HUGE YIELDS, HUGE DIFFERENCES IN GEORGIA-NORTH CAROLINA PUMPKIN VARIETY TRIALS

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Introduction

The 2007 pumpkin trial was conducted for the second consecutive year in Waynesville, North Carolina at the Mountain Research Station. The growing season was very favorable for good yields. Among the new varieties tested were a giant white pumpkin from Hollar Seeds called 'New Moon' and two experimental lines from Harris Moran that will be released as named varieties. All performed relatively well and should be good additions to available varieties. Miniature and white pumpkins were included in the trial and analyzed separately so that comparisons could be made between like types. Although, some varieties have now been in the Georgia trial for six or more years, many of the ones tested in 2007 were being evaluated for the first or second time. Excellent yields were the trend, but growers should keep in mind that yields in these small plot trials are greater than would be expected in large field production. However, the comparison between varieties remains valid.

Methods

Twenty-two commercially-available pumpkin varieties and four unreleased varieties were compared at the Mountain Research Station (elev. 2,600 feet) in Waynesville, North Carolina. Three of the varieties can be described as miniature pumpkins and four others as white specialty pumpkins. All pumpkins were field-seeded on July 10, 2007 into a Braddock clay loam soil (fine, mixed, semiactive, mesic Typic Hapludult). Plots consisted of single rows which contained six hills each. Plots were 24 feet in length with 12 feet between rows. The planting was arranged in a Randomized Complete Block Design with four replications.

Normal cultural practices were used for bare ground pumpkin culture in North Carolina/Georgia. Base fertilizer consisted of 800 pounds/A of 10-10-10 incorporated prior to planting followed by two side dress applications of 10-10-10 (300 pounds/A each). Ethalfluralin (0.38 lb. ai/A) and clomazone (0.2 lb. ai/A) were applied pre-emergence for weed control. Fungicide and insecticide applications were made according to current University of Georgia recommendations. Irrigation was applied as needed.

Pumpkins were harvested at maturity on October 5-6, 2007. Data were collected on yield, fruit number and average fruit weight. Results are summarized in Tables 1 and 2.

Results

Overall yields were exceptional. Individual pumpkin weights were generally very comparable to those expected according to commercial variety descriptions. Conditions were generally favorable for pumpkins with average conditions throughout most of the season. 'Aladdin' produced the greatest yield and 'Prizewinner' the largest fruit size among all varieties. 'Full Moon' was the only other "giant" size variety in the test besides 'Prizewinner' and they were the only pumpkins that averaged over 50 pounds. Four other varieties averaged over 30 pounds each, however.

Many of the large- and medium-sized varieties produced yields and fruit numbers within the range of acceptability for Southeast production. There were really no poor performers in the test, although 'Gladiator', 'Magician' and 'Phat Jack' probably trailed most other varieties. They did not produce yields and fruit numbers per acre that were competitive with other similarly-sized pumpkins. 'Aladdin', 'Gold

Rush' and 'SuperHerc' were all superior performers among the pumpkins over 30 pounds each. 'Cinderella', 'Phantom' and 'Schooltime' all did well in the over 20-pound class.

Among pumpkins in the 10-20-pound range, 'Jarrahdale', 'Magic Lantern', and 'Oktoberfest' were the best performers with yields above 70,000 pounds per acre. The only pumpkins in the five to 10-pound range were 'Lumina' and 'Cotton Candy' which both did fairly well. 'Iron Man' was the only entry in the two to five-pound size class and produced over 10,000 fruit which was good for that size pumpkin.

In the miniature class, "Apprentice' was by far superior to the other orange varieties. 'Baby Boo' did very well as a white miniature also. Both produced over 26,000 fruit per acre. 'Lil' Pump-ke-mon' is another non-orange and along with 'Jack-Be-Little' produced over 17,000 fruit per acre. 'Hooligan' and 'Gold Dust' did not perform as well as the rest in the mini class.

Overall, 'Aladdin' was one of the most exceptional performers. It achieved a size of just over 30 pounds on average with almost 4,000 fruit per acre. The yield of over 127,000 pounds per acre was second only to 'Prizewinner' - a much larger variety. 'Full Moon' was a major surprise in the quality of the white color and the size it achieved. This should quickly become a favorite on the market.

Table 1. Yield, number, and average weight of six varieties of small pumpkins grown at Waynesville, NC in 2007.

Variety	Sponsor	No. Fruit/A	Yield[1] (lb/Acre)	Fruit Wt (lbs.)
Bumpkin	Harris Seeds	29,948 a	29,747 a	1.00 c
Gooligan	Twilley	10,058 b	5,736 b	0.55 c
Hobbitt	Twilley	4,046 c	29,785 a	6.55 b
Lumina	Twilley	4,991 c	35,848 a	7.53 b
Mini-Treat	Twilley	6,806 bc	7,453 b	1.10 c
Valenciano	Rupp	2,836 c	28.073 a	9.80 a
Mean of Test		9,781	22,790	4.42
L.S.D. (0.05)		4,341	14,768	1.96
C.V. (%)		29.4	43.0	29.5

One-row plot, 24 ft. long x 12 ft. wide. Plants spaced four feet apart. [1]Marketable Yield.

Table 2. Yield, number, and average weight of 20 varieties of large pumpkins grown at Waynesville, NC in 2007.

Variety	Sponsor	No. Fruit/A	Yield[1] (lb/Acre)	Fruit Wt (lbs.)
Aladdin	Harris Moran	4,197 abcde	112,919abcdef	27.1 defg
Dependable	Abbott & Cobb	2,987 efg	106,783 abcdefg	35.8 bcd
EXT 13035718111	Seminis	3,176 efg	50,226 jk	15.7 j
Full Moon	Rupp	1,929 gh	84,904 cdefghij	44.7 b
Gladiator	Harris Moran	3,025 efg	58,677 ijk	19.9 fghij
Gold Challenger	Rupp	3,214 defg	63,309 hijk	19.5 ghij
Gold Medal	Rupp	4,613 abc	120,467 abcde	26.3 efgh
Harvest Time	Twilley	3,895 bcde	125,927 abc	32.5 cde
HSR 4700	Hollar	3,365 cdef	79,648 efghijk	23.5 efghij
HMX 6685	Harris Moran	4,159 abcde	98,105 bcdefghi	23.6 efghij
HMX 6686	Harris Moran	3,706 cde	66,149 ghijk	18.1 ghij
Howden	Hollar	3,706 cde	79,482 efghijk	21.2 fghij
Magic Lantern	Harris Moran	4,500 abcd	80,185 efghijk	17.8 hij
Magician	Harris Moran	5,143 ab	75,496 fghijk	14.7 j
New Moon	Hollar	3,214 defg	132,881 ab	41.8 b
Pro Gold #510	Twilley	5,256 a	124,501 abcd	23.8 efghi
Prizewinner	Seminis	2,269 fg	145,892 a	66.8 a
Super Herc	Harris Moran	3,630 cde	103,784 bcdefgh	28.6 def
20 Karat Gold	Rupp	4,197 abcde	83,687 defghijk	20.0 fghij
Wyatt's Wonder	Rupp	908 h	43,515 k	40.9 bc
Mean of Test		3554	91,827	28.1
L.S.D. (0.05)		1,302	41,047	9.1
C.V. (%)		25.9	31.6	22.8

One-row plot, 24 ft. long x 12 ft. wide. Plants spaced four feet apart. [1]Marketable Yield.