Maine Introduces Three Strawberry Varieties for Trial

In Maine, the Howard 17 (Premier) strawberry for many years has been the most widely planted variety. In trials conducted by the Maine station at Highmoor Farm, Monmouth, Maine for several years prior to 1937, some other varieties were found to be superior to Howard 17 in certain specific characters, but nearly all were inferior to it in general over-all performance.

Crosses were made by the station in 1936, with the hope of combining the desirable characters of several varieties. From approximately 3,000 crossed seedlings set in the field for evaluation during the following years, three varieties of some promise have now been introduced.

Maine seedling numbers 127 and 81 have been named, respectively, *Orland* and *Monmouth. Maine seedling number* 55 also is released for general trial. All three are crosses between Howard 17 (Premier) and the red stele resistant Aberdeen, and are highly resistant to this disease, as compared with Howard 17 under Maine conditions.

Russell M. Bailey and Elizabeth F. Murphy write in Misc. Publication 620 of the Maine Agricultural Experiment Station (Orono, Maine, 1952): "These selections are thought to have sufficient merit to justify release for trial especially for home use where winter hardiness, vigor and red stele resistance are important considerations. They are recommended only for trial planting until further information proves if any deserve a place in Maine agriculture."

The following paragraphs and tables reporting grower and station trials are extracted from the publication by Bailey and Murphy.

Study of Freezing Quality

During four crop years the Maine seedlings were included in a quality study after being quick frozen and stored for four to eight months. A panel of 10 to 28 judges tasted the frozen strawberries and rated them for flavor, color, and texture. Sparkle was included in all of the tests because it is considered superior for quick freezing. Howard 17 was also included as a standard Maine variety.

Usually Sparkle was rated best for flavor but the judges also showed high preference for Maine 55 and Monmouth, Orland and Temple were given a lower rating. Howard 17 was usually rated poorest.

Monmouth and Maine 55 were judged to be better textured than Sparkle while Howard 17 and Orland were poor.

The judges preferred the color of Monmouth to all of the other varieties including Sparkle while Maine 55, Orland and Howard 17 were rated as less attractively colored.

Conclusions

From results of the various trials conducted during the past few years it seems that the three Maine varieties, Orland, Monmouth, and Maine 55 possess sufficient merit for trial planting by interested growers. They appear to be superior to Howard 17 in winter survival, vigor, ability to set runner plants, productivity and resistance to red stele disease. The berries are attractive, perhaps not quite as firm as those of Howard 17, apparently are better for freezing and equal in fresh quality. The chief objections may be that all may runner

too freely to suit some growers and that the berries are not as firm as those of Sparkle and Temple. Further breeding work has been undertaken to try to combine the merits of the Maine seedling varieties with the berry firmness and high quality of Sparkle and Temple.

Availability of Plants for Trial

Foundation plants were distributed to approximately 30 plant growers in 1951 in order to provide sources of inspected and certified plants for 1952. A list of growers having certified plants for sale may be obtained from the State Horticulturist, State House, Augusta, Maine.

Suggestions for Setting and Training of Plants

All three of the varieties produce vigorous plants which runner freely. For this reason it is suggested that plants should be set two feet to 30 inches apart in the row. As the runners develop it may be advantageous to train them parallel to the row to establish a fully matted row of early set daughter plants. During the latter part of the season it may be desirable to remove excess side plants and runners with a rolling disc, cultivator or other means, thereby confining the matted row to a desirable width.

Description of Trial Varieties

Orland (Maine No. 127), Parentage: Aberdeen x Howard 17. Season: about four to six days later than Howard 17. Yield: excellent in trials. Berries: attractive bright exterior, pink to light interior, conic to globoseconic shape, good size, holding well throughout season, flavor, firmness, and quality for freezing about like Howard 17, sometimes less firm. Plants: vigorous, compact growth with abundant short stocky runners developing early in season. Good fruit stalks. Medium susceptibility to leaf spot. Good resistance to red stele in field and greenhouse tests. Orland is perhaps the most promising of the three varieties released for trial when considered in an over-all rating.

Monmouth (Maine No. 81), Parentage: Aberdeen x Howard 17. Season: about four days later than Howard 17. Yield: excellent in trials. Berries: bright attractive red, darker exterior and interior color than Orland, uniform conic shape, average size is smaller than Orland but larger than Howard 17. Flavor and freezing quality are rated as good. Approximately same firmness as Howard 17 but sometimes rated as less firm. Plant: vigorous, producing many somewhat objectionable long runners; good fruit stalks. Occasionally mildly infected with leaf spot; good resistance to red stele in field and greenhouse tests. Monmouth appears to be superior to Orland in freezing quality, equal in yield and hardiness but somewhat inferior in plant characters.

Maine 55. Parentage: Howard 17 x Aberdeen. Season: three or four days later than Howard 17. Yield: similar to Howard 17 but less than Orland and Monmouth in trials at Highmoor Farm. Berries: bright attractive red with excellent interior color; uniform conic to wedge shape averaging good size. Good flavor, highly aromatic and excellent for freezing, fruit probably slightly softer than Howard 17. Plants: vigorous, inclined to have weak fruit stalks; produces many slender runners; good resistance to leaf spot and red stele. Maine 55 perhaps has the least promise of the three trial varieties. It appears to be of less desirable plant type than Orland, but superior in flavor and freezing quality. It is suggested for trial as a variety for home freezing.

TABLE 1

Comparative Yields of Six Varieties of Strawberries in Five Locations in Maine, 1949

Location	Quarts Per Acre						
	Howard 17	Temple	Sparkle	Maine 55	Monmouth	Orland	Location Mean Yield
Highmoor Farm	2840	2903	2760	2914	3633	4513	3834
Jonesboro	1155	1042	1215	3328	2888	2689	2003
North Bridgton	3957	1961	4392	5608	4175	7550	4710
Orono	2651	2423	3517	4361	6301	6782	4686
Van Buren	1059	1147	479	2340	1407	2034	1429
Variety Mean	2332	1895	2473	3710	3681	4713	3332

TABLE 2

Performance of Selected Strawberry Varieties at Highmoor Farm, 1947-49

Variety	Yield (Qts. Per Acre)				No. Berries Per Qt. (Av. 3 years)	Days Later Than Howard 17 (Mid-harvest) (Av. 3 years)	Red Stele Resistance (% Plants Infected, Greenhouse, 1949)	% Plants Showing Good Winter Survival	
	1947	1948	1949	Av.				1947	1948
Howard 17	5652	4222	2840	4238	99	....	88	77	82
Catskill	3541	5630	2792	3988	85	2	*	70	87
Sparkle	6220	3450	2760	4143	99	5	13	88	80
Temple	5562	6061	2903	4842	95	1	11	100	95
Robinson	4949	4631	2224	3935	66	5	*	90	97
Maine 55	7582	7718	2914	6071	73	4	11	100	100
Monmouth	11010	9489	3633	8044	94	4	25	100	100
Orland	9852	9761	4513	3042	74	6	0	100	100
LSD 5%	.....	2475	1677	.....	....	....	....	....	....

*Not in greenhouse test but reported as susceptible.