

# Pumpkin Variety Trial at the North Mississippi Research and Extension Center

Thomas Horgan & Casey Barickman  
NMREC P.O. Box 1690 Verona MS 38879. 662-566-2201. E-mail: [teh5@ra.msstate.edu](mailto:teh5@ra.msstate.edu)

**Materials and Methods:** New developments in disease resistance and market demand have increased the interest in growing pumpkins. New varieties of pumpkins with differing disease resistance packages are offered annually from numerous seed companies. This study was conducted to evaluate the yield of 16 cultivars of pumpkin grown in northern Mississippi in 2013 & 2014 (Table 1). The experimental design was a randomized complete block with 4 replications. Each replication consisted of 10 plants. Plants were spaced 2 ft. apart in the row with rows on 12 ft. centers. Prior to bed formation fertilizer was broadcast, according to soil test recommendations, with all the P & K and ½ the N applied pre-plant. The remaining 40 lb N per acre was applied by injecting, thru the drip tape, a concentrated solution of calcium nitrate (CaNO<sub>3</sub>) (5 lbs actual N/week) when vines began to “run”. Plants were direct seeded the 1<sup>st</sup> week in July and harvest began in mid-September. The herbicide Strategy (ethalfuralin and clomazone) was applied immediately after seeding. One of the major diseases that infect pumpkins is powdery mildew, an air borne fungus that can cause extensive early defoliation, slow growth, and decrease yields. Powdery mildew developed and caused leaf defoliation even though a fungicide (chlorothalonil, azoxystrobin, or copper hydroxide) was sprayed every 7-10 days. The varieties with powdery mildew resistance (PMR) had overall good yields and had the best disease ratings (Table 1 & 2).

**Table 1.** Pumpkin variety name and yield data of the 16 pumpkin varieties grown in northern Mississippi in 2013 & 2014.<sup>X</sup>

Pumpkin Variety	Weight (lbs)		Number (Per plant)		Height (in)		Circumference (in)	
	2013	2014	2013	2014	2013	2014	2013	2014
<b>Large</b>								
Early Giant	20.7 a	17.3 a	1.0 def	0.9 cd	14.3 a	13.1 a	32.7 a	30.2 cd
First Harvest	19.2 b	---	1.1 c-f	---	13.5 b	---	32.7 a	---
Mustang	17.5 c	16.8 a	1.3 bcd	1.3 b	12.0 c	11.6 b	32.6 a	32.6 a
Gold Medal	17.0 c	14.7 b	0.8 f	0.9 cd	11.0 e	10.8 cd	33.1 a	30.8 cd
Early King	15.7 d	12.7 c	1.3 cde	1.3 b	11.5 d	10.6 de	33.1 a	29.8 d
Big Daddy	15.7 d	14.8 b	1.0 ef	0.7 d	11.4 d	11.0 c	31.6 b	31.1 bc
El Toro	14.1 e	14.5 b	1.0 def	0.9 cd	10.0 f	10.3 e	33.0 a	32.2 ab
Solid Gold	12.9 f	12.3 c	1.3 cde	1.0 c	9.3 g	9.2 f	30.8 b	30.8 cd
Earlpack	12.9 f	---	1.0 def	---	9.2 g	---	33.1 a	---
<b>Mid-Size</b>								
Corvette	11.3 g	10.3 d	1.7 b	1.3 b	9.5 g	9.1 fg	28.4 c	27.3 e
Oktoberfest	10.9 g	9.3 d	1.3 cde	0.9 cd	9.3 g	8.7 g	28.7 c	26.8 e
Magical	10.1 g	9.5 d	1.4 bcd	1.1 bc	9.3 g	9.3 f	28.4 c	27.4 e
Jack-O-Lantern	---	6.8 e	---	1.0 c	---	8.0 h	---	23.0 f
P1-7606	---	6.3 e	---	0.9 cd	---	7.6 i	---	24.0 f
Darling	4.4 h	4.4 f	2.5 a	1.9 a	8.0 l	7.9 hi	18.5 e	18.0 g
Early Abundance	4.1 h	3.0 g	2.3 a	1.1 bc	5.9 j	5.4 j	20.7 d	18.3 g

<sup>X</sup> Means sharing the same letter, within a column, were not significantly different. Least significant difference (LSD) at P=0.10.  
<sup>Y</sup> Seed not available in 2014  
<sup>Z</sup> New variety in 2014

**Table 2.** Seed source, disease resistance, disease rating, and days to harvest of the 16 pumpkins grown in northern Mississippi in of 2013 & 2014.

Pumpkin Variety	Seed Source	Disease Resistance <sup>Y</sup>	Disease Rating <sup>Z</sup> (1-10)	Days to Harvest	
				Catalog	Actual 2013 2014
<b>Large</b>	<b>Company</b>				
Early Giant	Abbott & Cobb	iPMR	6.3	95	72 79
First Harvest	Abbott & Cobb	iPMR	6.4	90	78 ---
Mustang	Seigers	PMR	4.2	100	85 87
Gold Medal	Rupp		6.0	95	81 84
Early King	Abbott & Cobb	iPMR	6.4	90	80 72
Big Daddy	Seigers	PMR	5.8	115	80 86
El Toro	Seigers	iPMR	5.3	95	81 86
Solid Gold	Rupp		6.7	100	73 72
Earlpack	Seigers	iPMR	6.4	95	78 ---
<b>Mid-size</b>					
Corvette	Seigers	PMR	4.8	110	83 86
Oktoberfest	Seigers		6.0	95	79 86
Magical	Abbott & Cobb	iPMR	6.5	88	74 72
Jack-O-Lantern	Seeds By Design		6.6	100	--- 87
P1-7606	Abbott & Cobb		6.6	95	--- 86
Darling	Abbott & Cobb	iPMR	5.5	90	76 76
Early Abundance	Rupp	iPMR	6.5	90	79 75

<sup>Y</sup>PMR = Powdery Mildew Resistance iPMR=intermediate PMR

<sup>Z</sup> Disease Rating Scale (estimate of % diseased foliage): 1=10%, 2=20%, 3=30%, 5=50%, 10=100%.



Fig.1 Early Giant



Fig. 2 First Harvest



Fig. 3 Mustang



Fig. 4 Gold Medal



Fig. 5 Early King



Fig. 6 Big Daddy



Fig. 7 El Toro



Fig. 8 Solid Gold

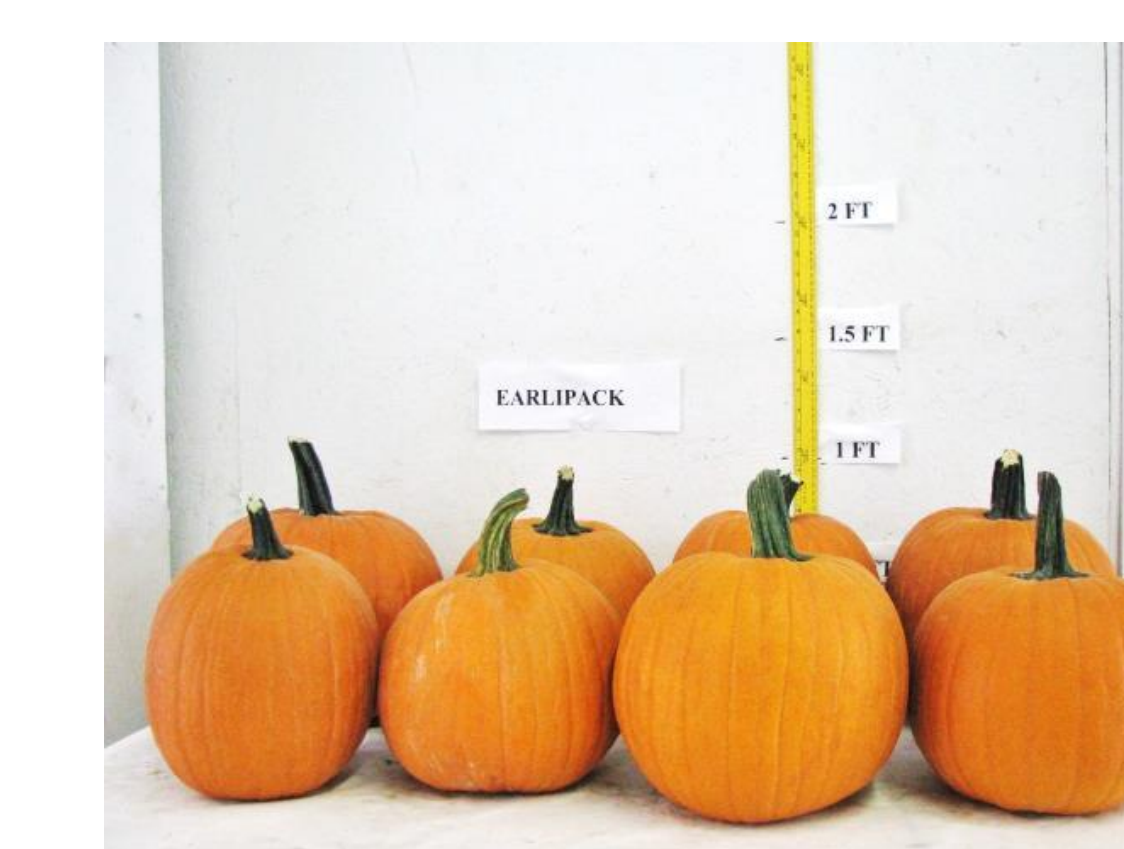


Fig. 9 Earlpack



Fig. 10 Corvette



Fig. 11 Oktoberfest



Fig. 12 Magical



Fig. 13 Jack-O-Lantern



Fig. 14 P1-7606



Fig. 15 Darling



Fig. 16 Early Abundance

**Results:** ‘Mustang’ (Fig. 3) was one of the top producers with the best disease rating both years, and averaged 1.3 pumpkins per plant. ‘Early Giant’ (Fig. 1) was one of the biggest pumpkins both years but had a high disease rating and averaged 1.0 pumpkin per plant (Table 1 & 2). ‘Corvette’ (Fig. 10) was one of the best mid-size varieties, had one of the best disease ratings, and averaged 1.5 pumpkins per plant. ‘Darling’ (Fig. 15) and ‘Early Abundance’ (Fig. 16) were two mid-size to small pie pumpkins that produced the most number per plant and had the least average weights with moderate to good disease resistance. The 2 new varieties trialed in 2014, ‘Jack-O-Lantern’ (Fig. 13) and P1-7606 (Fig. 14), an unnamed experimental variety, both had high disease ratings and yielded moderately.