

Yield of 17 Summer Squash Varieties in Southwest Michigan

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Objective:

To evaluate commercial potential of 17 summer squash selections under southwest Michigan growing conditions.

Summary:

Statistical differences were found in the traits measured for the 14 zucchini entries. 'Payload', 'Spineless Beauty', 3043, SV6009YG and MG0001 were the leaders for all traits measured. Prior to selecting which varieties to plant, growers need to consider the virus complex in their production area and plan accordingly. 'Spineless Beauty' has no genetic tolerance for virus, but that was not a concern in this trial since no virus infection was detected during the production cycle.

Materials and Methods:

Fertilizer: Prior to planting 33-0-0, 0-0-60, 95% sulfur and Solubor were broadcast and incorporated at 100, 175, 28 and 13 pounds/acre, respectively. After planting, 42 additional pounds of nitrogen was applied through the drip system as 28% nitrogen beginning 13 June and ending 1 August.

Planting: All entries were direct seeded 26 May, 2016 on plastic mulched, 6" high raised beds into which a drip tape was inserted at the time of bed shaping. Rows were spaced 5.5' on center with an in row spacing of 2' providing 3960 plants/acre. The trial was planted as a completely randomized design with four replications and eight plants/replication. Two guard plants bordered each plot.

Plant Care: Plots were irrigated as needed and disease and insect pests controlled using commercially recommended cultural practices. Weeds were controlled using the black plastic and suppressed between rows with Gramoxone.

Harvest and data collection: Harvest was conducted thirteen times between 7 July and 8 August and fruit graded into number one small, medium, large and culls. The two yellow squash and the Mid-Eastern squash were excluded from the data set when it was subjected to statistical analysis.

Results and Discussion:

The 2016 growing season was good for summer squash production. There were periods of hot weather during flower and fruit set but they did not last long enough to cause significant yield reduction. Significant virus infection was also not detected in the trial during the harvest period.

Significant differences were noted in all traits measured. Total yield in half-bushels ranged from 2028 for 'Payload' to 741 for SB0027 (Table 1). Five other entries ('Spineless Beauty', 3043, SV0474YG, SV6009YG and MG0001) were statistically similar in total yield as 'Payload' (Table 1). 'Payload', 'Spineless Beauty', 3043, SV6009YG and MG0001 had similar yield across all traits measured. 'Easy Pick Gold II' was among the lower yielding entries at 943 half-bushels per acre. This is typical for a yellow zucchini. Pictures of the entries appear in Figures 1 – 6.

The three non-zucchini entries; 'Luciana', 'Goldprize' and SN0013 (Table 2), were not included in the statistical analysis of the zucchini entries and were not subjected to statistical analysis on their own. 'Luciana' is a Mid-Eastern variety with the typical shape and light green color while Goldprize and SN0013 are standard yellow summer squash (Figure 7).

Table 1. Yield in half-bushels of 14 zucchini selections at the Southwest Michigan Research and Extension Center, Benton Harbor, Michigan in 2016. Plant population was 3960 plants per acre.

Entry	Seed Source	Total Yield	Yield Small	Yield Medium	Yield Large	Yield Cull
Payload	RG/SY	2028	789	539	602	97
Spineless Beauty	RG/SY	1918	751	547	550	70
3043	BE	1673	690	460	430	93
SV0474YG	SM	1669	773	549	320	27
SV6009YG	SM	1665	677	473	434	81
MG0001	RG/SY	1654	690	458	461	45
SV9043YG	SM	1626	755	471	368	33
SV9951YG	SM	1447	680	416	320	45
Reward	HM	1277	660	436	159	21
SV0914YG	SM	1192	533	273	356	30
Esteem	HM	1188	640	218	296	33
MG0011	RG/SY	1053	416	330	266	41
Easy Pick Gold II	PAN	943	584	209	150	0
SB0027	RG/SY	741	410	153	152	26
	Lsd.05	387	146	177	260	60

Seed Source: RG/SY = Rogers/Syngenta, BE = Bejo, SM = Seminis, HM = Harris Moran, PAN = Pan American.

Small = <8 inches; medium = 8 – 10 inches; large = 10 – 12 inches.

Bold numbers in the same column are not statistically different from the highest number.

Table 2. Yield in half-bushels of three summer squash selections at the Southwest Michigan Research and Extension Center, Benton Harbor, Michigan in 2016. Plant population was 3960 plants per acre.

Entry and Fruit Type	Seed Source	Total Yield	Yield Small	Yield Medium	Yield Large	Yield Cull
Luciana Mid-East	UA	2023	702	593	624	104
Goldprize Yellow Squash	RG/SY	1529	785	450	272	22
SN0013 Yellow Squash	RG/SY	1388	719	448	206	15

Seed Source: RS = Rogers Seed Company, AC = Abbott and Cobb Seed Company.
Small = <8 inches; medium = 8 – 10 inches; large = 10 – 12 inches.