

## YIELD OF 30 ZUCCHINI SELECTIONS IN SOUTHWEST MICHIGAN

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### OBJECTIVE:

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

### SUMMARY:

Lines having multiple virus tolerances generally performed better than those with no tolerance. The experimental selection SYNEXP-10 had the highest total yield, but the named cultivars Tigress, Cashflow, Justice III, Payroll, Spineless Beauty and Dividend had statistically similar total yields. Non virus tolerant entries had the highest amount of cull 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 125, 250, 100, 25 and 10 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 at planting and continued through last harvest, except for two weeks between 25 July and 8 August.

**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 1 July. Beds were 6" high and spaced 5.5' on center with an in row spacing of 1.5' providing 5280 plants/acre. The trial was planted and analyzed as a completely randomized design with four replications, eight 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 fourteen times between 27 July and 31 August. Fruit was graded into small, medium, large and cull fruit.

### RESULTS:

Total yield of the 30 entries ranged from 2415 (SYNEXP-10) to 1439 (Zucchini Elite) \_ bushels/acre (Table 1). Fourteen entries were not statistically different in total yield, and among these fourteen were six named varieties readily available to growers. SYNEXP-10 also had the highest yield of small fruit (978 – \_ bushels) while SYNEXP-06 (835) and Tigress (669) had the highest yield of medium and large fruit, respectively.

Most entries had some level of virus tolerance. The entries having the highest yield of cull fruit were 'Agriset 843', 'Zucchini Elite', 'Spineless Beauty' and 'Lynx'. Only 'Lynx' has any level of virus tolerance and then not to Cucumber Mosaic Virus - the most prevalent virus in the area in 2005. Much of the culled fruit from these selections were due to virus infections.

**Table 1.** Yield in \_ bushels/acre of 30 zucchini selections grown at the Southwest Michigan Research and Extension Center, Benton Harbor, Michigan in 2005. All seed provided by Syngenta Seeds, Inc.

Variety	Total Yield	Yield Small	% Total	Yield Medium	% Total	Yield Large	% Total	Yield Cull	% Total
SYNEXP-10	2415	978	40	773	32	472	20	191	8
SYNEXP-05	2262	843	38	691	31	598	26	130	6
SYNEXP-17	2238	783	35	761	34	554	25	140	6
Tigress	2138	587	28	717	33	669	30	165	8
SYNEXP-08	2047	777	39	743	37	311	14	216	10
Cashflow	2020	865	42	735	37	286	14	134	7
SYNEXP-02	2018	865	44	666	33	362	17	125	6
Justice III	1998	855	43	640	32	325	16	178	9
SYNEXP-06	1990	750	38	835	42	219	11	186	9
Payroll	1977	765	39	632	33	474	22	107	6
SYNEXP-09	1977	648	33	767	40	415	20	147	7
Spineless Beauty	1960	640	32	620	30	328	17	372	20
Dividend	1954	832	42	583	30	305	16	235	12
SYNEXP-15	1947	749	39	765	39	340	17	94	5
SYNEXP-07	1924	752	39	597	31	428	22	147	8
Wildcat	1923	705	37	504	26	434	23	281	14
SYNEXP-12	1890	759	40	571	30	386	21	174	9
Lynx	1882	632	34	558	28	321	17	371	21
SYNEXP-16	1865	834	46	539	29	311	16	182	9
SYNEXP-04	1852	808	44	567	31	372	20	105	5
SYNEXP-03	1850	810	44	594	32	394	20	51	3
SYNEXP-14	1846	785	43	594	33	339	18	127	7
Agriset 843	1787	446	25	374	21	344	19	623	35
SYNEXP-13	1779	789	45	650	37	241	13	99	5
SYNEXP-01	1768	667	37	589	34	431	24	82	5
Independence II	1761	551	31	468	26	574	33	168	10
SYNEXP-11	1728	703	42	486	28	421	23	119	6
RSQ 2054	1671	666	40	471	28	405	24	129	7
Declaration II	1484	590	40	540	36	259	17	96	7
Zucchini Elite	1439	462	31	388	28	201	14	389	27
lsd .05	468	217	10	242	11	262	11	167	9