

length of growing season, climate, and other factors affect the productivity of varieties differently. Although resistance to disease has been commonly observed to be a major factor in determining yields in certain areas, it was by no means the only factor of importance in these tests. This is clearly demonstrated in table 4, in which beet yields of leafspot-susceptible varieties tested under leafspot-free conditions, but varying as to other factors, are shown, and significant differences in yield were obtained.

In the 1941 tests (table 5) certain domestic varieties were found to be significantly high in yield in several of the areas under test. Varieties 0-601, and 200 x 215 x 216 appeared more nearly to meet the requirements of general varieties for interchangeable use in the 4 areas herein discussed. In the intermediate-yielding group, varieties 0-705 and to a lesser extent 0-401 were consistent performers regardless of area. On the other hand, the European variety Schreiber S. S. was lowest in yield in 2 areas because of high degree of susceptibility to the leafspot disease.

In view of the results obtained during this 5-year period of test, it appears highly necessary to test thoroughly new varieties in all areas where possible commercial utilization is planned. The results also indicate that as a general practice, it is desirable that commercial varieties used in any commercial sugar-beet growing area be made from increases of elite stocks originally selected in that area.

Report on 1941 Tests of U. S. 200 x 215, U. S. 215 x 216, and Other Varieties Arising in Leafspot-Resistance Breeding Investigations of the U. S. Department of Agriculture

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Agronomic evaluation tests were conducted in 1941 on U. S. 200 X 215 and allied varieties of sugar beet arising in the leafspot-resistance breeding project. Tests were conducted by members of the staff of the Division of Sugar Plant Investigations in cooperation with ex-

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periment stations and other cooperators at 9 locations. J. H. Torrie of the Wisconsin Agricultural Experiment Station, in cooperation with beet-sugar companies operating in Wisconsin, conducted tests at 3 locations.

In addition, cooperators in research organizations of the beet-sugar industry have contributed results from their tests with these varieties, as follows: H. W. Dahlberg and H. E. Brewbaker, the Great Western Sugar Company, tests at Brush, Colo.; A. W. Skuderna, American Crystal Sugar Company, tests at Rocky Ford, Colo., Grand Island, Nebr., Mason City, Iowa, and Chaska, Minn.; M. J. Busehlen, Farmers and Manufacturers Beet Sugar Association, tests at Ottawa and Maumee, Ohio, and at Bay City, Michigan; G. M. Bradford, Monitor Sugar Company, tests at Au Gres, Mich.; F. R. Bach, Michigan Sugar Company, tests at Saginaw, Mich.; and H. D. Brown, Canada and Dominion Sugar Company, tests at Chatham, Ontario, Canada. For the leading varieties a total of 27 tests is reported—6 in Colorado, 1 in Wyoming, 2 in Nebraska, 1 in Iowa, 2 in Minnesota, 3 in Wisconsin, 4 in Ohio, 7 in Michigan, and 1 in Ontario.

Comparisons in table 1 are with Synthetic Check, a variety obtained by pooling equal quantities of 9 European brands and using this mixture to produce a seed crop. In our experience, Synthetic Check has shown a performance equivalent to the best European tonnage types and superior to many European brands. The results in 1940 bore out this opinion, and those of 1941 are also entirely in line. In absence of leafspot, the variety is a strong competitor but falls below U. S. 200 X 215 when leafspot is a factor. The general superiority of U. S. 200 X 215 to Synthetic Check seems shown again in these tests.

Comparison is made between the new variety U. S. 215 X 216 represented by seed lot 0-257-00 and U. S. 200 X 215. In 20 of the 26 tests, the new variety produced more sugar per acre than the standard, the difference in many cases being significant. It is questioned if the seed lot 0-257-00 had as large a proportion of hybrids as might occur with production of seed in larger seed fields and under more favorable growing conditions, since the improvement over U. S. 200 X 215, while definite, is not so large as was anticipated. The variety is more leafspot resistant, higher in sucrose, and it may well replace U. S. 200 X 215 as seed stocks become available.

In tables 3, 4, and 5, new candidates, 0-14-00, 0-281-00, and 0-1804-00, involving hybrid combinations, are brought to attention by means of comparison with U. S. 200 X 215. For the double cross, 0-14-00, only identified F_1 plants of the 2 indicated crosses (U. S. 216 X 215 and Cesena X 215) were used. In this manner, the pure phase of the parental strains that may have occurred in seed of the

original crosses as a result of selfing was excluded from the seedplot. Seed lots 0-281-00 and 0-1804-00 represent, respectively, U. S. 216 X a high-yielding, moderately resistant inbred (8-266-0) and U. S. 215 X 8-419-0, a high-sucrose and highly resistant selection from Rovigo-581. All of these combinations show excellent promise which, if borne out in future tests, opens a way for new introductions.

The performance of the varieties is given in table 6 as averages from all locations (17) in which the complete lists of tests 1 and 2 were used. The averages are expressed also as percentages of U. S. 200 X 215. In addition to comparisons already given in tables 1 to 5, where a large number of tests (20-26) could be used, attention is called to the excellent performance of 0-252-00 in relation to U.S. 200 X 215 and Synthetic Check. Variety 0-252-00 was produced by interplanting in the seed field equal parts of U. S. 200, U.S. 215, and U.S. 216. From table 6, it is to be noted that the new varieties are all superior to Synthetic Check and U. S. 200 X 215 in acre-yield of gross sugar. Likewise, superior sucrose percentage is shown by the new varieties with the exception of 0-1802-02. Acre-yields of roots for the new varieties, as judged by the averages, are generally above Synthetic Check and U. S. 200 X 215. This superiority in root yield is not so consistent as is the superiority in sucrose percentage and in acre-yield of gross sugar. There are several instances of superiority of a new variety in both sucrose percentage and root yield over (1) U.S. 200 X 215, (2) Synthetic Check, and (3) the local variety. The last named was not uniform throughout the various tests, but was the variety supplied by the cooperator.

The 1941 results are gratifying in their general showing that many varieties, including those arising in breeding work of beet-sugar companies, are attaining a high level of leafspot resistance and excellent performance. In many cases, tests of greater precision, and over a longer period, will be necessary to settle which of many promising candidates are the outstanding. For the districts in which leafspot attack is frequent, breeding investigations must center on the attainment of high leafspot resistance without sacrifice of high productivity.

Table 1.—The 1941 comparisons of U. S. 200 x 215 with Synthetic Check (approximates European tonnage types). From test 1.
(Results given as 8-plot averages, unless otherwise noted)

Location	Acre-yield of						Apparent purity coefficient		Leafspot reading	
	Indle.-avail. sugar		Roots		Sucrose		US 200 X 215	Syn. Check	US 200 X 215	Syn. Check
	US 200 X 215	Syn. Check	US 200 X 215	Syn. Check	US 200 X 215	Syn. Check				
	pounds	pounds	tons	tons	percentage	percentage				
Colo., Fort Collins	3,883	3,329	13.60	12.44	15.56	14.80	91.8	96.3	4.0	6.8
Colo., Ault	6,977	6,805	22.87	23.06	16.69	16.28	91.4	90.7	2.4	4.3
Colo., Fort Collins	3,574	3,158	15.35	15.07	12.49	11.38	93.3	92.1	3.2	5.4
Colo., Rocky Ford	4,088*	3,861*	14.45	15.06	14.12	12.84	...	...	3.8	4.8
Colo., Rocky Ford, W. R.	3,902*	4,140*	14.84	15.87	13.15	13.14	...	...	2.9	4.6
Wyo., Torrington	5,946*	5,932*	19.22	19.45	15.60	15.40	...	...	...	...
Nebr., Scottsbluff	5,866*	6,166*	18.27	20.29	16.10	15.20	...	...	4.4	6.0
Minn., Waseca	2,817	2,480	11.14	10.62	15.04	14.38	84.3	82.1	2.7	3.8
Wisc., Doylestown	3,825	3,800	18.37	18.27	12.50	12.60	82.9	82.0	2.8	3.3
Wisc., Kenosha	3,770	3,376	14.69	12.85	14.70	15.60	84.5	83.7	2.3	3.6
Wisc., Fond du Lac	4,029	4,097	14.73	14.82	15.80	15.00	85.7	83.7	...	...
Ohio, Van Wert	5,549	5,216	19.19	19.70	17.51	16.80	82.3	81.4	...	...
Ohio, Holgate	2,406	2,299	9.39	10.12	15.02	15.13	85.2	84.7	...	...
Ohio, Ottawa	3,643	3,497	14.84	14.81	15.33	14.73	80.9	80.2	3.5	4.6
Ohio, Maumec	2,733	2,969	10.39	11.87	16.00	15.50	82.2	80.6	2.5	3.5
Mich., East Lansing	2,158	2,083	8.23	8.01	14.88	14.90	87.8	87.4	...	...
Mich., Merrill	5,354	4,944	18.62	17.02	16.72	17.02	86.1	85.4	...	...
Mich., Bay City	4,964	4,460	17.92	17.34	15.89	16.02	82.0	80.2	...	...
Mich., Au Gres	3,517	3,651	10.60	11.31	18.67	18.67	80.0	86.5	2.0	2.8
Ontario, Chatham	4,372	3,784	16.79	14.65	14.93	14.75	87.2	87.1	2.7	4.2
Average	4,155	4,017	15.20	15.00	15.34	14.90	86.06	85.02	3.1	4.4
Difference	+ 138		+ .11		+ .35		+ 1.04		-1.3	

*Gross sugar.

tWisconsin tests had 4 replicates (Youden square).

Table 2.—The 1941 comparisons of 0-257-00 (U. S. 215 X 216) with U. S. 200 X 215. From test 1.
(Results given as 8-plot averages, unless otherwise noted)

Location	Acre-yield of						Apparent purity coefficient		Leafspot reading	
	indic.-avall. sugar		Roots		Sucrose		0-257-00	200 X 215	0-257-00	200 X 215
	0-257-00	200 X 215	0-257-00	200 X 215	0-257-00	200 X 215	0-257-00	200 X 215	0-257-00	200 X 215
	pounds	pounds	tons	tons	percentage	percentage				
Colo., Fort Collins	4,016	3,883	13.23	13.60	16.40	16.56	92.0	91.8	4.0	5.5
Colo., Ault	6,086	6,977	19.31	22.87	17.16	16.69	91.8	91.4	1.8	2.4
Colo., Fort Collins	3,534	3,574	14.20	15.35	13.18	12.49	94.1	93.3	2.1	3.2
Colo., Rocky Ford	4,731*	4,988*	16.44	14.45	15.33	14.13	—	—	2.3	3.8
Colo., Rocky Ford	4,654*	3,902*	16.54	14.84	14.08	13.10	—	—	2.3	2.9
Colo., Brush†	5,651*	5,379*	17.32	17.30	16.40	16.04	—	—	3.3	5.8
Wyo., Torrington	6,346*	5,948*	20.28	19.92	16.70	16.00	—	—	—	—
Nebr., Scatsbluff	6,378*	5,886*	18.46	18.27	17.20	16.10	—	—	2.4	4.4
Nebr., Grand Island	4,305*	3,956*	12.67	12.34	16.00	16.03	—	—	—	ix.
Minn., Waseca	3,566	2,817	13.70	11.14	15.41	15.04	84.7	84.3	1.4	2.7
Minn., Chaska	3,798*	3,972*	13.21	15.33	12.28	12.79	—	—	—	—
Wisac.† Doylestown	3,946	3,825	13.76	13.37	12.60	12.50	83.2	82.9	0.9	2.8
Wisac., Kenosha	3,301	3,779	13.13	14.69	14.30	14.70	82.9	84.5	1.5	2.3
Wisac., Fond du Lac	4,077	4,029	13.60	14.73	16.50	15.80	87.9	85.7	—	—
Ohio, Van Wert	5,617	5,549	17.90	19.19	18.56	17.51	84.3	82.6	—	—
Ohio, Holgate	2,959	2,408	11.43	9.39	15.17	15.02	85.5	85.2	—	—
Ohio, Ottawa	4,424	3,643	10.00	14.64	16.58	15.33	82.0	80.9	1.6	3.5
Ohio, Maumee	3,095	2,753	11.49	10.39	16.31	16.00	82.5	82.2	1.0	2.5
Mich., East Lansing	1,869	2,156	7.24	8.23	14.68	14.58	87.7	87.8	—	—
Mich., Merrill	5,429	5,354	18.08	18.62	17.25	16.72	87.0	86.1	—	—
Mich., Bay City	5,130	4,604	18.35	17.92	16.31	15.89	85.8	82.0	—	—
Mich., Bay City†**	5,017*	4,384*	14.42	12.77	17.27	17.04	—	—	—	—
Mich., Au Gres	3,579	3,517	10.89	10.60	18.62	18.67	88.2	89.0	0.1	2.0
Mich., Au Gres†	3,733*	3,610*	11.22	10.94	16.65	16.50	—	—	0.5	1.5
Mich., Saginaw†	3,499	3,608	12.51	13.78	16.08	15.41	87.0	85.1	—	—
Ontario, Chatham	5,094	4,372	17.86	16.79	16.11	14.83	86.6	87.2	1.1	2.7
Average	4,370	4,162	14.98	14.83	16.92	15.41	86.7	86.0	1.8	3.3
Difference	+ 217		+ .19		+ .51		+ .7		-1.5	

Table 3.—The 1941 comparison of 0-44-00 with U. S. 200 X 215. Prom test 2.
(Results given as 8-plot averages from each of the 20 locations, unless otherwise noted)

Location	Acre-yield of									
	Indic. avail. sugar		Roots		Sucrose		Apparent purity coefficient		Leafspot reading	
	0-14-00	200 X 215	0-14-00	200 X 215	0-14-00	200 X 215	0-14-00	200 X 215	0-14-00	200 X 215
	pounds	pounds	tons	tons	percentage	percentage				
Colo., Fort Collins	4.221	3,783	14.10	13.39	16.25	15.41	82.1	91.7	4.4	5.4
Colo., Ault	6,801	7,006	22.67	24.00	16.83	16.41	89.5	88.9	1.6	2.3
Colo., Fort Collins	4,039	3,756	15.46	15.58	14.01	12.96	83.7	92.9	2.1	2.9
Colo., Rocky Ford, Spr.	4,788*	3,608*	16.07	13.23	14.80	13.59	....	....	2.4	4.0
Colo., Rocky Ford, W. R.	4,516*	3,467*	16.25	13.20	13.80	13.03	....	....	2.3	2.8
Wyo., Torrington	6,269*	6,712*	19.88	21.00	15.80	15.30	....	....	....	....
Nebr., Scottsbluff	6,510*	6,248*	20.15	20.29	16.10	15.30	....	....	4.0	5.4
Minn., Waseca	2,885	2,852	11.58	10.60	14.83	14.45	83.8	83.2	2.0	3.1
Wisc., † Doylestown	4,331	3,825	20.49	18.17	12.50	12.50	82.3	82.9	0.9	2.8
Wisc., Kenosha	4,170	3,770	15.56	14.60	15.70	14.70	88.8	84.5	1.4	2.3
Wisc., Fond du Lac	3,909	4,029	13.14	14.73	17.80	15.80	88.7	85.7	....	....
Ohio, Van Wert	5,915	5,346	18.25	17.70	18.54	17.60	90.9	85.8	....	....
Ohio, Holgate	2,900	2,619	10.65	9.66	16.16	15.60	84.2	86.6	....	....
Ohio, Ottawa	4,610	4,682	16.06	16.02	16.79	15.23	82.1	80.6	2.2	3.3
Ohio, Maumee	3,759	3,228	12.94	11.64	17.35	16.93	85.0	81.9	1.0	1.5
Mich., East Lansing	2,038	1,639	8.21	7.51	14.63	14.46	86.1	85.9	....	....
Mich., Merrill	5,202	5,221	18.49	18.14	16.89	16.75	84.7	85.3	....	....
Mich., Bay City	5,462	4,804	19.48	17.77	16.71	16.22	83.8	83.0	....	....
Mich., Au Gres	3,892	3,761	11.79	11.58	19.02	18.66	80.6	87.5	1.0	2.0
Ontario, Chatham	4,664	4,314	16.81	16.44	15.76	15.01	88.0	87.4	2.0	1.7
Mean	4,548	4,193	15.93	15.34	16.02	15.30	86.33	85.71	2.10	3.02
Difference	+ 355		+ .59		+ .72		+ .62		-.92	

*Gross sugar.

†Wisconsin tests had 4 replicates (Youden square).

Table 4.—The 1941 comparisons of 0-281-00 (high-yielding inbred X U, S. 216) with U, S. 200 X 215. From test. 1.
(Results given as 8-plot averages unless otherwise noted)

Location	Acre-yield of						Apparent purity coefficient		Leafspot reading	
	Indic.-avail. sugar		Roots		Sucrose		0-281-00	200 X 215	0-281-00	200 X 215
	0-281-00	200 X 215	0-281-00	200 X 215	0-281-00	200 X 215				
	pounds	pounds	tons	tons	percentage	percentage	...	...	...	...
Colo., Fort Collins	4,293	3,883	14.16	13.60	16.51	15.56	91.8	91.8	3.1	4.0
Colo., Ault	6,353	6,977	21.16	22.87	17.08	16.60	91.5	91.4	1.2	2.4
Colo., Fort Collins	3,617	3,574	14.76	15.33	13.05	12.40	93.6	93.3	1.9	2.3
Colo., Rocky Ford	4,775*	4,098*	15.63	14.45	15.44	14.13	...	...	2.1	3.8
Colo., Rocky Ford W. R.	4,083*	3,902*	16.40	14.84	14.28	13.10	...	...	1.8	2.9
Colo., Brush†	5,706*	5,579*	17.30	17.39	16.40	16.04	...	...	3.2	5.8
Wyo., Torrington	5,018*	5,045*	18.62	19.02	15.90	15.00	...	...	...	...
Nebr., Scottsbluff	6,030*	5,880*	20.31	18.27	16.30	16.00	...	...	3.5	4.4
Nebr., Grand Island	4,601*	3,958*	13.50	12.34	12.34	17.04	...	...	0	tr.
Minn., Waseca	3,754	2,817	14.46	11.14	15.42	13.04	84.1	84.3	1.0	2.7
Minn., Chaska	3,030*	3,972*	13.66	15.53	12.74	12.79	...	...	0	...
Wisc., Doylestown	4,120	3,825	17.54	18.37	13.90	12.50	84.8	82.9	1.1	2.8
Wisc., Kenosha	3,251	3,770	13.37	14.00	15.40	14.70	83.3	84.5	1.8	2.3
Wisc., Fond du Lac	4,558	4,020	14.62	14.73	17.50	15.80	88.1	85.7	0	0
Ohio, Van Wert	5,772	5,549	18.81	19.10	18.14	17.51	84.7	82.6	...	...
Ohio, Holgate	3,091	2,408	11.77	9.39	15.41	15.02	85.2	85.2	...	...
Ohio, Ottawa	4,500	3,943	16.70	14.84	16.63	15.33	81.0	80.0	1.9	3.5
Ohio, Maumee	3,213	2,753	11.42	10.30	16.94	16.00	83.1	82.2	0.5	2.3
Mich., East Lansing	2,121	2,158	8.06	8.33	14.81	14.88	88.5	87.3	...	...
Mich., Merrill	5,497	5,354	18.00	18.62	17.70	16.72	85.3	86.1	...	...
Mich., Bay City	5,008	4,064	18.34	17.92	16.61	15.69	83.7	82.0	...	...
Mich., Au Gres	3,578	3,517	10.77	10.60	19.01	18.67	86.8	89.0	1.0	2.0
Ontario, Chatham	5,192	4,372	18.13	16.79	16.25	14.93	88.2	87.2	2.8	2.7
Average	4,557	4,200	15.63	15.19	16.05	15.29	86.58	86.08	2.0	3.2
Difference	+ 357		+ 0.44		+ 0.76		+ 0.30		-1.2	

*Gross sugar.

†Replications: Brush, 9 plots; Wisconsin, 4 plots (3 tests).

Table 5.—The 1941 comparisons of 0-1804-00 (U. S. 215 X highly leafspot-resistant strain) with U. S. 200 X 215. From test 2. (Results given as 8-plot averages unless otherwise noted)

Location	Acre-yield of						Apparent purity coefficient		Leafspot reading	
	Indic.-avail. sugar		Roots		Sucrose		0-1804-00	X 215	0-1804-00	X 215
	0-1804-00	200 X 215	0-1804-00	200 X 215	0-1804-00	200 X 215				
	pounds	pounds	tons	tons	percentage	percentage				
Colo., Fort Collins	4,520	3,783	15.21	13.39	16.10	15.41	92.4	91.7	1.9	5.4
Colo., Ault	6,187	7,906	21.82	24.00	15.86	16.41	89.4	88.9	1.1	2.3
Colo., Fort Collins	3,608	3,758	14.42	15.08	13.74	12.96	93.2	92.9	1.3	2.9
Colo., Rocky Ford	4,530*	3,608*	15.02	13.23	14.41	13.39	...	...	1.3	4.0
Colo., Rocky Ford W. R.	4,174*	3,457*	15.11	13.20	13.82	13.05	...	...	1.5	2.5
Colo., Brush†	6,848	5,579*	20.98	17.39	16.90	16.04	...	...	2.3	5.8
Wyo., Torrington	6,120*	6,702*	19.72	21.60	15.50	15.50	...	...	...	...
Nebr., Scottsbluff	6,382*	6,248*	19.62	20.29	16.30	15.30	...	...	1.9	5.4
Minn., Waseca	2,784	2,552	11.31	10.60	14.61	14.45	89.4	83.2	2.31	2.00
Wisc., † Doylestown	3,955	3,825	20.54	18.37	11.70	12.50	81.8	82.9	1.0	2.8
Wisc., Kenosha	4,277	3,770	15.09	14.69	16.30	14.70	85.8	84.5	1.0	2.3
Wisc., Fond du Lac	5,175	4,029	16.08	14.73	17.20	15.80	87.4	85.7	...	...
Ohio, Van Wert	5,913	3,346	17.95	17.70	18.77	17.60	87.7	85.8	...	...
Ohio, Holgate	2,946	2,510	10.90	9.46	15.05	15.60	85.4	83.6	...	...
Ohio, Ottawa	4,787	4,082	16.89	16.62	17.10	15.23	83.0	80.6	1.18	3.31
Ohio, Maumee	3,714	3,228	12.81	11.44	17.23	16.93	84.3	81.0	...	0.5
Mich., East Lansing	2,252	1,840	9.11	7.51	14.32	14.46	86.9	85.9	...	...
Mich., Merrill	5,446	5,221	18.58	18.11	17.08	16.78	80.9	85.8	...	...
Mich., Bay City	5,542	4,804	19.84	17.77	16.52	16.22	84.1	83.0	...	...
Mich., Bay City†**	5,351*	4,384*	14.80	12.77	17.73	17.04	...	...	...	...
Mich., Au Gres	4,050	3,761	12.97	11.38	18.57	18.58	87.9	87.5	1.0	2.0
Mich., Au Gres††	4,142*	3,910*	12.92	10.94	17.04	16.30	...	...	1.0	1.0
Mich., Saginaw†	2,780	3,608	13.94	13.78	16.57	15.41	87.1	85.1	...	...
Ontario, Chatham	5,446	4,314	19.06	16.44	18.21	15.01	88.1	87.4	2.5	1.7
Average	4,667	4,210	15.92	15.07	16.06	15.46	86.75	83.67	1.5	3.2
Difference	+ 457		+ 0.85		+ 0.60		+ 1.08		-1.7	

*Gross sugar.

†Replications: Brush, 9 plots; Wisconsin, 4 plots (3 tests); Au Gres, † 6 plots; Bay City, ** 6 plots; Saginaw, 6 plots.

Table 6.—Summary of (1) gross sugar, (2) tonnage, and (3) sucrose percentage given as averages of 17 locations for each variety. Data for tests 1 and 2, from those locations at which complete lists of varieties were grown, have been averaged. These averages are expressed in relation to that of U. S. 200 X 215 for each variety in a test, equality being expressed as 100. These percentage values may be used as coefficients of performance for comparison of varieties in one test with those in the other,

Variety	Test	Gross sugar		Roots		Sucrose	
		Average yield	Variety 200x215	Average yield	Variety 200x215	Average percentage	Variety 200x215
Description	Seed No.	pounds	percentage	tons	percentage	percentage	percentage
U. S. 200 X 215	Acc. 5025	4,681	100.0	15.07	100.0	15.51	100.0
U. S. 215 X 216	0-257-00	4,971	106.2	15.32	101.7	16.15	104.1
U. S. 200 X 216	0-236-00	4,851	103.6	14.73	97.7	16.34	105.4
U. S. 200 X 215 X 216	0-232-00	4,963	106.0	15.84	105.1	15.39	100.5
U. S. 215 X 8-205-0*	0-280-00	4,757	101.8	15.15	100.5	15.58	100.5
U. S. 216 X 8-266-0*	0-281-00	5,129	109.5	15.73	104.4	16.24	104.7
Synthetic Check	Acc. 1055	4,563	97.5	15.10	100.2	15.08	97.2
.....	A Local Var.†	4,881	104.3	15.58	103.4	15.65	100.3
U. S. 200 X 215	Acc. 5025	4,742	100.0	15.24	100.0	15.47	100.0
(U. S. 216 X 216) X (Cesena X 215)	0-14-00	5,131	108.2	15.85	104.0	16.14	104.3
U. S. 215 X 8-1408-0‡	0-16-00	4,765	100.5	14.74	96.7	16.08	103.9
8-1261-00§ X 8-537-00§	0-1902-02	4,836	102.0	15.81	103.7	15.23	98.4
U. S. 215 X 8-419-0¶	0-1804-00	5,113	107.8	15.80	104.3	16.01	106.5
U. S. 216 X 8-421-0¶	0-1805-00	5,037	105.2	15.18	99.6	16.57	107.1
(U. S. 216 X 215) X 8-1336-0**	0-1807-00	5,011	105.7	15.11	99.1	16.63	106.9
.....	A Local Var.†	4,920	104.8	15.74	103.3	15.58	100.7

*Inbred strains arising from Tracy material.

‡Selected by cooperator, hence differs among the various locations.

†Selection out of Cesena.

§Synthetic varieties produced by crossing several inbred strains.

¶Selections out of Ravigo-581 (Munerati).

**Selection out of Mezzano N-71.