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CABBAGE CULTIVAR EVALUATION TRIALS

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CABBAGE CULTIVAR EVALUATION TRIALS--1979

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The cabbage cultivar evaluation trials were conducted at the OARDC Vegetable Crops Research Branch near Fremont. The soil is a sandy loam. The plots received 700 lb/A of 10-20-20 fertilizer, 1 lb/A boron and 4 lb/A of Diazinon pre-plant incorporated. Treflan at 0.75 lb/A was pre-plant incorporated for weed control.

The plots were field seeded on April 26 using a Planet-Jr. seeder. Rows were 30 ft. long on 30-in. centers. The rows were hand-thinned to give a 12-in. spacing for the fresh market and an 18-in. spacing for the processing trial. Each cultivar was replicated three times in the replicated trial.

Cultural care throughout the season was according to recommended procedures. No serious insect, disease or weed problems developed during the season. Monthly rainfall totals were:

April	4.28 in.
May	4.58 in.
June	2.54 in.
July	3.86 in.
August	5.04 in.

When the majority of the heads of a cultivar reached marketable maturity in the fresh market replicated trial, the authors evaluated each cultivar for external color, uniformity of head size and maturity, plant size, head shape, plant uprightiness, and wrapper-leaf cover. The numbers of bursted and rotted heads were recorded. The mature heads were then harvested, counted and weighed. Four heads of each cultivar from each replicate were cut and the core length and polar and equatorial diameters recorded. One additional harvest was made for each cultivar when the majority of the remaining heads had reached marketable maturity. The observational trial was harvested once only with no re-cutting. The processing trial was harvested on August 14, with numbers and weight of heads recorded. Four heads of each cultivar from each replicated were cut, rated for internal tipburn and core length, equatorial and polar diameter recorded.

Seed companies who supplied seed for these trials included: Joseph Harris Co., Inc., Rochester, New York; Northrup, King & Co., Minneapolis, Minn.; Asgrow Seed Co., Kalamazoo, Mich.; Stokes Seed Co., Buffalo, New York; Ferry-Morse Seed Co., Mountain View, Calif.; Niagara Div., FMC Corp., El Macero, Calif.

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TABLE 1. Yield and quality characteristics of cabbage cultivars from fresh market replicated trial - 1979.

Cultivars	Source	First Harvest days*	First Harvest			Total Harvest		Measurements (in.)			
			tons/ acre	lbs/ head	% harvest	tons/ acre	lbs/ head	core length	polar diam.	equatorial diam.	firm- ness**
Ice Queen	Stokes	127	18.3	2.90	78.0	18.3	2.90	3.96	5.92	6.54	3.00
Blue Haven	Stokes	102	26.5	4.08	86.5	27.8	3.97	3.75	6.87	6.62	1.00
April Green	Stokes	127	18.8	3.41	68.6	18.8	3.42	2.25	6.08	5.87	1.00
Ultra Green	Stokes	127	18.7	3.04	71.9	18.7	3.04	2.87	6.16	6.46	1.00
Princess	Stokes	84	8.1	3.44	28.9	14.9	2.82	3.46	6.54	6.75	2.08
Gourmet	Stokes	102	22.8	3.45	81.7	25.8	3.30	3.75	6.12	7.12	1.42
Prime Pak	Stokes	102	22.7	3.99	74.0	26.2	3.64	3.17	6.50	6.75	1.08
Safekeeper	Stokes	127	33.7	5.07	88.8	33.7	5.07	2.80	6.58	6.67	1.00
Emerald Acre	Stokes	78	5.7	1.98	30.7	12.6	1.75	2.25	5.46	5.67	2.08
Early Marvel	Stokes	78	7.5	2.08	42.4	15.3	2.21	2.67	5.50	5.67	2.25
Storage Green	Stokes	127	18.2	2.97	75.6	18.2	2.97	3.08	5.87	5.79	1.00
Quick Green	Stokes	127	23.9	3.23	88.9	23.9	3.23	2.75	5.92	5.96	1.00
Stokes Early	Stokes	78	10.1	2.34	53.1	18.0	2.42	2.42	5.71	5.96	1.83
Early Dawn	Niagara	84	10.6	2.65	48.3	17.4	2.58	3.33	6.12	6.12	1.25
Jack Pot	Niagara	102	28.6	4.05	77.1	31.9	3.80	3.71	6.29	7.00	1.00
Market Price	Niagara	102	22.6	3.15	82.8	23.5	3.10	3.33	5.54	6.29	1.00
LSD .05		---	7.8	0.66	11.1	7.9	0.71	0.66	0.79	0.89	0.46

* Days indicates the number of days from seeding to first harvest.

** Firmness rating of first harvest heads: 1 = firm, 2 = medium, 3 = soft.

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TABLE 2. Quality characteristic ratings of cabbage cultivars from fresh market replicated trials - 1979*

Cultivars	External color	Plant uniformity	Plant size	Head shape	Upright-ness	Leaf cover	% burst
Ice Queen	2.0	1.7	3.0	2.0	2.0	1.0	0
Blue Haven	1.3	2.3	2.0	2.0	3.0	2.0	6.2
April Green	1.7	2.3	2.6	2.0	2.0	1.6	0
Ultra Green	2.0	2.0	2.3	2.0	2.3	1.3	0
Princess	1.0	3.0	1.0	1.6	1.0	2.0	1.2
Gourmet	2.0	1.3	1.7	2.0	1.6	1.0	0
Prime Pak	2.0	2.3	2.6	2.0	2.3	1.3	0
Safekeeper	2.0	1.3	2.6	2.0	2.3	1.0	0
Emerald Acre	1.0	2.3	1.0	2.0	1.0	3.0	5.4
Early Marvel	1.0	1.7	1.0	2.0	1.3	3.0	4.5
Storage Green	2.0	2.3	2.6	2.0	3.0	2.0	0
Quick Green	2.0	2.0	2.0	2.0	3.0	2.0	0
Stokes Early	1.0	1.7	1.0	2.0	1.0	3.0	18.2
Early Dawn	2.0	2.0	1.0	2.0	2.0	1.0	2.3
Jack Pot	1.0	2.3	2.3	2.3	2.0	2.3	0
Market Prize	2.0	1.3	2.0	2.0	2.0	1.0	0
LSD .05	0.4	0.9	0.9	---	0.6	0.4	---

- * Color: 1 - green, 2 - blue-green, 3 - blue, 4 - red
 Uniformity: 1 - good, 2 - fair, 3 - poor
 Plant Size: 1 - small, 2 - medium, 3 - large
 Head Shape: 1 - pointed, 2 - round, 3 - flat
 Uprightness: 1 - upright, 2 - slightly tipped, 3 - very tipped
 Leaf Cover: 1 - good, 2 - fair, 3 - poor

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TABLE 3. Quality characteristics of cabbage cultivars from observation trial - 1979.

Cultivars	Source	Harvest data			Plant characteristics ²							Head characteristics		
		days ¹	lbs/ plot	lbs/ head	first harv. (%)	ext. color	uni- formity	plant size	head shape	upright ness	leaf cover	core length	polar diam.	equatorial diam.
11C-X142	Ferry-Morse	102	86.0	4.77	90	2.0	2.0	3.0	2.0	1.0	1.0	3.50	6.25	7.37
11C-X138	Ferry-Morse	109	58.1	3.06	95	3.0	2.0	3.0	1.0	2.0	1.0	3.25	7.25	6.12
11C-X144	Ferry-Morse	102	53.3	3.55	75	2.0	3.0	2.0	2.0	2.0	1.0	2.65	6.50	5.62
11C-X145	Ferry-Morse	109	56.2	3.75	75	2.0	2.0	3.0	2.0	2.0	1.0	3.62	7.62	6.37
11C-X150	Ferry-Morse	110	74.4	3.91	95							3.50	6.25	6.87
11C-X135	Ferry-Morse	110	74.4	4.13	90							4.00	6.25	7.12
11C-X99	Ferry-Morse	110	90.1	4.50	100							4.00	6.50	6.87
11C-X134	Ferry-Morse	110	92.4	4.62	100							3.12	6.00	6.62
11C-X136	Ferry-Morse	110	91.0	4.79	95							3.62	6.25	6.12
11C-X141	Ferry-Morse	110	94.8	4.99	95							4.00	7.37	7.12
Blue Crown	Harris	110	115.0	6.05	95							3.87	6.37	7.50
Exp.510-5B	Harris	110	93.3	5.18	90							3.62	7.37	6.75
BRR-1618	Harris	110	99.7	5.25	95							2.50	7.12	7.37
Genesee	Harris	110	58.6	4.88	60							4.00	6.50	6.62
Grandslam	Northrup King	110	106.6	5.61	95	2.0	2.0	2.0	2.0	1.0	1.0	2.75	7.12	8.00
EXP-916	Northrup King	78	46.0	2.87	80	1.0	2.0	2.0	2.0	2.0	3.0	3.00	6.25	6.25
EXP-929	Northrup King	110	112.2	5.61	100	2.0	1.0	2.0	2.0	2.0	2.0	2.75	6.50	6.75
EXP-914	Northrup King	110	127.6	6.38	100	1.0	1.0	2.0	2.0	2.0	1.0	4.75	7.00	7.37

1) Days indicates the number of days from seeding to first harvest.

2) Color: 1 - green, 2 - blue-green, 3 - blue, 4 - red

Uniformity: 1 - good, 2 - fair, 3 - poor

Plant Size: 1 - small, 2 - medium, 3 - large

Head Shape: 1 - pointed, 2 - round, 3 - flat

Uprightness: 1 - upright, 2 - slightly tipped, 3 - very tipped

Leaf Cover: 1 - good, 2 - fair, 3 - poor

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TABLE 4. Yield and quality characteristics of cabbage cultivars for processing, replicated trials - 1979

Cultivars	Source	Harvest Data			Head Measurements (in.)		
		tons/ A	head wt. (lbs.)	tip* burn	core length	polar diam.	equatorial diam.
Canada Kraut	Stokes	23.7	4.56	1.33	3.41	6.94	6.70
Express	Stokes	29.9	5.10	1.00	3.70	6.41	6.39
Enterprise	Asgrow	26.4	4.62	2.33	3.12	6.83	6.74
XP-1058	Asgrow	28.1	4.78	1.00	3.62	6.32	6.62
XP-1069	Asgrow	27.2	4.77	1.00	2.98	6.77	6.83
King Cole	Ferry-Morse	31.6	6.05	1.00	4.24	7.30	7.79
Roundup	Ferry-Morse	30.3	5.52	1.00	4.17	6.84	7.16
Little Rock	Ferry-Morse	21.3	3.68	1.00	2.87	6.07	6.25
EXP-510-5B	Harris	25.2	5.31	1.67	4.32	7.63	7.32
BRR-51017	Harris	24.1	5.16	1.67	3.38	7.20	7.04
BRR-1618	Harris	21.3	5.40	1.00	2.43	6.82	7.07
Hybrid-N	Harris	34.7	6.66	2.00	4.36	7.45	7.72
Geneva 364-314	Harris	17.4	4.16	2.00	3.76	6.63	6.66
	LSD .05	5.72	1.47	----			

* 1 - None, 2 - Fleck, 3 - Line, 4 - Massive

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