PERFORMANCE OF VEGETABLE VARIETIES IN KENTUCKY 1962-1963-1964

By

Dean E. Knavel

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UNIVERSITY OF KENTUCKY

AGRICULTURAL EXPERIMENT STATION

Department of Horticulture

Lexington

CONTENTS

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Vegetable variety trials are conducted annually by the University of Kentucky Department of Horticulture at the University experimental farms, to evaluate varieties and breeding lines best adapted to Kentucky climate and soils. The varieties and breeding lines are evaluated in respect to yield, fruit, and plant characteristics.

The trials are of either a replicated or observational type, and data are obtained on the potentiality of each variety for recommendation to commercial and home garden growers. If the varieties and breeding lines perform favorably in the observational trials, they are given thorough testing in replicated trials for several years before being recommended. Many of the entries are breeding lines and are listed by number rather than by variety. If the breeding line is not eventually named as a variety, seed of it will not be available to growers. In some cases numbers indicate commercial hybrids, of which seed is available.

The vegetables tested in 1962, 1963, and 1964 were field and greenhouse tomatoes, snapbeans, polebeans, sweetcorn, Irish potatoes, okra, and pickle cucumbers. All replicated plots were located at Lexington. Plots for sweetcorn, snapbeans, Irish potatoes, okra, and cucumbers were 50 feet long. The tomato plots consisted of 10 plants per plot spaced 3x4 feet in the plot. The polebean plots were 100 feet long.

Following is the list of concerns as sources of seed for the varieties and breeding lines used in the trials:

(Numbers preceding names of concerns are used to identify the concerns in the tables which follow.)

1. Associated Seed Growers, Milford, Conn.
2. Ben Picha, Grand Forks, N. D.
3. Dept. of Horticulture, Univ. of Ky., Lexington, Ky.
4. Burgess Seed & Plant Co., Galesburg, Mich.
5. Clow Seed Co., Salinas, Calif.
6. Corneli Seed Company, St. Louis, Mo.
7. Crookham Co., Caldwell, Idaho
8. Vaughans, Downers Grove, Ill.
9. D. V. Burrell Seed Growers Co., Rocky Ford, Colo.
10. Fayette Seed Company, Lexington, Ky.
11. Ferry-Morse Seed Co., Detroit, Mich.
12. Gill Bros. Seed Company, Portland, Ore.
13. Hastings Seeds, Atlanta, Ga.
14. Henry Field Seed and Nursery Co., Shenandoah, Iowa

15. Holmes Seed Co., Canton, Ohio
16. West Virginia Exp. Sta., Morgantown, W. Va.
17. Joseph Harris Co., Inc., Rochester, N. Y.
18. Illinois Seed Producers Assoc., Champaign, Ill.
19. Letherman Seed Co., Canton, Ohio
20. Northrup-King and Co., Minneapolis, Minn.
21. Peto Seed Co., Saticoy, Calif.
22. Pine Tree Nurseries, Par, Caldwell, England
23. Robert Reed, Texas Tech. College, Lubbock, Texas
24. Robson Seed Farm, Hall, N. Y.
25. Rodgers Bros. Co., Caldwell, Idaho
26. Sawan, Inc., Columbus, Miss.
27. Seed Research Specialist, Modesto, Calif.
28. Sorrels & Sons, Williams, Minn.
29. Southern States, Richmond, Va.
30. Southeastern U. S. Vegetable Exchange Program Trials
31. Stokes Seeds, Ltd., St. Catharine, Ont., Canada
32. U. S. Dept. of Agriculture, Beltsville, Md.
33. W. Atlee Purpee Co., Philadelphia, Pa.

Table 1.—Yields, average weight per ear, number of days to maturity, and percentage of ears harvested for early[a] sweetcorn varieties in 1962, 1963, and 1964

Variety	Seed Source	Marketable Ears (Doz/A) 1962	1963	1964	Av No. Days to Maturity (1962 and/or 1963)	Av Wt/ear (lb)	No. Days to Maturity (1964)	% Picked at Main Harvest
Earligold	19	1524	847	1718	92	0.54	70	73
Northern Belle	17	2981	1210	1476	90	0.54	72	49
Pot-O-Gold (1)[c]	12	1390	--	--	79	0.45	--	64
Gold Cup	17	1847	1573	1379	93	0.59	70	59
Spring Gold	17	1883	1089	1682	88	0.71	70	66
Morning Sun (1)	15	1547	--	--	81	0.45	--	35
Early Sunrise	15	1188	--	--	79	0.42	--	46
Honey Gold	15	1480	--	--	87	0.50	--	52
Early Sunglow (1)	29	1143	--	--	85	0.38	--	61
North Star	17	942	--	1561	80	0.51	65	59
Carmelcross	17	1233	--	--	85	0.57	--	55
Northerncross	17	942	--	--	89	0.54	--	44
Spancross (1)	12	--	968	1331	89	0.51	70	62
Northern Light	17	--	1089	1246	92	0.65	81	86
Tokay Sugar (1)	12	--	1089	--	95	0.70	--	--
Golden Earlipak	12	--	1452	2069	98	0.57	70	53
Improved Golden Bantam	12	--	484	871	100	0.63	70	81
Buttersweet (1)	12	--	968	--	103	0.72	--	--
Early Goldensweet	12	--	484	774	99	0.61	70	61
Golden Early Market	12	--	242	1234	98	0.53	70	56
Earliking	17	--	1331	1549	92	0.55	68	45
Morning Sun (2)	19	--	--	1278	--	0.55	68	43
Morning Sun (3)	12	--	--	1815	--	0.58	70	80
Early Sunglow (2)	4	--	--	1379	--	0.46	70	79
Spancross (2)	19	--	--	1537	--	0.45	65	48
Seneca Dawn	19	--	--	1283	--	0.60	70	89
Barbecue	17	--	--	1440	--	0.53	70	52
Earliest Golden	4	--	--	847	--	0.53	75	64
Gold Rush	6	--	--	1416	--	0.71	75	59
Gold Crest	19	--	--	1863	--	0.50	70	64

[a]Planted April 7, 1962, April 7, 1963, and May 6, 1964.

[b]Yields were reduced in 1963 by poor germination owing to extremely dry conditions in April.

[c]Corresponds to the same variety in Table 3.

Table 2.—Yields, average weight per ear, number days to maturity, and percentage of ears harvested at main harvest for mid-season[a] sweetcorn varieties in 1962, 1963, and 1964

Variety	Seed Source	Marketable Ears (Doz/A) 1962	1963	1964	Av Wt/Ear (lb)	Av. No. Days to Maturity	% Picked at Main Harvest
Aristogold Bantam Evergreen	27	2134	--	--	0.62	71	58
Seneca LV-7	24	2838	--	--	0.67	71	59
Staygold	27	2398	1361	1039	0.65	76	55
Florigold-107	11	2134	--	--	0.66	76	51
Texsweet #2	30	2178	--	--	0.70	81	85
Merit	19	1870	1069	--	0.83	76	82
Golden Orbit (Cr.-955-1)	7	2772	1555	--	0.74	71	68
XP-195	1	2750	1847	1207	0.55	71	77
Golden Security	19	2728	1895	1547	0.62	74	59
Royal Gold	26	2860	--	--	0.68	76	59
Silvercross-16	27	2420	1847	1447	0.61	77	70
Golden Sensation	27	2222	--	--	0.67	76	53
Seneca Brave	24	1035	1507	1260	0.67	71	79
Golden Market	27	1150	--	--	0.62	72	66
471-U6 X 81-1	30	920	1480	1147	0.59	74	83
KVF 58-10	6	1196	1368	1512	0.57	70	65
Cr-955-5	7	1288	--	--	0.49	72	55
Valleygold	27	1380	1482	1451	0.69	70	67
NK-87	20	1104	1678	--	0.77	72	62
20 X 409	20	920	--	--	0.70	72	85
63330-B	11	1633	--	--	0.72	66	49
F. M. Exp. Hybrid #1	11	1242	--	--	0.73	69	37
Ill. 330A X 322	30	943	--	893	0.63	68	79
Cr-053-18	7	1219	--	--	0.67	69	58
Cr-053-3	7	1104	--	--	0.75	69	46
I39A X 97 (M5162R)	7	805	--	--	0.57	72	83
IDR X 97 (M5367R)	7	1242	--	--	0.47	76	54
H X 118 (M5246R	7	437	--	--	0.47	72	74
R-303	25	1035	--	--	0.63	72	78
(H2.39 X H2.39) X 205	30	966	--	--	0.58	76	--
Tendermost-H	27	690	--	--	0.74	72	57
Table Topper	27	1127	--	--	0.71	66	59
KVF 60-21	6	1012	--	--	0.67	66	77
KVF 60-1261	6	1219	--	--	0.71	78	85
KVF 60-1334	6	1219	--	--	0.55	66	58
W-Q X H	30	851	--	--	0.63	72	84
97 X H	30	828	--	--	0.61	69	53
LeF-2-A X 97	30	1035	--	--	0.44	76	89
97 X LeF-2-D	30	1058	--	--	0.49	80	45
1675 X LeF-2-A	30	1035	--	--	0.48	76	62
I 39A X 1715	30	690	--	--	0.55	76	87
Cr-100-7	7	1058	--	--	0.66	66	46
Cr-199-3	7	1012	--	--	0.65	66	55
Cr-197-32	7	1173	--	--	0.56	72	61

(continued)

Table 2. (continued)

Variety	Seed Source	Marketable Ears (Doz/A) 1962	1963	1964	Av Wt/Ear (lb)	Av. No. Days to Maturity	% Picked at Main Harvest
Seneca Brave A	24	805	--	--	0.77	67	57
Seneca Wampum #61	24	989	--	--	0.69	66	67
XP-233C	1	989	--	--	0.70	67	49
XP-276B	1	989	--	--	0.76	67	53
Midway	1	1104	--	--	0.65	67	73
R-89	25	1265	--	--	0.66	67	42
R-124-28	25	1725	--	--	0.67	67	48
F.M. Exp. Hybrid #50	11	966	--	--	0.64	67	48
F.M. Exp. Hybrid 26E61	11	897	--	--	0.51	66	51
Exp. Hybrid 3559	11	897	--	--	0.57	72	56
Exp.-75703	20	1173	1156	1519	0.83	68	72
Sugar King (1)[b]	15	989	--	940	0.58	65	90
Exp. Hybrid 70696	20	1311	--	--	0.78	66	60
Bittersweet (2)	12	1288	--	1139	0.72	66	75
Duet	13	805	1452	--	0.63	70	55
SRS-2068-1	27	1150	802	1731	0.67	71	69
Eclipse	15	690	--	--	0.67	66	40
Deep Gold	19	1058	1904	--	0.61	73	66
Tendercrisp	27	1058	--	--	0.51	72	70
Golden Hybrid G 101	25	1242	--	--	0.63	66	74
60-2992	25	1012	--	--	0.59	68	50
60-2888	25	1127	--	--	0.55	68	61
61-2796	25	1495	--	--	0.54	68	58
60-2427	25	1334	--	--	0.60	66	78
Melo-gold	12	1265	1227	2314	0.62	67	76
Big George (KVF 61-102)	6	1058	1072	1538	0.87	70	76
Jubilee	12	--	1748	1476	0.59	70	68
Pot-O-Gold (2)	12	--	1904	1238	0.47	70	73
NK-199	20	--	1382	1465	0.60	70	57
KVF-60-93	6	--	1875	2402	0.34	71	55
NK-1304	20	--	1424	955	0.44	70	77
Golden Valley	20	--	1368	1799	0.57	71	74
KVF-60-133	6	--	1509	--	--	76	60
Corneli-109	6	--	1255	1424	0.51	75	78
Silverqueen (1)	6	--	2016	981	0.59	70	56
SRS-C-2090	27	--	1458	--	0.71	73	65
SRS-Cross (SRS-C-2089)	27	--	1337	1391	0.67	71	67
SRS-C-2092	27	--	1215	1193	0.85	73	68
Silvercross Bantam	27	--	1288	--	0.69	77	41
W-Q-6A X H3-B	30	--	--	1089	0.58	69	59
E-3100	11	--	--	1428	0.72	67	86
Queen Anne (1)	20	--	--	1706	0.52	64	68
Queen Anne (2)	19	--	--	1052	0.54	64	100
Exp. 4048	20	--	--	2088	0.63	64	100
Golden Bantam	9	--	--	1828	0.38	64	100

(continued)

Table 2. (continued)

Variety	Seed Source	Marketable Ears (Doz/A) 1962	1963	1964	Av Wt/Ear (lb)	Av. No. Days to Maturity	% Picked at Main Harvest
Tokay Sugar (2)	12	--	--	1981	0.49	64	100
Silverliner	6	--	--	1725	0.52	67	82
Stowell's Evergreen (1)	27	--	--	511	0.68	77	100
Golden Delicious	14	--	--	1812	0.50	72	61
Silverqueen (2)	17	--	--	808	0.57	72	75
Exp. 2333	20	--	--	1471	0.60	67	96
Illinichief Supersweet	18	--	--	1428	0.51	75	52
Improved Golden Grain	27	--	--	1458	0.72	72	44
Country Gentleman Hybrid	27	--	--	1281	0.60	75	51
Stowell's Evergreen (2)	9	--	--	1146	0.67	72	43
Sugar King (2)	20	--	--	1676	0.59	67	50
Ill. 14 X 11	17	--	--	812	0.64	75	63
Country Gentleman	9	--	--	905	0.50	77	91

[a]Planted June 9, 1962, May 24, 1963, June 3, 1964.

[b]Corresponds to the same variety in Table 3.

Table 3.—Ratings (1-5)[a] for husk appearance, husk extension, over tip of ear, and ear-tip fill for sweetcorn varieties

Variety	Husk Appearance	Husk Extension	Tip Fill
Earligold	4	5	5
Northern Belle	4	5	5
Pot-O-Gold (1)	-[b]	-	-
Gold Cup	4	5	5
Spring Gold	4	5	5
Morning Sun (1)	3	5	4
Early Sunrise	4	5	3
Honey Gold	3	5	4
Early Sunglow (1)	4[c]	5	3
North Star	4	5	5
Carmelcross	3	4	3
Northerncross	4	4	3
Spancross (1)	3	3	3
Northern Light	5	5	5
Tokay Sugar (1)	2	1	3[d]
Golden Earlipak	3	5	1

Table 3. (continued)

Variety	Husk Appearance	Husk Extension	Tip Fill
Improved Golden Bantam	5	4	2
Buttersweet (1)	3	4	4
Early Goldensweet	4	5	2
Golden Early Market	5	3	5
Earliking	4	4	4
Morning Sun (2)	5	3	5
Morning Sun (3)	5	5	5
Early Sunglow (2)	3[c]	3	3
Spancross (2)	4	5	3
Seneca Dawn	2	5	4
Barbecue	4	5	4
Earliest Golden	5	5	3
Gold Rush	5	4	4
Gold Crest	5	4	5
Aristogold Bantam Evergreen	3	3	3
Seneca LV-7	3	5	5
Staygold	3	5	5
Florigold-107	3	5	3
Texsweet #2	3	3	5
Merit	3	3	5
Golden Orbit (Cr-955-1)	3	3	5
XP-195	3	3	3
Golden Security	4	5	5
Royal Gold	4	3	5
Silvercross-16	3	5	5[d]
Golden Sensation	3	5	2
Seneca Brave	3	5	4
Golden Market	3	3	3
471-U6 X 81-1	3	5	3[d]
KVF 58-10	3	3	5
Cr-955-5	3	3	4
Valleygold	3	5	3
NK-87	3	5	3
20 X 409	3	5	3
63330-B	3	3	2
F. M. Exp. Hybrid #1	2	3	3
Ill. 330A X 322	3	5	5
Cr-053-18	3	5	5
Cr-053-3	3	3	5
I 39 A X 97 (M5162R)	3	5	2
I DR X 97 (M 5367 R)	-[b]	-	-
H X118 (M 5246 R)	-[b]	-	-
R-303	5	5	5
(H2.39 x H2.39) X 205	2	5	2
Tendermost-H	3	5	3

Table 3. (continued)

Variety	Husk Appearance	Husk Extension	Tip Fill
Table Topper	3	5	5
KVF 60-21	3	5	2
KVF 60-1261	2	5	2
KVF 60-1334	3	5	3
W-Q X H	3	5	5
97 X H	3	5	3
LeF-2-A X 97	2	5	5[d]
97 X LeF-2-D	2	5	5[d]
1675 X LeF-2-A	2	3	5[d]
I39A X 1715	2	5	5
Cr-100-7	2	3	5
Cr-199-3	3	5	5
Cr-197-32	3	5	5
Seneca Brave A	3	5	3
Seneca Wampum #61	3	5	3
XP-233C	3	3	2
XP-276 B	3	5	3
Midway	3	5	4
R-89	3	5	2
R-124-28	4	5	3
F. M. Exp. Hybrid #50	3	5	3
F. M. Exp. Hybrid 26E61	2	5	3
Exp. Hybrid 3559	3	5	3
Exp. 75703	3	5	2
Sugar King (1)	3	5	3
Exp. Hybrid 70 696	3	5	2
Buttersweet (2)	3	3	4
Duet	3	5	4
SRS-2068-1	3	5	3
Eclipse	3	5	2
Deep Gold	3	5	2
Tendercrisp	2	5	2
Golden Hybrid G 101	4	3	1
60-2992	3	3	1
60-2888	2	5	3
61-2796	4	5	3
60-2427	3	5	2
Melo-gold	3	3	4
Big George (KVF 61-102)	4	5	3
Jubilee	3	4	5
Pot-O-Gold (2)	-[b]	-	-
NK-199	4	5	3
KVF-6093	4	5	5
NK-1304	4	3	5
Golden Valley	4	4	5

Table 3. (continued)

Variety	Husk Appearance	Husk Extension	Tip Fill
KVF-60-133	-[b]	-	-
Corneli-109	4	4	5
Silverqueen (1)	5	5	5[d]
SRS-C-2090	2	2	2
SRS-Cross (SRS-C-2089)	3	4	3
SRS-C-2092	3	3	3
Silvercross Bantam	2	4	4[d]
W-Q-6A X H3-B	5	5	5
E-3100	4	5	5
Queen Anne (1)	5	4	5
Queen Anne (2)	4	5	5
Exp. 4048	5	5	3
Golden Bantam	5	5	2
Tokay Sugar (2)	3	4	4[d]
Silverliner	5	5	3[d]
Stowell's Evergreen (1)	5	5	3[d]
Golden Delicious	4	5	4
Silverqueen (2)	5	5	4[d]
Exp. 2333	3	5	3
Illinichief Supersweet	3	4	3
Improved Golden Grain	5	5	4
Country Gentleman Hybrid	4	5	3[d]
Stowell's Evergreen (2)	4	5	4[d]
Sugar King (2)	4	5	5
Ill. 14 X 11	5	5	3[d]
Country Gentleman	3	5	3[d]

[a]1 = poor; 5 = excellent

[b]Data not recorded on these varieties.

[c]Husk contains red pigment.

[d]White kernels

Table 4.—Yields, average pod length, number of days to first harvest, and fruit characteristics for bush bean varieties in 1962, 1963, and 1964

Variety	Seed Source	1962[a]	1963[b]	1964[c]	Av Pod Length (in)	No. Days to First Harvest	Fruit Characteristics		
							Shape	Color[d]	Straightness (1-5)[e]
Wade	6	390	341	--	4.9	50	Heart	DG	3
Harvester	1	422	384	344	5.0	52	Round	LG	4
Early Harvest (XP-260)	1	554	434	464	4.8	51	Round	MG	3
Extender	6	451	435	434	5.0	50	Round	DG	3
Slenderwhite	25	490	476	460	4.8	50	Round	MG	3
B-3125-X-5-2	30	609	454	383	4.7	51	Round	MG	3
Provider (B-3370)	30	566	537	495	5.0	50	Heart	DG	3
B-3489	30	377	--	--	4.1	50	Round	DG	4
#19	30	351	--	--	5.2	45	Round	MG	3
#34	30	165[f]	--	--	4.7	45	Heart	MG	3
Abunda	30	200	--	--	5.3	52	Heart	LG	4
Executive	20	270	--	314	4.8	45	Round	MG	3
Sprite	20	147[f]	--	340	4.5	45	Flat	LG	3
Improved Hygrade	25	207	517	--	5.1	48	Heart	MG	3
Slimgreen	30	256	--	--	4.9	45	Oval	LG	3
W. S. Greenpod (60204)	30	279	--	--	5.0	45	Round	MG	3
W. S. Greenpod (60209)	30	200	--	--	5.2	52	Heart	MG	4
W. S. Greenpod (60215)	30	108[d]	--	--	4.7	52	Oval	LG	3
B-2971-1-1	30	142[d]	--	280	4.9	52	Oval	MG	3
B-3490	30	259	--	--	4.9	45	Round	MG	3
B-3496	30	320	384	--	5.2	47	Heart	LG	4
B-3509	30	210	--	--	5.2	45	Round	LG	4
Topcrop	17	--	369	--	5.5	49	Round	LG	3
Spartan Arrow	30	--	422	--	6.3	49	Oval	LG	2
#997	30	--	--	215	5.2	55	--	--	-
Corneli #14	6	--	--	366	5.4	53	--	--	-
Tendercrop	6	--	--	383	4.4	53	--	--	-
Mountaineer	6	--	--	340	3.7	53	--	--	-
Wadex	6	--	--	271	4.8	55	--	--	-
Exp. -1070	20	--	--	301	4.7	53	--	--	-
NK-VIP	20	--	--	202	4.7	55	--	--	-
Exp. -1230	20	--	--	284	4.6	53	--	--	-
White-Seeded Tendercrop	20	--	--	280	4.4	53	--	--	-
White-Half Runner	6	--	--	396	3.7	53	--	--	-

[a]Planted May 10

[b]Planted May 26

[d]DG = dark-green; MG = medium-green; LG = light-green

[e]Rating: 1 = crooked in 2 directions; 5 = very straight

Table 5.—Yield, pod length, days to first harvest, and fruit characteristics for pole bean varieties in 1962 and 1964

Variety	Seed Source	Bu/A 1962[a]	Bu/A 1964[b]	Av Pod Length (in)	No. Days to First Harvest	Pod Color[c]	Pod Shape	Pod Straightness (1-5)[d]
Kentucky Wonder White-seeded	6	338	344	7.0	57	MG	flat	1
Kentucky Wonder-191	6	342	292	7.2	57	MG	flat	2
Stringless Blue Lake-231	1	440	472	5.2	57	MG	round	3
Stringless Blue Lake-S-7	1	236	--	5.9	64	MG	heart	4
Kentucky Wonder McCaslan-42	30	--	242	6.5	57	MG	flat	2
	6	445	340	7.5	57	MG	crease-back	1
Dade (SES #1)	30	253	426	6.1	57	MG	crease-back	3
SES #2	30	392	324	6.4	57	MG	crease-back	1
SES #5	30	264	--	8.7	64	MG	crease-back	1
M57-1	30	356	--	5.5	57	MG	heart	4
White-seeded Canfreezer	30	402	318	5.2	57	MG	heart	3
Romano	6	--	200	6.7	60	MG	flat	3

[a]Planted May 10

[b]Planted May 6

[c]MG = medium-green

[d]Rating: 1 = crooked in two directions; 5 = very straight

Table 6.—Yields, average fruit weight, percent marketable, amount of foliage cover, season of maturity, and fruit characteristics for tomato varieties in 1962

Variety	Seed Source	Marketable Fruit Wt (lb/A)	Marketable Fruit Wt (lb/Fruit)	Percent Marketable	Season	Fruit Characteristics: Fruit Shape[b]	Fruit Characteristics: Appearance[c]	Foliage[d] Cover
Redtop VR-9	5	26,810	0.405	90	E[a]	3	3	4
African Beefsteak	19	17,235	1.047	76	L	2	3	4
Alpha 212 (F_2)	5	26,427	0.411	87	E	4	4	4
Ponderosa	8	25,278	0.846	85	L	2	3	4
Giant King	12	32,938	0.497	87	E	4	2	4
Oregon Centennial	12	28,342	0.352	81	E	4	4	4
Wonder Boy (F_1)	21	22,980	0.385	88	M	4	4	3
Large Red Cherry	5	8,809	0.062	--	E	5	4	3
Early Giant (F_1)	21	31,789	0.352	94	XE	4	4	4
Colorado Special	12	25,278	0.373	81	XE	2	2	1
Dwarf Stone	8	17,235	0.360	90	L	2	2	4
Alpha 66 (F_1)	5	34,853	0.412	83	E	4	2	1
#21 (F_1)	12	29,108	0.394	84	E	3	4	3
W. R. Red Jubilee	19	26,810	0.370	91	M	4	4	4
Bonny Best	8	19,532	0.345	60	E	4	4	1
Earliana	8	31,023	0.266	82	E	2	2	3
Oxheart	8	13,022	0.693	52	L	2	2	3
Pinkshipper	15	17,235	0.333	82	M	5	4	3
Exp. Hybrid 59-61	21	32,938	0.364	78	E	5	5	3
Early Delicious	21	26,810	0.307	69	E	5	4	3
Southern States (F_2)	29	27,576	0.431	79	E	4	4	4
Imperial	5	9,575	0.462	86	E	4	4	1
Seattle Best-of-All	12	30,257	0.216	77	XE	5	4	3
Early Prolific (F_1)	12	22,214	0.400	79	E	3	5	3
Improved Wayahead	12	29,491	0.269	66	E	2	2	3
Rutgers	30	23,240	0.402	82	M	5	4	3
STEP-390	30	44,240	0.400	79	M	4	5	5
STEP-388	30	33,180	0.350	74	L	3	4	3
STEP-272	30	28,420	0.444	72	L	5	4	5
STEP-361	30	34,160	0.415	79	M	5	4	1
STEP-352	30	33,320	0.482	72	M	5	4	1
STEP-348	30	33,740	0.434	83	M	5	4	3
STEP-373	30	26,810	0.366	73	M	5	3	3
STEP-379	30	35,619	0.439	85	L	5	5	1
STEP-382	30	32,172	0.438	90	L	3	5	33

Variety	Seed Source	Marketable Fruit Wt (lb/A)	Marketable Fruit Wt (lb/Fruit)	Percent Marketable	Season	Fruit Characteristics: Fruit Shape[b]	Fruit Characteristics: Appearance	Foliage[d] Cover
STEP-385	30	26,044	0.442	75	M	4	4	4
STEP-386	30	42,130	0.380	84	M	5	5	1
STEP-387	30	31,406	0.471	72	L	5	5	1
STEP-389	30	22,214	0.319	76	E	5	5	1
STEP-395	30	37,917	0.485	85	M	5	4	4
STEP-396	30	27,193	0.500	85	E	5	5	4
STEP-397	30	24,129	0.460	80	E	5	4	4
STEP-398	30	23,363	0.394	55	E	4	4	3
STEP-399	30	30,257	0.271	78	E	5	5	4
STEP-400	30	39,066	0.337	91	E	4	5	1
STEP-401	30	39,249	0.328	85	E	2	3	3
STEP-402	30	19,532	0.338	89	E	4	5	4
STEP-403	30	29,491	0.321	85	E	5	5	4
STEP-404	30	35,236	0.402	93	E	5	5	3
STEP-405	30	21,448	0.424	85	M	2	2	4
STEP-406	30	22,214	0.319	74	E	5	4	4
STEP-407	30	27,959	0.332	91	M	5	5	4
STEP-408	30	28,725	0.503	71	L	4	5	3
STEP-409	30	23,746	0.385	61	E	5	5	3
STEP-410	30	37,917	0.427	78	M	5	5	1
STEP-411	30	30,640	0.339	88	E	4	3	3
STEP-412	30	20,682	0.327	71	M	5	2	1
Big Early	33	24,500	0.498	65	XE	5	4	3
Homestead-24	30	29,540	0.388	81	M	4	4	3
Summer Sunrise	31	33,880	0.378	82	E	5	5	3
Glamour	17	24,920	0.438	83	E	4	4	3
Moreton Hybrid	17	28,280	0.370	83	XL	5	4	1
Cardinal Hybrid	17	28,700	0.471	85	E	4	5	1
Heinz-1370	17	39,060	0.349	76	E	5	5	5
Valiant	17	27,300	0.519	87	XE	4	4	1
Burpee Hybrid	15	31,920	0.399	85	E	5	5	4
Sioux	19	38,500	0.418	84	E	5	4	1
Beak-O-Day	19	32,620	0.370	82	E	5	5	1
Stokescross #1	19	34,860	0.383	84	E	5	3	5
Alpha-166 (F_2)	5	30,380	0.482	75	E	3	3	1
Early Pak	12	23,800	0.448	66	E	4	4	5

Table 6. (continued)

Variety	Seed Source	Marketable Fruit Wt (lb/A)	Marketable Fruit Wt (lb/Fruit)	Percent Marketable	Season	Fruit Characteristics: Fruit Shape[b]	Fruit Characteristics: Appearance[c]	Foliage[d] Cover
Improved Wasatch Beauty	12	17,080	0.423	42	E	4	2	1
Earlicrop	17	27,500	0.283	67	XE	5	3	1
Early Hybrid	17	30,100	0.323	67	XE	4	3	1
CRT-Hybrid	17	27,580	0.258	76	E	5	3	3

[a]XE = extra early; E = early; M = midseason; L = late

[b]Rating 1-5: 1 = flat; 3 = Rutgers type; 5 = globe

[c]Rating 1-5: 1 = rough fruit with poor color; 5 = smooth fruit with high color

[d]Rating 1-5: 1 = low disease resistance; 5 = high disease resistance

Table 7. Yields, percent early fruit, percent marketable fruit, and average weight per fruit for non-staked tomato varieties in 1963

Variety	Seed Source	Marketable Yields (lb/A)	% Early	% Mktbl	Av Wt per Marketable Fruit (lb) Early (1st 1/2 Harvest)	Late (Last 1/2 Harvest)
Rutgers	19	19,883	30	81	0.46	0.47
Oregon Centennial	12	9,112	7	65	0.31	0.35
Surprise (F_1)	14	26,302	55	64	0.43	0.39
Plainsman	23	12,757	25	60	0.39	0.42
Gill's All-Purpose	12	24,290	34	62	0.34	0.34
#5961 (F_1)	21	13,682	68	62	0.43	0.32
#574 (F_1)	21	24,861	27	74	0.47	0.50
Burpee Globemaster (F_1)	33	13,627	1	73	0.12	0.39
Giant King (F_1)	12	23,283	20	76	0.59	0.55
Early Prolific (F_1)	12	17,218	30	70	0.39	0.40
#5962 (F_1)	21	22,494	72	60	0.45	0.35
#21 (F_1)	12	33,891	29	82	0.44	0.36
Early Delicious	21	19,258	63	62	0.31	0.25
Hy X 5414 (F_1)	12	15,150	76	66	0.44	0.31
Oxheart	8	4,434	5	37	0.80	0.91
Ponderosa (Beefsteak)	8	5,440	11	48	0.53	0.53
Red Knight (F_1)	12	27,418	54	77	0.52	0.39
Nemared	30	19,557	28	46	0.38	0.35
STEP 395	30	32,286	26	72	0.60	0.48
STEP 398	30	23,066	80	61	0.34	0.35
STEP 400	30	22,222	53	62	0.31	0.26
STEP 408	30	29,947	29	67	0.65	0.50
STEP 409	30	25,622	35	61	0.36	0.50
STEP 412	30	41,834	28	79	0.43	0.32
STEP 413	30	33,320	19	86	0.44	0.38
STEP 414	30	27,690	42	78	0.34	0.39
STEP 415	30	35,115	29	91	0.42	0.37
STEP 416	30	36,312	31	76	0.41	0.44
STEP 417	30	40,501	33	85	0.41	0.36
STEP 418	30	26,683	14	78	0.52	0.52
STEP 419	30	25,024	48	59	0.38	0.33
STEP 420	30	31,389	61	73	0.32	0.25
STEP 421	30	34,626	57	77	0.32	0.33
STEP 424	30	28,886	37	84	0.55	0.40
STEP 425	30	33,782	38	67	0.48	0.43
STEP 426	30	14,933	47	57	0.41	0.28
STEP 427	30	30,192	38	66	0.40	0.35
STEP 428	30	22,712	54	63	0.41	0.34
STEP 429 Supermarket)	30	34,707	49	76	0.40	0.35

Table 7. (continued)

Variety	Seed Source	Marketable Yields (lb/A)	% Early	% Mktbl	Av Wt per Marketable Fruit (lb) Early (1st 1/2 Harvest)	Late (Last 1/2 Harvest)
STEP 430	30	28,315	20	84	0.41	0.43
STEP 432	30	48,906	25	81	0.51	0.41
STEP 434	30	26,765	40	66	0.48	0.42
STEP 435	30	28,152	38	63	0.56	0.50
STEP 436	30	50,728	22	87	0.45	0.37
Hybrid-A	4	21,162	55	59	0.50	0.48
Hybrid-2	4	18,850	73	66	0.43	0.33
Hybrid-1	4	19,094	57	66	0.25	0.29
Mammoth Wonder	4	26,357	27	74	0.45	0.35
Hybrid-3	4	29,050	54	62	0.53	0.40
Crack Proof	4	25,758	10	75	0.26	0.35
Everbearing	4	27,418	25	72	0.49	0.36
Jumbo Hybrid	4	28,017	56	64	0.83	0.63
Super Colossal (F_1)	4	14,389	5	51	0.56	0.93

Table 8. Ratings on fruit characteristics and foliage cover for tomato varieties in 1963

Variety	Fruit Characteristics (Ratings 1-5)									Foliage Cover[h]
	External					Internal		Cracking[g]		
	Size of Stem Scar[a]	Shape[b]	Shoulder Smoothness[c]	Shoulder Color[d]	Firmness[e]	Color[d]	Core Depth[f]	Radial	Concentric	
Oregon Centennial	4	3	4	3	3	3	4	5	5	3
Surprise (F_1)	5	5	3	4	4	3	3	5	5	4
Plainsman	5	3	4	5	5	3	3	5	5	5
Gill's All-Purpose	4	3	4	3	5	4	5	5	5	3
#5961 (F_1)	4	5	5	5	4	5	5	4	5	3
#574 (F_1)	3	4	4	5	3	5	5	3	5	5
Burpee Globemaster (F_1)	4	5	5	3	3	3	4	4	5	4
Giant King (F_1)	3	4	3	4	2	5	5	4	5	4
Early Prolific (F_1)	3	3	3	3	3	4	5	4	5	3
#5962 (F_1)	2	4	3	3	2	5	4	4	5	4
#21 (F_1)	2	3	4	3	3	3	4	4	5	5
Early Delicious	4	3	3	3	3	4	5	4	4	3
Hy X 5414 (F_1)	3	2	1	1	2	4	4	5	5	1
Oxheart	3	2	1	2	3	3	3	4	4	2
Ponderosa (Beefsteak)	2	1	4	3	4	2	3	3	5	5
Red Knight (F_1)	3	3	2	4	3	3	4	4	5	3
Nemared	3	3	4	3	3	4	4	5	5	4
Rutgers	4	4	4	4	3	5	3	4	5	5
STEP 395	3	3	3	4	2	4	4	3	5	5
STEP 398	4	3	2	2	4	3	4	5	5	3
STEP 400	5	3	5	4	4	3	4	5	5	4
STEP 408	3	4	4	5	5	3	4	5	5	5
STEP 409	5	4	3	5	5	4	4	5	5	5
STEP 412	5	5	4	5	5	4	4	5	5	5
STEP 413	5	5	4	4	5	4	4	5	5	5
STEP 414	5	5	5	5	4	4	4	4	5	4
STEP 415	4	4	4	5	3	4	5	5	5	4
STEP 416	5	4	5	4	5	4	5	5	5	5
STEP 417	5	4	4	5	4	4	4	5	5	4
STEP 418	4	1	2	3	4	2	3	5	5	5

Table 8. (continued)

Variety	Fruit Characteristics (Ratings 1-5)									
	External					Internal		Cracking[g]		
	Size of Stem Scar[a]	Shape[b]	Shoulder Smoothness[c]	Shoulder Color[d]	Firmness[e]	Color[d]	Core Depth[f]	Radial	Concentric	Foliage Cover[h]
STEP 419	3	3	3	4	3	5	4	5	5	3
STEP 420	4	2	2	3	2	3	4	5	5	3
STEP 421	4	2	4	5	3	4	4	5	5	4
STEP 424	4	3	3	4	4	4	4	4	4	5
STEP 425	5	5	5	5	5	3	4	5	5	5
STEP 426	5	5	4	4	4	3	3	5	5	3
STEP 427	5	4	3	4	4	4	3	5	5	4
STEP 428	5	3	3	3	4	4	4	5	5	3
Supermarket (STEP 429)	3	4	3	4	5	4	4	4	5	4
STEP 430	5	5	5	4	5	3	4	5	5	5
STEP 432	5	4	3	5	3	4	5	5	5	5
STEP 434	3	2	2	5	5	3	3	5	5	4
STEP 435	5	3	2	3	3	3	3	5	5	4
STEP 436	5	5	5	5	5	5	4	5	5	4
Hybrid-A	3	3	2	3	4	2	2	5	5	4
Hybrid-2	3	2	1	3	4	2	2	5	4	2
Hybrid-1	5	4	3	3	2	2	3	5	5	2
Mammoth Wonder	3	3	3	5	3	3	3	5	5	4
Hybrid-3	2	3	2	3	4	5	4	5	5	3
Crackproof	4	3	3	5	4	4	3	5	5	4
Everbearing	2	5	4	5	3	3	4	4	5	4
Jumbo Hybrid	2	5	3	4	4	3	3	4	5	4
Super Colossal (F_1)	1	2	1	4	2	5	5	2	3	3

[a] 1 = large; 5 = small

[b] 1 = flat; 3 = Rutgers type; 5 = globe

[c] 1 = rough; 5 = smooth

[d] 1 = poor; 5 = excellent

[e] 1 = soft; 5 = firm

[f] 1 = deep; 5 = shallow

[g] 1 = severe; 5 = none

[h] 1 = poor disease resistance; 5 = good disease resistance

Table 9.—Marketable yields, average weight per fruit, percent of total fruit marketable, season of maturity, and color and shape of fruit for tomato varieties in 1964

Variety	Seed Source	Marketable Fruit: Yields (lb/A)	Marketable Fruit: Av Wt per Fruit (lb)	Marketable Fruit: % Marketable	Season of maturity[a]	Fruit Characteristics: External Color[b]	Fruit Characteristics: Shape[c]
Seattle-Best-of-All	12	10,200	0.172	41	XE	3	3
Success	6	29,512	0.307	81	M	3	2
Streak-O-Day	19	29,022	0.267	83	E	2	2
Summer Sunrise	31	35,034	0.264	75	E	4	3
Campbell-135	9	35,822	0.299	90	M	4	2
Surprise (F_1)	6	41,480	0.268	81	E	4	3
September Dawn	17	31,090	0.366	94	XL	4	2
Globemaster (F_1)	33	24,942	0.237	86	E	4	4
Big Boy (F_1)	33	40,936	0.559	93	L	5	3
Surpee Hybrid (F_1)	33	23,501	0.269	82	M	4	3
Red Jubilee	19	44,907	0.293	82	L	5	2
Smoothie	6	24,507	0.254	82	M	4	3
Pelsher	9	40,392	0.307	89	L	3	2
Harlicrop (F_1)	17	31,334	0.183	75	XE	5	3
Pinkdeal	9	32,830	0.297	81	E	4	3
Tiltmaster	9	27,390	0.242	79	L	5	2
Campbell-146	9	41,072	0.282	84	XE	3	2
Heinz-1370	9	34,136	0.253	75	XE	4	3
Rutgers	19	22,603	0.267	81	L	4	3
Manapal	19	36,557	0.309	80	L	4	3
VS-24	1	37,890	0.243	80	M	4	2
Homestead-24	30	24,888	0.313	88	M	3	2
Avalanche (STEP-382)	30	29,458	0.277	85	E	3	2
Floradel (STEP-430)	30	38,107	0.268	84	E	4	2
Supermarket (STEP-429)	30	30,926	0.298	82	E	5	3
Red Bird	14	27,064	0.311	90	M	3	4
Everbearing	4	23,500	0.443	85	M	5[p]	2
Dixie Golden	13	18,142	0.654	87	L	5[y]	3
Crackproof	4	16,102	0.506	79	L	5	3
Fy-X	14	21,298	0.295	83	XE	3	1
Oregon Centennial	12	18,006	0.314	67	E	2	2
Henry Field (F_1)	14	19,829	0.259	77	L	5	3
Hill's All-Purpose	12	20,862	0.205	70	E	4	3
Fy-574 (F_1)	21	19,230	0.342	78	XL	3	3
Heinz-1409	17	29,512	0.277	75	E	4	3
Giant King (F_1)	12	20,237	0.305	84	XL	5	3
Mammoth Wonder	4	23,202	0.335	90	XL	4	3
Hybrid #21 (F_1)	12	22,848	0.275	83	L	3	3
West Virginia Centennial	16	22,875	0.260	83	L	5	3
Jumbo (F_1)	4	25,514	0.397	86	L	4	2
Forresteel	4	16,211	0.261	72	XE	2	1
Fantastic (F_1)	21	20,590	0.270	91	E	4	3

Table 9. (continued)

Variety	Seed Source	Marketable fruit: Yields (lb/A)	Marketable fruit: Av Wt per Fruit (lb)	Marketable fruit: % Marketable	Season of Maturity[a]	Fruit Characteristics: External Color[b]	Fruit Characteristics: Shape[c]
Nemared	30	12,104	0.233	55	XL	3	2
Red Knight	14	14,606	0.266	76	E	2	1
STEP 373	30	32,803	0.261	79	L	5	3
STEP 397	30	46,947	0.370	85	E	4	2
STEP 401	30	26,874	0.266	75	E	3	2
STEP 413	30	27,608	0.281	85	M	5	3
STEP 415	30	21,162	0.273	71	M	5	3
STEP 416	30	16,021	0.265	89	XL	4	3
STEP 422	30	21,869	0.267	74	L	2	2
STEP 423	30	15,994	0.246	80	L	3	2
STEP 428	30	21,189	0.253	74	E	4	3
STEP 431	30	44,200	0.308	80	E	5	2
STEP 434	30	35,034	0.484	86	XE	3	2
STEP 439	30	19,448	0.280	84	XL	4	5
STEP 440	30	14,198	0.288	65	XL	4	4
STEP 441	30	30,818	0.311	84	XL	4	3
STEP 442	30	15,150	0.253	74	L	5	4
STEP 443	30	16,320	0.250	73	XE	4	3
STEP 444	30	21,896	0.207	67	M	4	3
STEP 445	30	14,688	0.215	55	M	5	3
STEP 446	30	22,957	0.261	54	XE	5	3
STEP 447	30	18,333	0.280	76	M	3	2
STEP 448	30	15,966	0.214	62	L	3	2
STEP 449	30	18,496	0.217	56	XE	3	2
STEP 450	30	25,078	0.274	88	M	4	3
STEP 451	30	17,109	0.175	67	M	4	4
STEP 452	30	17,626	0.225	65	M	5	3
STEP 453	30	15,994	0.306	79	XL	3	2
STEP 454	30	14,035	0.290	73	L	3	3
STEP 455	30	16,891	0.275	63	E	5	3
STEP 456	30	19,013	0.274	74	M	5	3
STEP 457	30	13,981	0.276	87	XL	3	3
STEP 458	30	28,397	0.282	80	M	5	2
STEP 459	30	30,219	0.238	87	M	5	3
STEP 460	30	30,899	0.307	71	L	5	4
STEP 461	30	17,082	0.249	64	L	5	3
STEP 462	30	27,282	0.294	78	L	5	3
STEP 463	30	24,099	0.293	81	M	4	3
STEP 464	30	7,915	0.280	75	L	4	3
STEP 465	30	22,114	0.189	67	XE	5	3
STEP 466	30	20,699	0.297	85	L	3	3
STEP 467	30	16,592	0.268	81	E	4	3
STEP 468	30	16,347	0.224	57	E	5	2
STEP 469	30	27,445	0.293	77	M	3	2

[a]XE = Extra early; E = early; M = midseason; L = late; XL = extra late

[b]Color rating (1-5): 1 = poor; 5 = excellent

P = Pink
Y = Yellow

[c]Shape rating (1-5): 1 = flat; 3 = Rutgers type; 5 = globe

Table 10. Average yields and weight per fruit for tomato varieties in greenhouse fall trial (Aug. 15-Dec. 30) 1962

Variety	Seed Source	Av Yield (lb/plant)	Av Wt (lb)/Fruit
Michigan-Ohio (F_1)	17	8.6	0.138
Manalucie	17	9.2	0.307
Indian River	4	11.5	0.225
Ky. 101-4	3	9.9	0.302
Tuckcross-O	17	10.2	0.122
Waltham (F_1)	17	11.0	0.128
Warecross	22	9.7	0.076
Eurocross	22	8.6	0.074

Table 11. Yields and quality characteristics for tomato varieties grown in the greenhouse spring trial (Feb. 10-June 30) 1963

Variety	Seed Source	Mkt Yield per Plant (lb)	% of Fruit Mkt	Av Fruit Wt (lb)	Quality Characteristics*			
					External	Internal	Organoleptic	Overall Standing
Michigan-Ohio (F_1)	17	11.2	85	0.37	8.0	6.5	7.9	7.4
Manapal	17	11.2	90	0.50	8.7	8.5	8.1	8.4
Moreton Hybrid (F_1)	17	10.4	94	0.43	8.2	7.9	8.4	8.1
Indian River	4	8.0	85	0.43	7.1	7.2	7.9	7.4
STEP 390	30	10.8	85	0.58	8.1	7.8	8.4	8.1
STEP 361	30	10.5	91	0.44	8.3	6.9	8.4	7.8
Ky. 101-6	3	9.1	85	0.49	8.6	8.7	8.4	8.6

* Measured by taste panel analysis conducted by the School of Home Economics. Score of 10 is excellent. External factors measured were shape, color, and depth of stem scar. Internal factors were wall thickness, core depth, wall speckling, locule size, jelly color, and general color. Organoleptic factors were flavor, acidity, mealiness, and skin toughness. These tests were made in triplicate at three different harvest periods.

Table 12.—Yields and tuber characteristics for Irish potato varieties in 1962

Variety	Seed Source	US#1 Yield (CWT/A)	% US#1	Tuber Characteristics				
				Skin* Color	Eye** Depth	Shape***	Skin**** Smooth-ness	Specific Gravity (at Harvest)
Dayoc	32	222	90.9	R	4	3E	3	1.061
Houma	32	321	94.5	Y	2	3	5	1.070
Kennebec	32	299	96.4	Y	1	3	3	1.064
Mohawk	32	225	94.9	Y	2	2E	3	1.073
R. Pontiac	32	328	95.9	R	3	5	3	1.050
Sebago	32	270	94.7	Y	2	3	3	1.060
Allehanna	32	245	93.3	Y	3	5E	5	1.056
Red LaSoda	32	278	93.6	R	2	5	3	1.051
B-3309-4	32	296	87.5	R	3	5	3	1.052
I-8140-1	32	116	91.6	R	1	3	3	1.064
LaChipper	32	308	95.4	Y	3	3	3	1.062
Redskin	32	298	94.6	R	3	5	5	1.065
B-2894-24	32	282	94.2	Y	2	5E	3	1.056
B-3429-22	32	266	93.0	Y	1	3	3	1.057
B-3599-8	32	164	90.1	R	2	5	5	1.058
Fundy	32	287	93.3	Y	2	1E	3	1.057
Huron	32	294	94.1	Y	3	3E	3	1.069
Katahdin	32	236	91.0	Y	2	3	5	1.060
R. Beauty	32	252	92.2	R	1	5E	3	1.058
Rushmore	32	246	94.6	Y	1	5E	3	1.063
Teton	32	287	93.0	Y	1	3E	3	1.062
Dazoc	32	223	88.5	R	5	3	3	1.058
Earlaine #2	32	321	90.8	Y	3	3	3	1.057
B-3309-8	32	223	93.0	R	1	1E	3	1.050
LaRouge	32	353	93.7	R	4	1E	3	1.053
B-3725-1	32	194	97.8	Y	2	5E	3	1.063
Cherokee	32	279	94.0	Y	1	1E	3	1.066
B-3352-8	32	262	91.8	Y	2	3	3	1.060
B-3454-5	32	191	78.2	R	4	5	1	1.061
B-3626-13	32	191	85.6	Y	1	3	3	1.060
Chippewa	32	301	95.2	Y	1	1E	3	1.058
L.S.D. .05 (level)	87							
L.S.D. .01 (level)	116							

*Skin color rating (R and Y): R = red; Y = yellow
**Eye depth rating (1-5): 1 = shallow eyes; 5 = deep eyes
***Shape rating (1-5 and E): 1 = flat; 5 = round; E = one axis longer than the other
****Skin smoothness rating (1-5): 1 = rough; 5 = smooth

Table 13.—Yields and tuber characteristics for Irish potato varieties in 1963.

Variety	Seed Source	US#1 Yield (CWT/A)	% US#1	Skin* Shape	Tuber** Shape	Eye*** Depth	Degree of Russeting****
Merimack	32	225	95	W	3E	1	2
Norgleam	32	208	86	W	3	2	2
Allahanna	32	240	96	W	4	5	3
Kennebec	32	268	93	Y	3	2	2
Onaway	32	322	94	Y	3E	5	4
B-3692-4	32	177	86	W	4	1	1
B-4744-23	32	217	91	Y	1	4	
B-4808-8	32	189	95	Y	3	1	1
Rushmore	32	217	95	Y	1E	1	4
B-3453-2	32	224	83	R	3	3	5
Catoosa	32	321	93	R	4E	2	3
B-766E	32	248	90	Y	4E	2	2
Rukat	32	272	93	Y	1E	3	3
S-29-1	32	283	92	Y	4	2	3
Nordak	32	230	88	W	4	1	2
Ona	32	337	92	Y	4	3	4
TL-6937	32	186	88	Y	4E	1	5
B-2368-13	32	368	90	R	3	3	3
Pungo	32	308	94	Y	3	2	4
Wy-1122	32	344	93	Y	3	1	5
B-3696-13	32	175	89	Y	4E	1	5
Houma	32	283	84	Y	3	2	5
Hunikel	32	416	93	Y	4	2	3
B-4160-1	32	154	88	Y	1E	1	1
B-4860-5	32	172	86	Y	4	1	3
B-605-10	32	212	89	Y	3E	1	3
Keswick	32	248	93	W	3E	2	2
B-3819-17	32	165	89	W	3	1	2
Arenac	32	247	90	Y	3	1	2
Early Gem	32	133	94	Y	4E	2	5
Snowflake	32	214	92	Y	3	2	2
L.S.D. (5% level)	57						
L.S.D. (1% level)	76						

*Skin color rating (W, R, and Y): W = white; R = red; Y = yellow
**Tuber shape rating (1-5 and E): 1 = flat; 5 = round; E = one axis longer than the other
***Eye depth rating (1-5): 1 = shallow eyes; 5 = deep eyes
****Russeting rating (1-5): 1 = no russeting; 5 = much russeting

Table 14.—Yields of U.S. #1 and U.S. #2 and skin color of tubers for Irish potato varieties in 1964

Variety	Seed Source	US #1 (CWT/A)	US #2 (CWT/A)	Skin* Color
Dazoc	28	228	87	R
Kennebec	28	313	113	Y
Kennebec	10	373	126	Y
Norland	28	313	96	R
Russet Burbank	28	327	123	Y
Red LaSoda	28	518	136	R
Irish Cobbler	28	463	143	W
5814-1	2	429	96	W
5719-4	2	349	88	W
Irish Cobbler	10	441	199	W
Reliance	2	451	116	Y
Pontiac	28	473	128	R
Catoosa	2	405	45	R
L.S.D. 5% (level)		109	39	
L.S.D. 1% (level)		148	53	

*Skin color ratings (R, Y, and W): R = red; Y = yellow; W = white.

Table 15.—Yields for pickle varieties in 1963

Variety	Seed Source	Yields (Bu/A)
Model	30	213
Ohio MR-17*	30	232
Southern Pickler	30	316
Pixie	30	375
Ark. #3	30	273
GY. 34 X Ark. #3 (F_1)	30	296
Spartan Dawn (F_1)	30	243
M59-A-B	30	176
M59-A-W	30	298
SC 10 D	30	235

*Principal variety grown in Kentucky in recent years.

Table 16.—Yields (lb/A) and number of days from planting to the first harvest for okra varieties in 1964

Variety	Seed Source	Yields	No. Days
Clemson Spineless	9	10,034	60
Dwarf-stalked Long-green Prolific	9	6,434	55
Emerald	9	11,713	53
Dwarf-green Long-pod	17	5,614	70

DISCUSSION

The interpretation of data presented indicates that one should not base recommendations on one-year's results but, instead, he should average the performances of a variety over a period of years. The performance of a variety cannot be predicted, prior to planting for any one year because climatic conditions vary for areas within the state from year to year. Moisture, soil types, and temperatures largely determine the performance of a variety. Therefore, since these climatic conditions vary greatly, the grower should not plant all of one vegetable crop in a newly recommended variety before first trying the variety on a small scale and comparing the new variety with the present variety in his locality for at least one year. Since Kentucky covers an area of 40,395 square miles and the testing of varieties is time-consuming, it is practically impossible to test in various sections of the state in order to evaluate the varieties' adaptation to those localities.

Rainfall recorded at Lexington from May 1 to August 31 was 17.3 inches in 1962, 18.1 in 1963, and 11.2 in 1964. The mean temperatures for the same period of time were 73.9°F in 1962, 71.5°F in 1963, and 72.9°F in 1964. The vegetable crops were irrigated in 1963 and 1964 when they showed need for additional moisture.

The number of days from planting date to harvest date for early sweetcorn varieties in 1962 and 1963 (Table 1) was usually more than the number listed in the dealer's seed catalog. Sweetcorn matures according to the number of nights and days the temperature is above 40°F, and how many degrees above this base temperature for each night and day during the growing period. For an example, Northern Belle is listed in the seed catalog to mature in 74 days, and when planted April 7 it took an average of 90 days to mature in 1962 and 1963. In 1964 when planted on May 6, the variety matured in 72 days. Therefore, the date listed is most nearly applicable only when the seed of the variety is planted sometime between May 1 and July 15 in Kentucky. Seed planted after July 15 will, in most years, produce mature fruit as soon as seed planted in April because of the cooler night temperatures later in the season. If most varieties were planted in May they would probably mature within the number of days listed in the seed catalogs.

The days to maturity obtained for the midseason varieties in Table 2 are approximately the number of days listed in the seed catalogs.

CONCLUSIONS AND RECOMMENDATIONS FOR KENTUCKY

1. Early Sweetcorn: Northern Belle was the outstanding yellow, early-maturing variety in 1962 (Table 1). Gold Cup and Golden Earlipak were the highest yielding in 1963, and Golden Earlipak led in 1964 (Table 1). However, Golden Earlipak had poor tip fill and had an average rating for husk appearance (Table 3), whereas Northern Light did not yield so well as these varieties but did have outstanding ear appearance. Spring Gold yielded satisfactorily in each of the three years tested and had outstanding ear characteristics. Morning Sun (3) yielded well in 1964 and had ear characteristics equal to Spring Gold and Northern Light.

2. Midseason Sweetcorn: A number of yellow varieties yielded well in 1962, but over the three-year period Golden Security was rated outstanding for yield and ear characteristics (Tables 2 and 3). Several breeding lines with yellow kernels showed promise in the 1963 and 1964 trials (Table 2). KVF 60-93 was the best appearing and highest yielding of these lines but had a small ear.

A number of white kernal varieties were tried in 1963 and 1964 and of these, Queen Anne and Silverqueen were rated high for appearance. Silverqueen (1) yielded well in 1963, and Queen Anne (1) yielded well in 1964.

3. Snapbeans: Breeding line B-3370 has been under trial since 1959, and is a consistent high yielding variety (Table 4). This variety has been recently named Provider, and has outstanding plant and pod characteristics for canning and freezing. Another new variety is Early Harvest, which was under trial since 1961 as XP-260. Early Harvest has yielded nearly as well as Provider.

4. Polebeans: Stringless Blue Lake-231 was consistently high yielding, with outstanding stringless pods for canning and freezing (Table 5). Dade and McCaslan-42 are recommended for fresh market, and have fewer strings than Kentucky Wonder if picked at the proper stage of maturity.

5. Early field tomatoes (non-staked): Heinz-1370 was outstanding for yield and fruit characteristics, but the fruit may be too small for fresh market use although it does have weight for its size (Tables 6 and 9). A new variety worth watching is Surprise (Tables 7, 8, and 9). Surprise is an early hybrid and yielded well in 1964, but the fruit was slightly small.

6. Main-season field tomatoes (non-staked): Several of the S.T.E.P. lines had outstanding performance in 1962, 1963, and 1964 (Table 6, 7, 8, and 9). STEP 397 produced the highest yields in 1962 and 1964 (Tables 6 and 9). Big Boy Hybrid, Red Jubilee, Supermarket, Heinz-1370, and Surprise Hybrid were other outstanding varieties in the 1964 trial (Table 9).

7. Greenhouse tomatoes: Indian River, Manalucie, and Ky 101-4 produced the highest yields of acceptable fruit in the 1962 fall trial (Table 10). Yields were satisfactory for the other varieties in the fall trial, but their average fruit size was too small. All varieties performed satisfactorily in the 1963 spring trial (Table 1 Michigan-Ohio hybrid and Indian River rated lowest for fruit quality, whereas Manapal and Ky 101-6 rated highest for fruit quality. Manapal yielded as well as had larger fruit than Michigan-Ohio hybrid.

8. Irish potatoes: The highest yielding, yellow skin varieties were Houma in 1962 (Table 12), Hunikel in 1963 (Table 13), and Irish Cobbler in 1964 (Table 14). The highest yielding red skin varieties were LaRouge in 1962 (Table 12), Catoosa in 1963 (Table 13), and Red LaSoda in 1964 (Table 14).

9. Pickle cucumbers: Pixie was the outstanding variety in the 1963 trial (Table 15).

10. Okra: Emerald was the earliest and highest yielding variety (Table 16). Clemson Spineless also yielded well.