

YIELD OF 30 LATE-PLANTED ZUCCHINI SELECTIONS IN SOUTHWEST MICHIGAN

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OBJECTIVE:

To evaluate commercial potential of 30, late planted zucchini cultivars/selections under southwest Michigan conditions

SUMMARY:

Significant differences were noted in all traits measured. 'Dividend' had the highest total yield (1876 ½ bushels/a) and yield of small fruit (1081). 'Dividend' stood alone in yield of small fruit but was similar to eight other selections in total yield, four already available commercially. 'Spineless Beauty', a non-virus tolerant selection, was among the top yielding lines. This indicates the low virus incidence within the trial in 2006

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 5 July and ended 18 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 22 June and reseeded if needed on 30 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 randomized block design with four blocks and ten plants/replication. Two guard plants bordered each plot.

Plant Care: Plots were irrigated as needed and disease and insect pests were controlled using recommended cultural practices.

Harvest and data collection: Harvest was conducted twelve times between 31 July and 25 August. Fruit was graded into small, medium, large and culls.

RESULTS:

Total yield of the 30 entries ranged from 1876 ('Dividend') to 852 (06-5333) ½ bushels/acre (Table 1). Nine entries were not statistically different in total yield, and among these nine were five named varieties readily available to growers. 'Dividend' also had the highest yield of small fruit (1081 – ½ bushels) while the advanced selection 06-5342 had the highest yield of medium (456) and large fruit (488).

Most entries had some level of virus tolerance. Virus was present in this planting but incidence was low and possibly sporadic in 2006 as indicated by the high and variable yield of 'Spineless Beauty', a virus susceptible variety. Entries having the highest yield of cull fruit were 06-5330, 'Justice III', 'Cashflow' and 'Dividend'. Most culled fruit in this trial were not due to virus infections but to poor pollination and double fruit early in the harvest cycle.

The trial was 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 contributed to excessive growth. Therefore, drip applied nutrients were stopped after two weeks of application. Excessive growth and warm temperatures during July may have contributed to decreased yields in 2006.

Table 1. Yield in ½ bushels/acre of 30 zucchini selections grown at the Southwest Michigan Research and Extension Center, Benton Harbor, Michigan in 2006. All seed were provided by Syngenta Seeds, Inc. Plant spacing was 5.5' between rows and 1.5' in the row for a population of 5280 plants/a.

Variety	Total Yield	Yield Small	% Tot.	Yield Medium	% Tot.	Yield Large	% Tot.	Yield Cull	% Tot.
Dividend	1876	1081	58	447	25	214	10	135	7
Sp. Beauty	1830	863	49	437	24	466	25	63	3
06-5342	1651	663	41	456	28	488	29	44	2
Justice III	1635	879	54	298	18	270	16	188	12
Cashflow	1598	833	52	365	23	261	16	139	9
06-5329	1566	870	59	352	21	307	18	37	2
06-5328	1523	721	48	362	25	379	23	60	4
06-5344	1492	748	51	417	28	250	16	78	5
Payroll	1489	869	59	426	29	166	11	27	2
06-5346	1470	814	56	343	24	274	18	39	2
06-5330	1428	642	45	249	18	271	19	266	17
Sp. Beauty	1407	716	52	433	30	250	18	8	1
06-5336	1397	701	51	407	30	277	19	12	1
Sp. Beauty	1393	692	51	450	31	210	14	41	3
06-5325	1392	654	48	443	31	250	17	46	3
06-5337	1379	626	46	396	29	286	20	71	5
06-5338	1376	693	50	419	31	239	17	24	2
Sp. Beauty	1363	609	45	455	32	267	20	32	3
06-5326	1325	624	48	408	30	212	16	82	6
06-5324	1322	679	51	300	23	308	23	35	3
06-5341	1303	762	58	255	20	247	19	39	3
06-5335	1266	629	52	310	24	282	21	45	3
06-5347	1221	694	56	381	32	124	10	22	2
06-5334	1212	652	54	374	30	180	15	7	1
06-5340	1181	605	51	347	29	173	15	56	5
06-5327	1127	590	57	247	20	245	18	44	4
06-5345	1086	619	57	286	26	158	15	23	2
06-5332	1040	588	57	281	27	133	13	38	4
Independence II	972	552	59	241	24	150	14	28	3
06-5333	852	597	70	187	22	50	5	18	2
Lsd .05 =	398	194	13	187	11	201	11	141	9