

PUMPKIN VARIETY PERFORMANCE TRIAL

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Pumpkins grow well in North Dakota. Early maturing pumpkins are usually best, but later maturing ones do well in some years.

MATERIALS AND METHODS

Soil:	Hecla sandy loam, Embden sandy loam and Maddock Sandy Loam; pH=6.6; 2.4% organic matter; soil-K and soil-P were very high; soil-S was very low.
Previous crops:	2000 - field corn; 1999 - edible bean; 1998 - tomato and pepper.
Seedbed preparation:	Disked on April 20. Multiweeded (field cultivated) twice on May 17 to incorporate fertilizer and smooth seedbed.
Planting:	Seeds planted 1 ft apart in rows 9.5 ft apart on May 18. On June 19 thinned to an in-row spacing of one plant every 3 ft.
Plots:	Plots were 20 ft long by 8 ft (one row) wide.
Fertilizer:	On April 19, broadcast 10 lbs N/acre and 50 lbs P ₂ O ₅ /acre as 10-50-0 and 18 lbs N/acre and 20 lbs S/acre as 21-0-0-24. Sprayed 50 lbs N/acre as 28-0-0 on May 17. Side dressed 35 lbs N/acre as urea on June 20.
Irrigation:	Underground drip irrigation as needed.
Pest control:	Weeds were controlled by rototilling and by hand weeding. Sprayed Asana (8 oz/acre on July 19, Aug 8 and Aug 15) and Sevin (1 qt/acre on July 30) to control cucumber beetles. Applied Ridomil MZ72 (2.5 lb/acre on July 24 and Aug 15), Topsin (.41 lb/acre on Aug 1 and Aug 27) and Maneb (2 lb/acre on Aug 8) to reps 1 and 2 to control disease.
Harvest:	Hand harvested Oct 3 and 4.

RESULTS

Hybrid Pam had the highest quality, number and percentage of marketable pumpkins. Racer had good quality and the greatest marketable yield. Gold Standard, Racer and Autumn King were also good varieties. Some varieties had trouble maturing before harvest.

Table 1. Early stand and yields for the Oakes Irrigation Research Site 2001 pumpkin performance trial.

Name	Seed source	Early stand ¹ plants/plot	Marketable		Green ²		Total yield ³ tons/A	Percent marketable %
			number fruit/A	yield tons/A	number fruit/A	yield tons/A		
Appalachian	NH (PS)	9.5	2000 e ⁴	20.1	1840	13.3 ab	41.5 a	48 def
Autumn King	NH (RU)	11.8	2240 de	23.4	1200	10.2 abc	42.1 a	56 def
Citrouille	NH (ST)	8.3	2080 de	20.6	2320	16.9 a	40.9 a	50 def
Conneticut Field	NH (JS)	8.5	2560 de	23.5	1280	7.6 bc	39.1 ab	60 b-f
Gold Standard	NH (RU)	9.0	4240 b	24.0	1120	4.6 c	30.9 bc	78 ab
Howden	NH (JS)	10.3	1600 e	16.6	2240	16.3 a	38.4 abc	44 ef
Hybrid Pam	SW	11.0	6890 a	17.6	2480	3.9 c	22.3 d	79 a
JPN 6472	JS	9.8	3120 cd	23.2	560	3.6 c	30.4 cd	75 abc
JPN 6622	JS	10.8	1840 e	21.1	1440	10.2 abc	35.9 abc	58 c-f
Magic Lantern	NH (HS)	9.5	2640 de	24.3	2000	11.1 abc	40.5 a	59 c-f
Pro Gold 300	AC	11.3	2080 de	17.0	2320	13.6 ab	39.4 a	43 f
Racer	JS	10.0	3840 bc	21.8	2000	6.6 bc	36.1 abc	62 a-e
Rock Star	JS	11.3	2320 de	23.8	1600	14.2 ab	42.0 a	58 c-f
Rocket	NH (JS)	13.0	3760 bc	26.1	1600	7.2 bc	42.1 a	64 a-d
Tom Fox	NH (JS)	11.3	2560 de	15.0	2480	14.5 ab	36.2 abc	42 f
Trojan	SW	12.0	2160 de	18.7	1360	11.6 abc	38.5 abc	48 def
C.V. (%)		29	27	29	50	57	16	22
Probability		0.69	<.0001	0.35	0.09	0.02	0.001	0.0005

¹Number of plants per 17 ft plot on June 9. Later thinned to one plant every three feet.

²Green - pumpkins that were immature at harvest time.

³Includes those that were diseased, odd shaped, etc.

⁴Values in the same column followed by the same letter are not significantly different (0.05 level). If no letters there were no significant differences between values in that column.

Table 2. Pumpkin fruit characteristics for the Oakes Irrigation Research Site 2001 pumpkin performance trial.

Name	Seed source	Fruit size lbs/fruit	Handle (stem) ¹ -----	Fruit color ² 1 to 5 -----	Fruit shape ³	Uniformity 1 to 3	Overall score 1 to 10
Appalachian	NH (PS)	20.1 ab ⁴	3.3 cde	3.3 cd	4.0 a	2.1 a-d	7.1
Autumn King	NH (RU)	20.8 ab	2.8 def	3.3 cd	4.1 a	1.8 def	7.4
Citrouille	NH (ST)	19.4 abc	2.6 ef	3.1 cde	3.9 ab	2.0 b-e	6.9
Conneticut Field	NH (JS)	18.5 bc	1.9 g	3.1 cde	3.1 cde	1.8 def	7.0
Gold Standard	NH (RU)	11.4 f	3.4 bcd	3.3 cd	2.9 de	2.4 ab	7.1
Howden	NH (JS)	21.0 ab	2.1 fg	3.8 ab	3.5 a-d	1.9 cde	6.8
Hybrid Pam	SW	5.2 g	4.4 a	4.0 a	2.9 de	2.5 a	8.6
JPN 6472	JS	14.6 def	3.5 bc	3.0 de	3.3 b-e	2.3 abc	6.5
JPN 6622	JS	22.6 a	3.4 bcd	3.5 bc	3.6 abc	2.3 abc	7.9
Magic Lantern	NH (HS)	18.2 bcd	3.0 cde	3.5 bc	3.6 abc	2.1 a-d	7.1
Pro Gold 300	AC	16.0 cde	1.8 g	2.8 e	2.8 e	1.6 ef	7.1
Racer	JS	11.5 f	4.0 ab	3.3 cd	2.9 de	2.4 ab	7.3
Rock Star	JS	20.3 ab	3.5 bc	3.4 bcd	3.8 abc	2.3 abc	7.0
Rocket	NH (JS)	13.7 ef	3.0 cde	3.0 de	3.6 abc	2.3 abc	6.8
Tom Fox	NH (JS)	12.8 ef	3.6 bc	3.3 cd	3.5 a-d	1.4 f	6.3
Trojan	SW	18.2 bcd	3.3 cde	3.4 bcd	4.0 a	1.6 ef	7.0
C.V.(%)		16	15	9	14	16	13
Probability		<.0001	<.0001	0.0003	0.0006	<.0001	0.22

¹Handle (or stem) - 1 to 5; the longer and thicker the handle in relation to the size of the pumpkin, the higher the score.

²Color - 2 = light orange, 3 = medium orange, 4 = dark orange, 5 = red orange.

³Shape - 1 = short, 2 = medium short, 3 = round, 4 = medium tall, 5 = tall.

⁴Values in the same column followed by the same letter are not significantly different (0.05 level). If no letters there were no significant differences between values in that column.