2024 Pumpkin Variety Evaluation

Kansas State University

John C. Pair Horticultural Center

According to the 2022 USDA Census of Agriculture (www.nass.usda.gov/AgCensus/), Kansas produced 781 acres of pumpkins on 149 farms. In 2024 the John C. Pair Horticultural Center established a field plot to evaluate the yield of 11 commercially available varieties (Table 1). Varieties included traditional Jack O'Lantern-Type and several Specialty-Type pumpkins. A discussion of the methods, results, and photos follow.

Methods:

A wheat variety trial was harvested on June 14, 2024. On June 19, the field was sprayed with glyphosate (2.5 oz/gal) to terminate any remaining weeds. The field was mowed with a flail mower leaving a dense layer of wheat straw on the soil surface on June 21. Pumpkins (Table 1) were direct seeded by hand on the same day through the straw, into the soil at a depth of 1 inch. Individual variety plots were 20 ft long with 9 planting points per plot. Seed were planted on 2 ft in-row spacing with 10 ft between rows. The following day, a pre-emergent herbicide (Oryzalin at 3 qt/A) was sprayed between the rows and the field was irrigated with overhead irrigation to activate the herbicide. The experimental design was a randomized complete block design with 11 varieties replicated six times. Each variety was represented with one plot in each of six rows.

Correspondence: Jason Griffin (jgriffin@ksu.edu)

K-STATE Research and Extension

Drip irrigation was installed down each row and the plants were irrigated weekly. Spot spraying with glyphosate (2.5 oz/gal) was done once to control escaped weeds. The field was fertilized with urea (46-0-0) at 50 lb/A of actual Nitrogen when the young plants started vining. Scouting for insect and disease presence was used to determine when pesticides would be applied. On August 20, the field was sprayed to control squash bug and spotted cucumber beetle with Bifenthrin (4.2 oz/10 gal water) using an airblast sprayer. On August 27 a fungicide (Topsin M at 0.5 lbs/A) was applied at the first sign of powdery mildew using the same sprayer. A follow-up preventative fungicide spray (Abound at 12 oz/A) was applied on August 30.

Data was collected at harvest. Harvest began on September 4 and four separate harvests occurred as pumpkins matured. The final harvest was on October 1. Data was collected on three of the six replications and included the number of pumpkins per plot and the average weight of 10 representative individuals.

Results:

Pest Control: Overall pest control was excellent. Weed pressure was low and there was no noticeable damage by insect pests on the pumpkins. Primary weeds were Palmer Amaranth (*Amaranthus palmeri*) and Tumble Pigweed (*A. graecizans*). At the time of insecticide application, significant aesthetic damage to the flowers by cucumber beetle had occurred. Fortunately, the insecticide was effective and beetle populations were insignificant for the remainder of the season. Control of squash bug was sufficient and population never reached a critical stage. The presence of powdery mildew was nearly absent until the final harvest and likely did not negatively impact yield.

Yield: Pumpkin yield (Table 1) ranged from a low of approx. 20,000 lbs/A (Little Giant) to a high of approx. 80,000 lbs/A (Sunrise). Blanco and Little Giant produced the most pumpkins by number (9,365/A and 8,639/A, respectively) and One Too Many and Bellatrix produced the fewest (2,178/A and 2,396/A, respectively). All varieties produced as expected with no complications.


Bellatrix


Blanco


Fireball


Grizzley Bear


Hermes


Jarrahdale

Little Giant

Mellow Yellow

Moranga

One Too Many

Sunrise

Table 1. Average number and weight of 2024 pumpkin varieties produced at the John C. Pair Horticultural Center

Variety	Number/20ft	Ave Wt. (lbs)	Number/A	Weight/A (lbs)
Bellatrix	11 ±1[z]	14.2 ±0.7[y]	2396	34100
Blanco	43 ±6	5.1 ±0.2	9365	47326
Fireball	31 ±2	7.2 ±0.1	6679	47845
Grizzley Bear	30 ±1	5.6 ±0.3	6607	37195
Hermes	21 ±2	11.6 ±0.3	4501	52079
Jarrahdale	13 ±2	16.7 ±1.6	2759	45952
Little Giant	40 ±4	2.3 ±0.1	8639	19957
Mell Yell	26 ±1	11.0 ±0.5	5590	61324
Moranga	23 ±2	6.7 ±1.5	5009	33713
One 2 Many	10 ±4	15.7 ±1.5	2178	34187
Sunrise	26 ±3	14.0 ±0.5	5663	79298

[z]Mean number of pumpkins/plot, +/- one standard error of the mean, mean of three plots

[y]Mean pumpkin weight (n=30), +/- one standard error of the mean