

OHIO AGRICULTURAL EXPERIMENT STATION

Wooster, Ohio

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POTATO VARIETY TRIALS, 1956

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Seven new varieties and seedlings were tested for the first time this year, together with twelve other recent introductions and several old standards. The trials at Wooster were planted at two dates on Wooster silt loam. Each plot was a single row of 40 seed pieces, in a space of 36 feet, and if ample seed was on hand, each variety was grown in four replicates, in both plantings.

May was wet. The first planting, made as soon as the soil was judged suitable to plow, was May 18. The second was June 11.

The soil continued wet throughout most of the season. Instead of driving through the plots with a sprayer, sprays were applied with an orchard sprayer driven around the plots. Similarly the plots were not cultivated until late August. Earlier, when weeds became as tall as the potato vines, the bigger weeds were pulled by hand. With an abundance, or excess of moisture, the presence of the weeds appeared to be beneficial rather than detrimental. In spite of heavy rains the soil remained mellow, and the yields in the first planting were as large as obtained in any previous year. The June planting, however, was damaged by early frost, September 21, only 101 days after planting.

Following the present practice of the Crop Reports, the yields are here

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given in hundred-weight per acre. To convert to equivalent bushels, multiply by 1.67 (or divide by 0.6). For example, 240 cwt. equals 400 bushels

#### SOURCE OF SAMPLES

Most of the varieties included were contributed by interested growers or dealers in certified seed potatoes. More than half of the samples were donated through the Ohio Farm Bureau, Columbus, Ohio. Other contributors were:

New York Potato Growers Cooperative, Bouckville, N. Y.

Dr. Cecil W. Frutchev, Potato Certification Service, Fort Collins, Colo.

Ben Picha, Box 816, Grand Forks, N. Dakota.

Geo. Mehlenbacher and Sons, Wayland, N. Y.

Starks Farms, Starks, Wisconsin.

W. L. Wykoff, Alba, Michigan.

#### COMMENTS ON SOME OF THE INDIVIDUAL VARIETIES (See Tables 1 and 2)

Starks 1429 from Starks Farms (Wis.) was about two days earlier than Cobbler, with smoother tubers, and free from hollow heart. Although this is the first season tested in Ohio, its freedom from tuber defects makes it a most promising early white potato.

Waseca, tested for several years, is an extra early red potato with somewhat rough surface, not equalling Cobbler in cooking quality.

Chippewa stood out as a high yielding, smooth, white potato, but in this wet season was almost as late as Katahdin. It had less hollow-heart than either Cobbler or Katahdin. Chippewa has been known in Ohio for over 20 years, and its shortcoming is that wounds are slow to heal, so that damaged tubers often rot. Only where the crop can be carefully sorted is Chippewa a good risk. Its good yields, however, since modern insecticides have been used, would seem to justify the care required to handle it.

Cherokee is reputed to have scab resistance, but has given low yields of rather rough potatoes in these Ohio trials.

Pungo has considerable resistance to late blight, but judging from five years of testing, seems to have no place in Ohio. Note its high proportion of hollow-heart in Table 2.

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Table 1.

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## VARIETY TRIAL AT WOOSTER, Planted May 18, 1956

Yield in hundred-weight per acre

<u>Variety</u>	<u>Days to Maturity</u>	<u>U.S.#1</u>	<u>Rough</u>	<u>Green</u>	<u>Total Size A</u>	<u>Size B</u>	<u>Specific Gravity of Tubers</u>	<u>No. hollow in 20 largest tubers</u>
Starks 961	110	178	8	6	192	17	1.067	0
Starks 1429	112	197	21	1	219	24	1.071	0
Irish Cobbler	114	211	47	7	265	30	1.072	7
White Cloud	115	197	21	3	221	19	1.074	3
Cherokee	122	163	44	5	212	21	1.075	0
DeSota (red)	122	238	50	3	291	42	1.068	11
Keswick	122	249	74	9	332	11	1.074	0
Red Pontiac	124	322	46	2	370	20	1.067	1
Russet Burbank	124	134	109	1	244	38	1.076	0
Chippewa	126	292	26	5	323	27	1.067	1
Pungo	126	252	24	8	284	24	1.072	3
Canso	126	218	6	8	232	22	1.077	0
Delus	126	185	65	4	254	20	1.074	0
Katahdin	128	290	15	12	317	16	1.069	5
Plymouth	128	221	59	10	290	12	1.072	2
Kennebec	130	242	33	22	297	25	1.068	4
Saco	130	200	188	50	438	18	1.073	0
Red LaSoda	130	256	93	12	361	15	1.064	0
Russet Rural	132	283	34	2	319	14	1.079	7
Sebago	136	254	26	9	289	23	1.067	0
Merrimac	144	181	18	5	204	11	1.080	2
Canoga	150	294	44	24	362	14	1.077	3

Least significant difference at 5%:58



Table 2.

## VARIETY TRIAL AT WOOSTER, Planted June 11, 1956

Yield in hundred-weight per acre

Variety	Percent vines dead Sept. 20*	U.S.#1	Rough	Green	Total Size A	Size B	Specific Gravity of Tubers	No. hollow in 20 lar- gest tubers
White Cloud	100	169	11	9	189	32	1.075	0
Waseca (red)	100	180	32	5	217	30	1.064	0
Starks 1429	100	164	12	1	177	40	1.070	0
Irish Cobbler	95	158	44	12	214	48	1.073	9
Early Gem	95	175	32	5	217	30	1.066	3
Starks 961	90	160	19	11	190	24	1.068	0
Chippewa	80	217	27	9	253	41	1.067	3
DeSota (red)	70	182	47	7	236	30	1.066	15
Canso	70	154	13	13	180	35	1.075	5
Pungo	60	227	33	10	270	27	1.076	16
Redkote	60	231	13	6	250	33	1.064	10
Keswick	50	174	31	11	216	28	1.073	0
Cherokee	40	131	58	5	194	48	1.072	0
Red Pontiac	40	265	36	4	305	23	1.063	10
Red LaSoda	40	272	51	4	327	17	1.067	1
Plymouth	30	172	50	21	243	23	1.077	2
Katahdin	30	240	19	11	270	25	1.072	7
Russet Burbank	20	114	84	2	200	85	1.083	0
White Rose	20	124	123	41	188	44	1.064	0
Kennebec	20	231	36	30	297	32	1.071	3
Red McClure	10	124	27	3	154	34	1.074	2
Russet Rural	10	225	17	2	244	30	1.080	10
Sebago	10	190	26	21	237	25	1.074	8
Delus	10	105	17	5	127	40	1.084	5
Merrimac	10	213	16	3	232	18	1.084	3
Saco	10	176	124	35	335	29	1.078	4
Canoga	0	217	29	33	279	23	1.081	3

Least significant difference at 5%: 74

\* Most of the green foliage was killed by frost September 21.

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Desota, Red Pontiac and Red LaSoda are popular high yielding varieties west of Lake Michigan, but all develop too many ill shapes in Ohio. They looked better in 1956 than previously. If one is seeking merely big yield, note that Red Pontiac planted May 18 produced at the rate of 370 bags per acre, -617 bushels of Size A.

Redkote, (Ben Picha, N.D.) because the sample arrived late, it was included only in the June planting. As in previous seasons, it was by far the most attractive red potato in the trials. On the other hand, it showed as much hollow-heart as either Russet Rural or Cobbler.

Plymouth, from North Carolina, Merrimac from New Hampshire, and Delus from Delaware, were rather distinctive and attractive in appearance, but did not yield well enough in these trials to be suggested for Ohio growers.

Canso and Keswick are Canadian varieties that seem of no special value in Ohio.

If a premium can be obtained for an Ohio-grown baking potato, Saco appears more promising than Russet Burbank (the Idaho baker). Saco, recently named by Maine and U.S. Dept. of Agriculture, is a large, round, irregular shaped potato with high starch content. It outyielded Russet Burbank by more than 130 bags per acre in both plantings this year. With either variety, almost half the crop was out of grade because of ill shapes. Consequently, neither variety seems likely to be grown in Ohio for regular trade channels; but for local sale, Saco offers a combination of enormous yield with superior baking quality, a combination which may move irregular shapes.

Canoga (Mehlenbacher, N. Y.), because of its very long growing season, needs to be planted early. In early planted trials it has been similar to Katahdin in both yield and quality. This year it reated above Katahdin in specific gravity.

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