

Pumpkin Cultivar Performance Trial

Grown in Southern Ohio 2017

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OBJECTIVES:

To screen new pumpkin variety releases (2016-2017) for their production performance under Southern Ohio growing conditions and to evaluate yield potential and fruit quality characteristics for the southern Ohio area.

MATERIALS and METHODS:

This trial evaluated thirty replicated and six observation pumpkin cultivars for their production suitability, performance and quality attributes under southern Ohio growing conditions. Cultivar selections were new releases along with industry standard varieties. Input was received from seed companies, growers, and industry personnel regarding variety selection and standard comparison. Seeds were direct seeded to the field on June 7th. Randomized complete block design with three blocks and 5 plants per variety per plot was used in the study. Rows were spaced 8 foot apart with seeds planted 3 foot apart in the row and row length was 15 foot. This study was conducted at the Ohio State University (OSU) South Centers/Piketon Research & Extension Center at Piketon, Ohio (lat. 39.07° N, long. 83.01° W), elevation 578 feet. The experimental soil is designated as a DoA—Doles silt loam, with 0–3% slopes. It is a deep, nearly level and somewhat poorly drained soil. Typically, the soil surface is a brown, friable silt loam about 20 cm deep and beneath this the subsoil is about 18.5 m. 578 pounds of 19-19-19 fertilizer per acre was applied prior to planting. There were zero applications of powdery mildew fungicides applied. Insecticides and downy mildew applications were applied following recommendations from the Midwest Vegetable Production Guide for Commercial Growers (ID-56). Sandea and Strategy pre-emerge herbicides were applied to the trial. Weeds were also controlled with cultivation and hand hoeing.

RESULTS and DISCUSSION:

All plants were harvested on September 21. Fruit were weighed individually. At harvest three fruit from each variety were collected for the Chroma evaluation of rind color to describe the vividness or dullness of pumpkin color. Overall plant and fruit quality was good in the 2017 growing season. Overall fruit yield was good for this trial. Marketable pounds per acre ranged from a high of 63,434 (Orange Sunrise) to a low of 14,274 (Jack Sprat) pounds per acre.



Average fruit weight ranged from a high of 32.88 pounds (RPX6903) to a low of 2.54 pounds (Jack Sprat).

References

Egel, D., R. Foster, E. Maynard, R., et al. 2017. Midwest Vegetable Production Guide for Commercial Growers, 2017 (ID-56). Purdue University.

Table 1. Yields from replicated Pumpkin Cultivar Performance Trial.

Variety	Pounds per Acre	Pounds per Plant	Fruit per Acre	Average Fruit Weight (lbs.)	Seed Source
<i>RPX6883</i>	54273	49.838	5808	22.849	Rupp
<i>ACX7606</i>	46465	42.667	13794	10.917	Abbot & Cobb
<i>Kratos</i>	40342	37.045	10164	21.513	Harris Moran
<i>Rhea</i>	40305	37.011	11979	16.996	Harris Moran
<i>JPN 6200R</i>	39267	36.058	9801	20.588	Johnnys
<i>1512</i>	38112	34.997	13431	13.36	Abbot & Cobb
<i>EX #5</i>	33949	31.174	7623	15.73	Enza Zaden
<i>Diablo</i>	33484	30.748	7986	16.71	Sakata
<i>SPU6016</i>	32300	29.66	11979	14.006	Sakata
<i>JPN-14-4090</i>	32131	29.505	12705	13.07	Johnnys
<i>Hulk</i>	31242	28.689	7260	23.869	Sakata
<i>EX #3</i>	30633	28.129	10890	12.854	Enza Zaden
<i>Skidoo Gold</i>	30390	27.906	9438	13.625	Rupp
<i>Bayhorse Gold</i>	30378	27.895	8712	16.79	Rupp
<i>Blaze</i>	29065	26.689	32307	3.378	Sakata
<i>Renegade</i>	28704	26.358	11253	12.785	Johnnys
<i>RPX6208</i>	28365	26.047	7986	16.741	Rupp
<i>Solid Gold</i>	28329	26.014	7623	16.43	Rupp
<i>Eagle City Gold</i>	27133	24.915	7986	13.698	Rupp
<i>PX6229</i>	25232	23.17	12342	11.329	Rupp
<i>Jason</i>	23272	21.37	8712	14.259	Sakata
<i>Cracker Jack</i>	23208	21.311	11979	11.304	Sakata
<i>RPX6927</i>	22383	20.554	14883	7.609	Rupp
<i>Bellatrix</i>	21945	20.151	7986	14.432	Enza Zaden
<i>JPN 62009</i>	20865	19.159	12705	9.813	Johnnys
<i>RPX6880</i>	18932	17.385	9438	6.628	Rupp
<i>Zeus</i>	17402	15.979	6171	13.565	Harris Moran
<i>Cronus</i>	17332	15.915	2904	21.747	Harris Moran
<i>1543</i>	15934	14.632	10527	4.986	Abbott & Cobb
<i>Jack Sprat</i>	14274	13.107	22869	2.543	Sakata
LSD	16512	15.163	9070	5.9875	NA



Table 2. Chroma Meter rind color results from 3 fruit sampled.

Variety	L (defines lightness)	A (denotes the red/green value)	B (defines the yellow/blue value)
<i>Cronus</i>	51.9	26.64	28.19
<i>1512</i>	45.29	27.04	24.65
<i>1543</i>	50.88	30.3	28.16
<i>ACX7606</i>	48.17	28.49	27.42
<i>Bellatrix</i>	52.93	29.94	29.72
<i>EX #3</i>	58.18	29.8	34.58
<i>EX #5</i>	49.42	28.73	27.44
<i>Kratos</i>	46.69	27.89	24.32
<i>Rhea</i>	53.77	30.34	28.93
<i>Zeus</i>	52.17	31	29.91
<i>JPN 62005R</i>	49.35	29.18	27.55
<i>JPN 62009</i>	48.84	28.34	26.63
<i>JPN-14-4090</i>	54.15	30.71	30.28
<i>Renegade</i>	52.23	32.6	29.08
<i>Bayhorse Gold</i>	43.13	23.47	22.76
<i>Eagle City Gold</i>	52.12	33.27	28.81
<i>PX6229</i>	60.52	16.26	27.74
<i>RPX6208</i>	50.84	30.17	29.78
<i>RPX6880</i>	45.79	30.05	23.89
<i>RPX6883</i>	39.98	21.9	21.76
<i>RPX6927</i>	85.2	1.43	23.45
<i>Skidoo Gold</i>	47.98	25.96	25.5
<i>Solid Gold</i>	52.78	23.3	26.17
<i>Cracker Jack</i>	49.66	30.91	26.54
<i>Diablo</i>	48.63	28.77	27.05
<i>Hulk</i>	44.9	27.65	25.97
<i>Jack Sprat</i>	57.63	33.71	34.2
<i>SPU6016</i>	43.61	27.65	24.69
<i>Blaze</i>	71.31	21.7	41.97
<i>Jason</i>	53.69	30.61	30.37
<i>RPX6890</i>	50.78	15.78	30.07
<i>RPX6903</i>	36.74	20.82	21.16
<i>RPX6879</i>	52.07	29.83	28.9
<i>RPX6851</i>	54.78	31.49	31.52
<i>Tallon</i>	45.91	24.21	24.87
<i>Orange Sunrise</i>	56.28	35.99	32.8



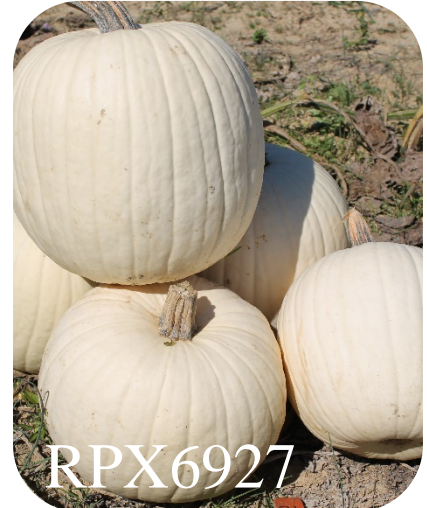
Table 3. Yields Observation Pumpkin Cultivar Performance Trial.

Variety	Pounds per Acre	Pounds per Plant	Fruit per Acre	Average Fruit Weight (lbs.)	Seed Source
<i>Orange Sunrise</i>	63434.25	58.25	14157	17.92	Rupp
<i>RPX6903</i>	59677.2	54.8	5445	32.88	Rupp
<i>Tallon</i>	34457.77	31.64	8712	23.73	Rupp
<i>RPX6879</i>	29522.79	27.11	6534	22.59	Rupp
<i>RPX6851</i>	26771.97	24.58	4356	30.73	Rispen Seed
<i>RPX6890</i>	18841.51	17.3	9801	11.53	Rispen Seed

Figure 1. Exterior of top five varieties in the 2017 Pumpkin Cultivar Performance Trial.



Figure 2. Exterior of specialty varieties in the 2017 Pumpkin Cultivar Performance Trial.



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