

Pumpkin Cultivar Evaluation in Eastern Kentucky

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Introduction

As a fall crop, pumpkins allow Kentucky growers to extend their marketing season and take advantage of labor used to cut and house tobacco. Both wholesale and direct market pumpkin acreage has increased dramatically during the past five years. Howden has been the predominate cultivar grown for Jack' O Lantern sale. However, problems with fruit set during high temperatures and Fusarium fruit rot have created a need for better cultivars.

A pumpkin cultivar trial was conducted at the University of Kentucky Robinson Station, Quicksand, Kentucky. Ten cultivars, two of which were small or miniature pumpkins, were evaluated in replicated plots.

Methods

Seeds were planted directly in the field on June 18, 2002. Each cultivar was replicated 4 times in a randomized complete block design. Each replication consisted of a single row 20 feet long containing 10 plants (2/hill). Seeds were hand-sown 4 feet apart in the row with 14 feet between rows. The seed was planted about 1 inch deep. A total of 500 lbs of 5-20-20/A was applied preplant. Fifty lbs/acre of N (ammonium nitrate) was applied as a side dressing two weeks after planting. A second side dressing of ammonia nitrate was applied when the vines began to run, bringing the total nitrogen applied to 125 lb actual N/A. Command 4EC (1 pt/A) was applied preplant and incorporated. Curbit 3EC at 2 qt/A was applied immediately after planting. Pest control sprays were applied during the growing season for disease and insect problems as conditions warranted. Overhead irrigation was applied as needed. Growing conditions during the season were hot and dry.

Results and Discussion

Pumpkin yields were very good for a hot, dry year (Table 1). None of the eight standard pumpkin cultivars showed any significant difference in fruit number. Appalachian, Gold Standard, Magic Lantern and Pro Gold 510 all had over 3000 fruit/A. Autumn King, Jumpin Jack, Gold Strike and Gold Gem had closer to 2000 fruit/A. The highest yielding (lb/A) large Jack O'Lantern in the trial was Appalachian. Magic Lantern and Pro Gold 510 also produced well. Gold Gem produced the fewest pounds/A and had the fewest fruit/A. Pro Gold 510 had the largest fruit size. Touch of Autumn produced significantly more fruit and pounds/A than Baby Bear. Both were attractive, nicely shaped miniature pumpkins. Appalachian, the best producing Jack O'Lantern in this trial,

produces fruit on bush vines which would allow for a much closer row spacing than that used in this trial. Gold Standard, a slightly smaller pumpkin, has consistently produced good yields of attractive fruit that are a nice size for school children. Magic Lantern, because of its resistance to powdery mildew, has potential for growers who follow a reduced spray program or do not own a good, high pressure sprayer.

Table 1. Seed source, fruit number per acre, yield, average weight, and quality evaluations for pumpkin cultivars, Quicksand, 2002.

Cultivar	Seed Source	Fruit Number/A ¹	Yield (lbs /A) ¹	Avg Wt. (Lb) ¹	Shape ²	Smoothness ³	Ribbing ⁴	Color ⁵	Stem Quality ⁶	Stem Color ⁷
Touch of Autumn (RWS-6260)	RG	8,517 A	16,510 DE	1.9 D	3	4	3	LO	3	DG
Baby Bear	RU	6,145 B	7,106 E	1.2 D	3	4	3	MO	2	DG-T
Appalachian	PS	3,461 C	52,440 A	14.9 AB	1.8	2.8	2.3	DO	2.3	L-DG
Gold Standard	RU	3,306 C	36,250 BC	11.1 C	2.8	2.5	2.3	DO	3	MG
Magic Lantern	HM	3,228 C	42,580 AB	13.1 ABC	3	4.3	1.5	MO	2.5	MG
Pro Gold 510	RU	3,034 C	43,710 AB	15.0 A	1.5	3.5	4.3	LO	2	MG
Autumn King	RG	2,411 C	30,820 BC	12.7 BC	1.8	3	2.5	MO	2.5	DG-T
Jumpin Jack	RU	2,334 C	29,910 BCD	12.9 ABC	1.8	3	3.3	LO	1.5	T
Gold Strike	RU	2,061 C	30,750 BCD	14.2 AB	1.5	1.8	1.5	DO	1.8	DG-T
Gold Gem (Rex 38041)	RU	1,945 C	26,550 CD	13.8 AB	2.8	2.3	1.8	M-DO	1.8	T
<i>LSD⁸</i>		<i>1,543</i>	<i>14,300</i>	<i>2.2</i>						

¹Means followed by the same letter are not significantly different as determined by LSD (P=0.05%)

²1= oblate or flat, 2 = blocky, 3 = round

³1 = rough warty skin, 5 = very smooth

⁴1 = heavy ribbed, 5 = no ribbing, smooth

⁵o = light orange, mo = medium orange, do = dark orange, ro = reddish orange, w = white

⁶1 = weak, small, breaks off; 3 = strong and large

⁷lg = light green, mg medium green, dg = dark green, t = tan

⁸Least Significant Difference (P=0.05)