

YIELD OF 19 ZUCCHINI AND FOUR YELLOW SQUASH SELECTIONS IN SOUTHWEST MICHIGAN

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OBJECTIVE:

To evaluate commercial potential in an early planting of 19 zucchini and four yellow squash cultivars/selections under southwest Michigan conditions.

SUMMARY:

Significant differences were noted in all traits measured for the 19 zucchini entries. 'Spineless Beauty' had the highest total yield at 1946 – ½ bushels/acre. However, seven other selections had similar total yields. 'Cashflow' and 'Spineless Beauty' had the highest yield of small and medium fruit, respectively. 'Spineless Beauty' also had the highest yield of large fruit. The yellow squash entries of 'Enterprise' and 'Gentry' were similar in total yield (931 and 776 – ½ bushels/acre). 'Enterprise' was highest in yield of small fruit and similar to 'Gentry' and Gold Star' in yield of medium fruit.

METHODS:

Fertilizer: Prior to planting 33-0-0, 0-0-60, Cal-fortified (calcium plus micronutrients), sulfur and Solubor were broadcast and incorporated at 150, 200, 100, 25 and 20 pounds/acre, respectively. After planting, fertilizer was applied through the drip system as 4-0-8-2 (2% Ca) at the rate of 1# nitrogen/acre/day. Drip fertilizer application began 13 June and ended 4 July.

Fumigation/weed control: Beds were fumigated with 350 pounds/acre 67/33% Methyl Bromide/Chloropicrin at shaping and plastic laying. Between-row weeds were controlled by cultivating and hoeing.

Planting: All entries were direct seeded on 23 May and reseeded if needed on 1 June. Beds were 6" high and spaced 5.5' on center with in row spacing of 1.5' providing 5280 plants/acre. The trial was planted and analyzed 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 recommended cultural practices.

Harvest and data collection: Harvest was conducted eleven times between 5 and 28 July. Fruit was graded into small, medium, large and culls.

RESULTS:

Total yield of the 19 zucchini entries ranged from 1946 ('Spineless Beauty') to 700 ('Golden Dawn III') ½ bushels/acre (Table 1). Eight zucchini entries were not statistically different in total yield, and among these are five named, readily available varieties. 'Cashflow' had the highest yield of small fruit (821 – ½ bushels) while 'Spineless Beauty' had the highest yield of medium fruit (669). 'Amatista', a mid-east-type, had the highest yield of large fruit (572). Selection 718 had the highest number of culled fruit at 158 – ½ bushels/acre. Regardless of the variety many fruit were culled due to poor pollination and double fruit, both of which occurred early in the harvest period.

Table 1. Yield in half bushels per acre of 17 zucchini varieties grown at the Southwest Michigan Research and Extension Center in 2006. Plants were spaced 5.5 feet between rows and 1.5 feet within the row (5280 plants/acre).

Variety	Seed Source*	Total Yield	Yield Small	% Tot.	Yield Med.	% Tot.	Yield Large	% Tot.	Yield Cull	% Tot.
Spineless Beauty	SY/RG	1946	750	39	669	34	506	26	21	1
718	SW	1845	730	40	530	28	427	23	158	8
Amatista	SY/RG	1767	614	35	575	32	572	32	6	1
Dividend	SY/RG	1627	785	48	557	34	249	15	37	2
Cashflow	SY/RG	1594	821	52	473	30	281	17	19	1
Payroll	SY/RG	1565	692	45	619	39	227	14	28	2
SSX 6729	SK	1539	780	51	458	30	255	16	46	3
SSX 6749	SK	1493	632	43	537	36	248	17	76	5
Topazio	SY/RG	1445	593	41	525	36	317	22	9	1
SCR 604	AC	1428	684	49	383	26	314	23	46	3
Envy	SY/RG	1397	684	49	470	33	221	16	23	2
RSQ4145-VP	SY/RG	1179	634	59	401	30	132	10	12	1
Magnum	SW	1114	471	42	363	33	263	23	17	2
ACX 504	AC	1077	404	40	357	30	281	27	34	3
SCR 605	AC	1016	437	43	278	27	260	26	41	4
Golden Delight	SY/RG	910	548	61	220	23	109	12	33	4
Golden Dawn III	SY/RG	700	430	64	179	24	68	9	22	3
Isd 05 =		392	144	13	240	11	169	10	63	4

*Seed Source: SY/RG = Syngenta/Rogers Seed Company, SW = Seedway Seed Company, SK = Sakata Seeds, AC = Abbott & Cobb Seed Company.

Yield of the four yellow squash ranged from 931 ('Enterprise') to 620 (ACX 601) ½-bushels/acre (Table 2). 'Gentry' was similar in total yield to 'Enterprise'. 'Enterprise' stood alone in yield of small fruit but was comparable to 'Gentry' and 'Gold Star' in yield of medium fruit. All entries were similar in yield of large fruit.

Most entries in both trials possess a certain level of virus tolerance. Virus was present late in the harvest period, but incidence was low as indicated by the high yield of 'Spineless Beauty', a virus susceptible variety.

The trials were planted on a site that had a winter cover crop of Hairy Vetch. Nitrogen made available from the vetch in combination with nitrogen applied pre-plant and through the drip irrigation contributed to excessive growth. Therefore, drip applied nutrients were stopped after two weeks of application. Excessive growth and warm temperatures during harvest may have contributed to decreased 2006 yields. Early harvests of 'Enterprise' also had a fair number of fruit with a significant greenish cast.

Table 2. Yield in half bushels per acre of four yellow squash varieties grown at the Southwest Michigan Research and Extension Center in 2006. Plants were spaced 5.5 feet between rows and 1.5 feet within the row (5280 plants/acre).

Variety	Seed Source*	Total Yield	Yield Small	% Tot.	Yield Med.	% Tot.	Yield Large	% Tot.	Yield Cull	% Tot.
Enterprise	SY/RG	931	558	60	276	30	76	8	21	2
Gentry	SY/RG	776	455	59	232	30	83	10	7	1
Gold Star	SY/RG	656	327	50	217	33	105	16	6	1
ACX 601	AC	620	315	53	141	21	142	23	21	3
Isd 05 =		157	69	ns	98	ns	ns	ns	ns	ns

*Seed Source: SY/RG = Syngenta/Rogers Seed Company, SW = Seedway Seed Company, AC = Abbott and Cobb Seed Company.