

HORTICULTURE SERIES 435

JANUARY 1976

OHIO AGRICULTURAL R & D CENTER

FEB 6 '76

LIBRARY

**GREEN SPRINGS
PEPPER VARIETY TRIALS
1975**

Department of Horticulture

Ohio Agricultural Research and Development Center

Wooster, Ohio

This page intentionally blank.

GREEN SPRINGS PEPPER CULTIVAR TRIALS, 1975

A. R. Mosley
Department of Horticulture
Ohio Agricultural Research and Development Center

Seventeen pepper cultivars were evaluated at Green Springs in 1975. Fourteen entries were typical bell peppers; the remaining 3 entries were so-called banana types.

Procedure

Seed were obtained from the following sources:

1. Agway, Inc., Syracuse, N. Y.
2. Asgrow Seed Co., Kalamazoo, Mich.
3. W. Atlee Burpee Co., Philadelphia, Pa.
4. Ferry Morse, Buffalo, N. Y.
5. FMC Corp., A.D.C., Modesto, Ca.
6. Joseph Harris, Co., Rochester, N. Y.
7. Letherman's, Inc., Canton, Ohio
8. S. Honma, Michigan State University, East Lansing, Mich.
9. Northrup-King Co., Minneapolis, Minn.
10. Seedway, Inc. (Robson), Hall, N. Y.
11. Otis S. Twilley Seed Co., Salisbury, Md.

Seed was germinated in vermiculite. Seedlings were pricked off into 2.5-inch square peat pots filled with a 1:1:1 mix of peat, sand, and silt loam soil on May 7. Transplants were set in the field on May 29. Individual plants were spaced 18-inches apart in rows 3-feet wide. Plots were single rows 25-feet long, replicated 3 times.

The sandy loam soil was amended prior to transplanting by incorporation of 400 lbs. per acre of 10-20-20 along with 2 pints per acre of Treflan for weed control. An additional 400 lbs. of 10-20-20 was banded beside the rows. One half pint of 10-52-17 starter solution was applied around each plant during transplanting.

Cultural and pest control methods followed commercially-recommended practices. Plots were cultivated 4 times during the season. Twenty-five lbs./A. of Furadan was side-dressed on June 23; additional insect control measures included Guthion, Sevin, Thiodan and Diazinon applied according to label directions as needed. Maneb and Kocide were applied during the latter part of the season for disease prevention.

Fruit were harvested beginning on August 12 and continuing at approximate 2-week intervals for a total of 3 harvests per plot. Fruit were divided into U.S. No. 1 and culls, counted, and weighed. Five typical fruits of each cultivar were then halved and rated for relative wall thickness and numbers of locules.

Results

60-70 Day Entries.--Sonnette was outstanding among the 60-70 day entries in 1975 (Table 1). Sonnette yielded 214 cwt/A. of attractive fruit, 95 percent of which were graded U.S. No. 1. A large percentage of the fruit had only 3 locules, however, and size varied to some extent. Fruit walls were relatively thick as

compared to Canape and Midway, other varieties in this maturity classification. Sonnette also yielded well in 1974 (Table 2).

Canape and Merrimack did not differ significantly in yield from Sonnette. Canape fruits were of good quality, but were rather small and had thin walls and only 3 locules, on the average. Canape has produced above-average yields the last 3 years at Green Springs (Table 2). Fruit of both Canape and Merrimack Wonder averaged only 0.19 lbs. each; significantly lower than most other bell types. Merrimack Wonder fruit were highly variable in shape and appearance.

Midway yielded at the rate of only 161 cwt. per acre, significantly less than Sonnette. Fruit were of average size and medium wall thickness but showed a tendency toward excessive blossom-end rot.

71-75 Day Entries.--Lady Belle was tested for the first time in Ohio in 1975. It performed very well with a yield of 201 cwt/A of U.S. No. 1 fruit; however, only 80 percent of the total fruit were graded No. 1. Individual fruit were as large and heavy as any other variety in the test, averaging 0.33 lbs. and measuring 3.7 inches long by 3.3 inches thick. Lady Bell produced more three-locule fruits than desired. Walls were medium to thick.

Aconagua produced good yields, 180 cwt/A., of large, banana-type fruit. Fruit were mild-flavored and considerably larger and heavier than Hungarian Wax and Sweet Banana, averaging 0.30 lbs. and 7.4 inches long by 2.4 inches in diameter. Aconagua appears to be an excellent choice for roadside marketers or other growers with a market for very large banana-type fruit.

Burpee's Bellringer and Early Set appeared promising with 175 and 171 cwt/A. of large fruit. Early set fruit were slightly more uniform than those of Bellringer; fruit walls were somewhat thicker.

80 + Day Entries.--Keystone Resistant Giant yielded well in 1975 with 217 cwt/A. This standard late-season cultivar has performed well each of the past 3 years (Table 2). Fruit were large, weighing 0.33 lbs. each. Typical fruit were 3.2 inches long by 3.1 inches thick. Walls were only medium-thick but a large majority of the fruit were 4-loculed. Ninety-three percent of Keystone fruit were graded U.S. No. 1.

The selection NCX 4010 appeared promising with 198 cwt/A. of smooth, light-green fruit. Fruit were large and thick-walled but with unusually light color. This light color could limit grower acceptance.

Emerald Giant fruits were large and heavy with thick walls. Size varied to some extent. Fruit shape tended to be relatively short and thick.

TABLE 1.--U.S. No. 1 Yield, Average Fruit Size, Number of Locules, Average Wall Thickness and Comments, Green Springs Pepper Variety Trial, 1975.

Variety (1)	Source	Days to Maturity (2)	Yield, U.S. No. 1		Avg. Wt. lbs.	Avg. Size, In.		Avg. # Locules	Wall Thickness	Comments
			cwt/A.	%		Lgth.	Diam.			
Merrimack Wonder	3	60	183	90	0.19	2.8	2.8	4	Thick	Poor uniformity.
Canape	6	62	192	89	0.19	3.0	2.8	3	Thin	Sm. but good quality. TMV tol. (4)
Sonnette	8	69	214	95	0.26	3.7	2.8	3-4	Thick	Var. size. Mostly 3 locules. TMV. res't.
Midway	3	70	161	80	0.26	3.0	3.1	4	Med.	Avg. quality. BER (3)
HUNGARIAN WAX	6	70	147	96	0.08	---	---	---	----	Std. Banana type. Hot
Lady Bell	6	72	201	80	0.33	3.7	3.3	3-4	Med.	Very promising. Att. TMV res't
Staddon's Select	6	72	157	80	0.27	3.6	3.5	3-4	Thick	Var. size. BER. TMV Res't.
SWEET BANANA	6	72	154	86	0.11	5.4	1.5	---	----	Std. Banana Type. Mild.
Early Calwonder	6	72	142	86	0.29	3.0	3.2	4	Med.	Var. Shape. Short, thick.
Aconagua	6	75	189	87	0.30	7.4	2.4	3	Thin	Large banana type. Mild flvr.
Bellringer	3	75	175	87	0.30	3.6	3.2	3-4	Med.	Large. Var. size.
Early Set	11	75	171	88	0.29	3.4	3.2	3-4	Thick	Uniform shape, appearance.
KEYSTONE RES'T GT.	6	80	217	93	0.33	3.2	3.1	4	Med.	Std. Good size, quality, TMV tol.
NCX 4010	5	80	198	90	0.29	3.5	3.4	3-4	Thick	Light green, smooth.
EMERALD GIANT	6	80	181	90	0.33	3.1	----	4	Thick	Std. Short, thick. TMV tol.
YOLO WONDER B	6	80	171	89	0.29	2.0	3.0	4	Med.	Attractive. TMV res't.
Belaire	5	80	155	81	0.29	3.0	3.2	3-4	Med.	Short, Thick.
Average	-	--	176	88	0.26	---	---	---	----	-----
LSD 5% level	-	--	51	9	0.04	---	---	---	----	-----

(1) Varieties in capital letters are standard in Ohio.

(2) As indicated by sources.

(3) Blossom-end rot.

(4) Tobacco Mosaic Virus.

TABLE 2.--U.S. No. 1 Yields in cwt./A., Green Springs Pepper Cultivar Trials, 1973-1975.

Cultivar (1)	Source (2)	1975	1974	1973
Aconagua	6	189	----	----
Allbig	2	----	126	----
Atlas	2	----	154	----
Belaire	5	155	----	----
Bell Boy Hybrid	10,7	----	249	389
Burpee's Bellringer	3	175	199	----
California Wonder 300	2	----	166	250
Canape	6	192	187	362
Delaware Belle	7	----	----	295
Early Calwonder	6,6,10	142	186	290
Early Set	11	171	----	----
Emerald Giant	6	181	----	----
Florida Giant	11	----	138	314
Green Boy	1	----	----	445
Hot Portugal	6	----	----	221
Hungarian Wax	6	147	171	328
Hungarian Yellow Wax (hot)	9	----	----	280
Hungarian Yellow Wax (Sweet)	9	----	----	303
Jade	4	----	139	----
Keystone Res't Gt.	6	217	220	306
Lady Bell	6	201	----	----
Large Red Cherry	6	----	----	225
Merrimack Wonder	3	183	196	----
Midway	3,7	161	162	----
NCX 4010	5	198	----	----
Pennbell	6	----	130	328
Red Cherry (hot)	7	----	----	229
Red Cherry (sweet)	7	----	----	115
Sonnette	8	214	217	----
Staddon's Select	6	157	----	348
Sweet Banana	3,6	154	----	282
Tasty Hybrid	3	----	----	314
Titan	7	----	136	----
Twilley's Big Pack	11	----	180	----
Twilley Wonder L.	11	----	180	----
World Beater	4	----	135	----
Yolo Wonder B	6,10	171	----	313
Yolo Wonder L	7	----	162	----
Average		176	172	297
LSD, 5% level		51	55	----

(1) Cultivars arranged alphabetically.

(2) Multiple source numbers arranged chronologically beginning with 1975.

This page intentionally blank.

This page intentionally blank.