479	10046	5391	1756	4179	1388	1565	1457	755	7	20	340	8807	15702	7875
LSD (0.05)		3470	5069	3885	1438	2184	1369	1486	1482	988	*	*	1838	4501	5815	5193

¹ Total of 15 harvests. Planting was 28 July 2016. Harvests 1-5 occurred on 31 August; 2, 5, 7 and 9 September; Harvests 6-10 occurred on 12, 14, 16, 19 and 21 September; Harvests 11-15 occurred on 23, 26, 28 and 30 September; 3 October.

² Marketable fruit are graded into U.S. No. 1 (requires younger and more tender squash than U.S. No. 2 which are permitted to be more mature and allows greater surface area to be affected by defects).

³ Culls consisted of primarily misshaped fruit.

⁴ Fruit were discolored or rough/disfigured due to virus.

*Virus incidence was low in harvests weeks (1-5) and (6-10); these data were not statistically different, therefore, they are only presented as observations.

Table 9. Zucchini squash cultigen trials¹. Percent fruit number per acre per indicated harvests, Clayton, NC, 2016.

Cultivar	Company	Marketable ²						Culls ³			Virus ⁴		
		#1			#2			1-5	6-10	11-15	1-5	6-10	11-15
		1-5	6-10	11-15	1-5	6-10	11-15						
10569	Rijk Zwaan	73.1	78.6	81.0	22.5	19.8	10.4	4.4	1.1	4.4	0.0	0.5	4.2
10607	Rijk Zwaan	79.2	56.4	64.7	14.9	36.7	22.1	5.9	6.9	8.3	0.0	0.0	4.8
10609	Rijk Zwaan	72.9	69.0	59.5	10.4	28.0	35.8	16.7	3.0	0.0	0.0	0.0	4.6
15S.49004	Rijk Zwaan	50.0	29.4	40.4	25.0	39.8	19.2	25.0	30.9	40.4	0.0	0.0	0.0
E28Z.00569	Enza	49.9	60.7	62.7	18.2	24.3	22.2	32.0	15.0	13.7	0.0	0.0	1.5
E28Z.00628	Enza	51.2	66.2	79.6	17.0	19.1	10.0	31.8	14.0	9.7	0.0	0.8	0.6
SV0474YG	Seminis	48.6	65.7	75.6	31.9	24.0	19.2	18.2	10.4	5.2	1.3	0.0	0.0
SV0914YG	Seminis	75.0	73.5	59.8	18.8	22.1	16.9	6.3	4.4	11.7	0.0	0.0	11.5
SV6009YG	Seminis	66.9	53.7	38.0	20.4	34.6	32.2	12.7	11.7	16.2	0.0	0.0	13.6
SV9043YG	Seminis	48.4	63.7	73.0	20.1	23.7	16.0	31.5	12.6	11.0	0.0	0.0	0.0
Bejo 3043	Bejo	61.2	69.0	84.1	22.8	25.5	7.9	16.0	5.6	7.3	0.0	0.0	0.7
Green Machine	Enza	57.8	58.6	59.0	15.7	24.6	11.9	26.4	16.8	21.4	0.0	0.0	7.7
Modena	Bejo	59.2	61.5	72.7	35.4	25.2	19.1	5.4	12.7	6.6	0.0	0.7	1.6
Respect	HM Clause	67.1	66.8	83.1	16.3	27.6	12.9	16.6	5.7	4.0	0.0	0.0	0.0
Spineless Beauty	Syngenta	77.6	64.6	61.4	19.3	30.9	15.9	3.1	4.5	16.1	0.0	0.0	6.7
Spineless Perfection	Syngenta	80.1	63.7	58.3	16.4	30.6	31.4	3.6	5.7	6.7	0.0	0.0	3.5
Average		63.6	62.6	65.8	20.3	27.3	18.9	16.0	10.1	11.4	0.1	0.1	3.8
LSD (0.05)		28.2	15.4	28.9	24.7	12.0	25.5	21.9	11.6	17.9	*	*	11.1

¹ Total of 15 harvests. Planting was 28 July 2016. Harvests 1-5 occurred on 31 August; 2, 5, 7 and 9 September; Harvests 6-10 occurred on 12, 14, 16, 19 and 21 September; Harvests 11-15 occurred on 23, 26, 28 and 30 September; 3 October.

² Marketable fruit are graded into U.S. No. 1 (requires younger and more tender squash than U.S. No. 2 which are permitted to be more mature and allows greater surface area to be affected by defects).

³ Culls consisted of primarily misshaped fruit.

⁴ Fruit were discolored or rough/disfigured due to virus.

*Virus incidence was low in harvests weeks (1-5) and (6-10); these data were not statistically different, therefore, they are only presented as observations.

Table 10. Zucchini Squash cultigen trial - Percent plant stand and average fruit length and width among replicated treatments, Clayton, NC, 2016¹.

<u>Cultivar</u>	<u>Company</u>	<u>% Stand¹</u>	<u>Fruit Size (cm)²</u>	
			<u>Avg. Length</u>	<u>Avg. Width</u>
10569	Rijk Zwaan	98	17.2	5.0
10607	Rijk Zwaan	95	16.9	4.8
10609	Rijk Zwaan	100	17.5	5.2
15S.49004	Rijk Zwaan	30	14.7	4.6
E28Z.00569	Enza	100	18.8	4.9
E28Z.00628	Enza	100	19.4	5.2
SV0474YG	Seminis	100	17.0	4.9
SV0914YG	Seminis	93	17.5	4.8
SV6009YG	Seminis	98	17.2	5.0
SV9043YG	Seminis	100	19.1	5.2
Bejo 3043	Bejo	100	17.4	4.9
Green Machine	Enza	90	17.1	4.3
Modena	Bejo	100	18.3	4.6
Respect	HM Clause	100	18.9	5.1
Spineless Beauty	Syngenta	100	19.5	5.4
Spineless Perfection	Syngenta	98	19.1	5.2
Average		94	17.8	4.9
LSD (0.05)			3.1	0.9

¹ Final plant stand count was taken on 31 August 2016.

² Fruit Size was obtained using the average length and width of 5 US No. 1 fruits from harvest 7 on 14 September 2016.