Rank	Variety	Tons per Acre	Percent Sucrose	Percent Purity	Recoverable Sugar
1	Commercial Check	4.60	16.83	85.18	1,321.3
2	U.S.D.A. #217	4.35	17.12	86.72	1,311.1
3	Holly Special	4.58	16.72	85.48	1,309.3
4	M.S.C. Check	4.36	17.04	85.67	1,275.5
5	Stokes Home Grown	4.32	17.66	85.63	1,250.0
6	Am. Crystal #3	4.21	16.73	85.54	1,212.5
7	Am. Crystal #4	4.36	16.32	83.71	1,190.0
8	Great Western	4.10	16.60	85.89	1,160.8
9	U.S.D.A. #33	3.54	17.16	86.85	1,058.6
10	Kohls Elite	3.60	17.16	85.71	1,058.0
11	U.S.D.A. #34	3.74	16.53	85.26	1,048.8
12	Am. Crystal #1	3.43	16.78	85.42	1,026.0
13	Am. Crystal #5	3.42	17.15	86.85	998.8
14	Amalgamated #600	3.61	15.77	84.31	997.0
Statistical Dependability		over 99%	over 99%	over 19%	over 19%
When values differ by more than		2.44	.96	1.62	225.7

Ranked according to recoverable sugar

Due to the very extreme wet weather the results are very disappointing. A careful study reveals that very little significance occurs in this data. I am inserting it only as a matter of record. It has very little value from an experimental standpoint in determining the worth of the various varieties.

OTHER STATE TESTS WITH U. S. #217

In 1937 we harvested 53 plots of blight resistant seed in direct comparison to the ordinary commercial seed which was being used in the various territories. Due to limited time and space I shall not insert the data here but suffice to say that in the majority of cases U.S. #217 showed up better than the ordinary commercial, in some instances as much as 15% increase was noted in favor of U.S. #217 over the ordinary Commercial variety.

TESTS OF U. S. 217 IN 1937

G. H. Coons, Dewey Stewart, J. O. Gaskill, G. W. Deming, H. W. Bockstahler, J. O. Culbertson, and S. B. Nuckols, U.S.D.A.

Following is a report on agronomic tests conducted with U. S. 217 in 1937. This variety, formerly called Acc. 217 or Acc. 220, is composed of 5 leaf-spot-resistant inbreds allowed to intercross. Details of the make up of this variety have been given in the first report made last year and in the 1936 U. S. Department of Agriculture Yearbook, page 641.

A summary of 11 intensive tests of U. S. 217 in comparison with a

SUMMARY OF 1937 TESTS OF U. S. 217

Conducted by the Division of Sugar Plant Investigations

Test No.	Location of Test	Acre-yield of roots[1]		Sucrose		Apparent Purity Coefficient		Calculated Acre-Yield of Sugar			
								Gross		Indicated available	
		U.S.217	Check[2]	U.S.217	Check	U.S.217	Check	U.S.217	Check	U.S.217	Check
		(tons)	(tons)	(%)	(%)			(lbs.)	(Lbs.)	(Lbs.)	(Lbs.)
1	Ft. Collins, Colo. Field Station(Sprinkler)	14.48	13.73	13.88	11.45	92.00	90.17	4,033	3,156	3,714	2,850
2	do	17.10	15.89	15.00	13.59	91.39	90.36	5,127	4,311	4,685	3,899
3	Ft. Morgan, Colo. Farmer's field	19.58	21.01	13.26	11.90	91.55	89.64	5,197	4,990	4,760	4,472
4	Ft. Collins, Colo. College Farm	18.02	16.86	15.46	14.08	95.13	94.59	5,567	4,743	5,292	4,489
5	Ft. Collins, Colo. Agronomic test	17.00	17.66	15.06	13.52	93.78	92.90	5,134	4,762	4,814	4,423
6	Rocky Ford, Colo. Exp. 1, Sprinkler	18.04	21.52	12.48	10.77	91.28	89.43	4,490	4,634	4,099	4,144
7	" Exp. 2,	19.20	18.65	11.92	10.56	89.08	89.60	4,540	3,928	4,035	3,511
8	Rocky Ford, Colo. West Ranch	17.59	19.12	15.51	14.48	96.18	96.16	5,458	5,544	5,248	5,329
9	Crookston, Minn.	6.32	8.00	16.80	16.62			2,130	2,661		
10	Waseca, Minn.	12.60	13.04	16.19	16.22	83.50	83.80	4,080	4,234	3,367	3,555
11	Scottsbluff, Nebr.	17.32	18.16	15.34	15.01	85.90	84.40	5,346	5,480	4,606	4,630
Average of 1937 tests		16.11	16.69	14.63	13.47	90.98	90.10	4,646	4,404	4,462	4,130
		-.58		+1.16		+.88		+242		+332	
Average of 16 tests in 1936		14.09	14.29	14.89	14.10	86.24	85.65	4,157	3,982	3,589	3,421
		-.20		+.79		+.59		+175		+168	

1/ Tests 1 to 8, inclusive, are based on normally-competitive beets; tests 9, 10, and 11 are based on actual yields.

2/ In tests 1 and 6, Old Type was used; in others, Synthetic Check.

check, as conducted in 1937 by members of the Division of Sugar Plant Investigations is presented. On the basis of the 1937 test, the guarded conclusion is drawn that the variety performed satisfactorily where tried, except in Minnesota where, because of low acre-yield of roots and sucrose percentage about equal to the check, the calculated acre-yields of sugar were significantly below the yield of the check. The leaf-spot resistance of the variety was conclusively shown; strongest superiority of the variety over check was manifested in those cases in which leaf spot was a serious factor.

VARIETY TESTS BY THE HOLLY SUGAR CORPORATION

C. E. Cormany, Chief Agronomist

Three brief summary charts are shown covering results of the variety tests in (a) Montana and Wyoming, (b) Western Slope of Colorado and (c) The Hamilton City, California, area.

American varieties are compared to a standard commercial check of the intermediate type in the California and Montana-Wyoming tests, U. S. 34 being used for check in the Delta test.

From the data presented in these tables, the American varieties compare favorably with, or exceed the yields of the check and are not significantly different from the check in the California and Montana-Wyoming areas.

In the curly-top area near Delta, Colorado, curly-top resistant strain, U. S. #12, was better than U. S. #34 and #600 but not significantly so.

The non-curly-top resistant varieties were inferior to the curly-top resistant varieties in the Delta tests, as was to be expected.

Variety Summary---Hamilton City, California---Total Plant Yield

Variety	% Sucrose	Tons per Acre	Sugar Per Acre
U.S. 33	17.63	13.588	4808
U.S. 34	17.33	14.815	5160
H.S. 36	18.23	13.896	5059
HGW 36	17.90	15.535	5559
Check	17.40	14.638	5102
Z Value	.5295	.7634	.5702
5% Point	.4090	.4090	.4090
Diff. Req. for Sig.	.8636	1.7332	.647
SEm in % Gen. M.	1.74%	4.32%	4.59%

According to these analyses no variety differs significantly from the commercial check.