

THE UNIVERSITY OF TENNESSEE
AGRICULTURAL EXPERIMENT STATION
Knoxville

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JERSEY REDSKIN: A FALL-CROP
IRISH POTATO

By
BROOKS D. DRAIN
Horticulturist



Samples of Jersey Redskin tubers

They run a little rough, with strongly marked eyes, and are decidedly red in color.

**THE UNIVERSITY OF TENNESSEE
AGRICULTURAL EXPERIMENT STATION
Knoxville**

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JERSEY REDSKIN: A FALL-CROP IRISH POTATO¹

By

BROOKS D. DRAIN

Horticulturist

INTRODUCTORY

Early in 1927 the Tennessee Agricultural Experiment Station secured some seed of the Jersey Redskin variety of irish potato, through Dr. Wm. Stuart, of the U. S. Department of Agriculture. This potato belongs to the Rose group and has been grown in Maryland, Delaware, and New Jersey for a number of years as a late crop. Additional seed has been secured from that section for later experimental work.

Jersey Redskin at once attracted attention in our late-crop trial plots because of the large, healthy foliage and superior yields, as shown in Figs. 1 and 2. A variety suitable for summer planting must be able to sprout and develop at high temperatures, extending over considerable periods, frequently accompanied by drouth. Large, healthy foliage must be developed under these conditions, and the plants must be capable of forming numerous and large tubers during the cool period preceding freezing temperatures in the autumn.

EXPERIMENTAL RECORDS

The Station's experimental records indicate that fall crops of vegetables are uncertain under Tennessee conditions and that success often depends on whether there is a good stand of plants. Most growers of late potatoes consider this the factor of greatest importance. Table 1 records the stand of plants for several seasons. Jersey Redskin, from both cold-storage and cellar-stored seed, has given uniformly good stands even in unfavorable seasons and on poor sites. Spaulding No. 4, from spring-crop Florida seed, has also sprouted well, but has been tested only two seasons, and grew slowly. Varieties of the McCormick type have at times given fairly good stands, but the yields were disappointing.

¹The records previous to September, 1931, were kept by J. A. McClintock and H. L. Fackler.

TABLE 1.—Stand of fall-crop potatoes, at Knoxville and substations.

Variety	1929 Knoxville Per cent	1929 Jackson Per cent	1931 Knoxville Per cent	1932 Clarksville Per cent	1932 Knoxville Per cent	1932 Jackson Per cent
Jersey Redskin.....	62	50	78	54	84	29
Other varieties.....	55	50	7	48	93	38
" "	.....	.....	.....	5	78	25
" "	.....	.....	.....	.....	66	.....

¹Needham, ²Hookout Mt., ³McCormick, ⁴Spaulding No. 4, ⁵Green Mt., ⁶Russet Rural, ⁷Triumph.



RUSSET RURAL JERSEY REDSKIN JERSEY REDSKIN SPAULDING No. 4

Fig. 1.—Varietal trial of fall-crop potatoes at the Knoxville Station, 1932

LEAF-AREA MEASUREMENTS

Casual observers remarked that Jersey Redskin made the best stand, even when counts showed that other varieties growing beside it had as many as 9 per cent more hills up. This was due to the large, stocky plants of Jersey Redskin, with large leaves, as shown in Fig. 2. Leaf-area measurements were made of each variety 45 days after planting. Fig. 3 indicates graphically that Jersey Redskin averaged 96.2 square inches of leaf surface per hill that grew; Russet Rural less than half as much, 44.8 square inches; while Spaulding No. 4 had a splendid stand of plants, but developed slowly, averaging only 18.1 square inches at that date. Observations indicate that this

last variety increased its leaf area toward the end of the season, but never equalled that of Jersey Redskin.

YIELD OF POTATOES

It has been aptly stated that the "Upper South" needs a fall-crop variety of white potato that will give a good yield per acre over a series of years. Jersey Redskin, as shown in tables 2 and 3, has come the nearest to meeting that requirement of all varieties tested at this Station for many years, frequently yielding over twice as much as other varieties planted by it for comparison. The yield has varied greatly, for these plantings have been made on both poor and fertile soils, on moist and very dry sites, and in favorable as well as unfavorable seasons; and Jersey Redskin has always given higher yields than other varieties with which it has been compared.



RUSSET RURAL JERSEY REDSKIN GREEN MOUNTAIN

Fig. 2—Representative plants one month after planting
Note the thick, stocky growth of the Jersey Redskin variety.

TABLE 2—*Yields of late-crop potatoes, at Knoxville Station.*

Variety	Average yields per acre of all plots				
	1927	1928	1929	1931	1932
Jersey Redskin.....	Bushels 149.7	Bushels 172.4	Bushels 105.6	Bushels 47.8	Bushels 209.8
A McCormick-type variety	86.9	56.1	5.3	1.0	¹ 72.6
Spaulding No. 4.....	.....	.....	31.3	.....	119.5
McCarty.....	.....	.....	47.0	1.0	² 114.5

¹Russet Rural, ²Green Mountain.TABLE 3—*Yields of late-crop potatoes, at substations.*

Variety	Average yields per acre of all plots			
	West Tennessee Station Jackson			Mericourt Station Clarksville
	1929	1930	1932	1932
Jersey Redskin.....	Bushels 360.0	Bushels 126.0	Bushels 112.6	Bushels 221.6
Spaulding No. 4.....	¹ 160.0	.....	46.3	101.9
Triumph.....	.....	.....	71.7	² 10.2

¹McCormick, ²Green Mountain.

GRADE OF POTATOES PRODUCED

Each variety of the 1932 crop was separated into three grades; viz., culls, No. 2, and No. 1, the last including "Fancy" according to the United States standard grades. Fig. 4 shows the results per 1/40 acre and indicates graphically both quality and quantity productions of each variety. Both Russet Rural and Jersey Redskin averaged over 94 per cent marketable, while Green Mountain and Spaulding No. 4 averaged only 91.5 per cent.

Tubers of Jersey Redskin are long and slightly rough, but graded out well.

HOME-GROWN SEED VERSUS SHIPPED-IN CERTIFIED SEED

No attempt was made to rogue out diseased plants, but a comparison was made between seed secured from the Station plantings and certified seed shipped in from the Maryland-New Jersey section. Table 4 gives two seasons' records. The results indicate that local seed if carefully selected may be as good as any obtainable at this time.

TABLE 4—*Sources of Jersey Redskin seed, at Knoxville Station.*

Kind of seed	1931 yield per acre	1932 yield per acre			
		U. S. No. 1, including U. S. Fancy	U. S. No. 2	Culls	Total
	Bushels	Bushels	Bushels	Bushels	Bushels
Certified—shipped in	54.1	159.7	31.8	13.6	205.1
Home-grown—not certified.....	41.9	173.5	29.2	10.3	213.0

TUBER FORMATION

In a study of the development of late-crop potatoes during the 1932 season, notes were taken from time to time on the extent of tuber formation. Representative hills were selected and dug from the trimmings of the plots, the tubers $\frac{1}{8}$ inch or over in diameter were counted, and each one was measured at the longest cross-diameter. Table 5 records these data up to October 28, 1932. The weights of tubers per hill at digging time, November 22, were 1.02, .60, .53 and .45 pounds, respectively. The vines remained in good condition until November 13, when they were killed by a freeze (30°F.). Russet Rural developed tubers early, but gave a low yield at digging time. Jersey Redskin grew steadily and formed tubers until the tops were killed. The diameter measurements given in table 5, and the yield by grades at digging time, shown in Fig. 4, indicate that the tubers increase in size during the cool weather before the vines freeze.

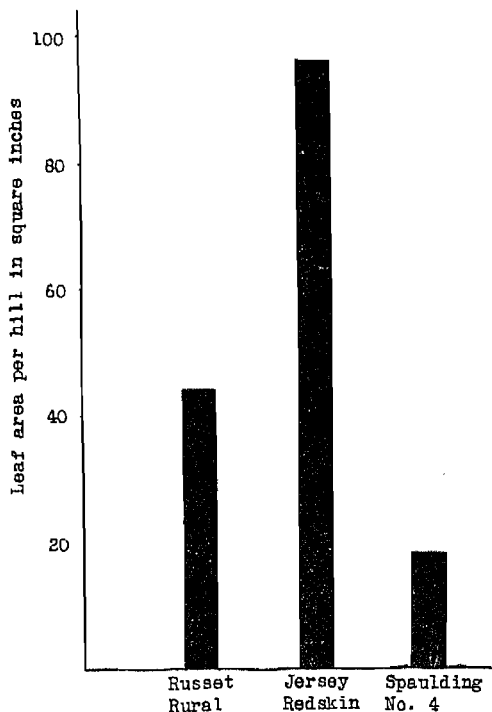


Fig. 3—Leaf area per hill, measured 45 days after planting, season of 1932, at Knoxville

Note that Russet Rural had less than one-half and Spaulding No. 4 less than one-fifth the leaf area of Jersey Redskin.

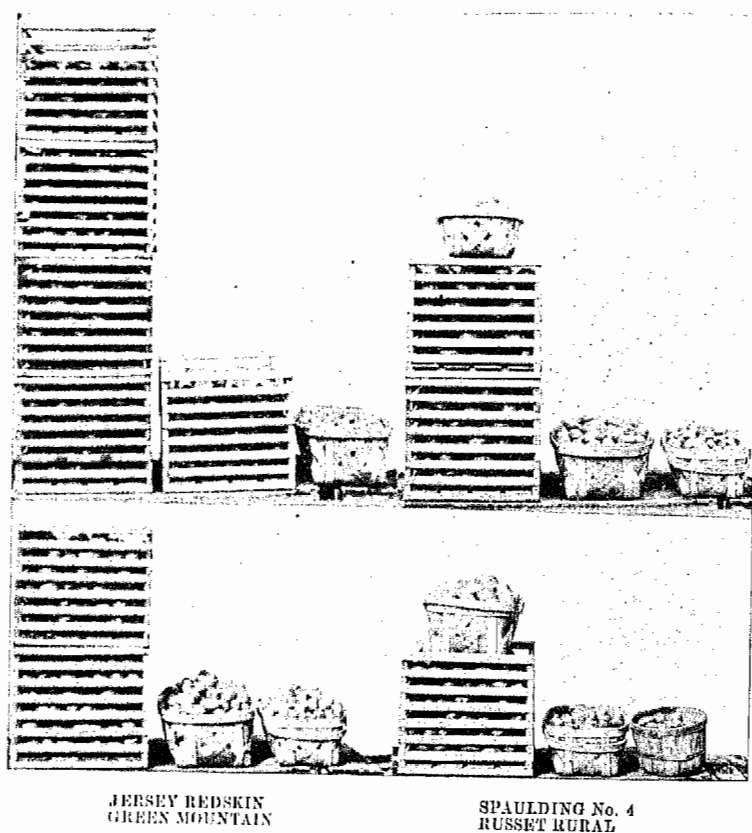


Fig. 4—Quality and quantity of tubers from 1/40-acre random samples, season of 1932, at Knoxville

The United States standard grades were used, with Fancy and No. 1, in each case, combined on the left, No. 2 in the center, and culls on the right.

DISEASE RESISTANCE

The writer has not made a study of disease susceptibility of the Jersey Redskin variety, but the tubers have shown more or less scab (*Actinomyces scabies* (Thaxter) Gussow), unless treated seed was planted on disease-free soil. Jehle and Sanders² report that vines of the Jersey Redskin variety are seldom injured by late blight (*Phytophthora infestans* (Mont.) De Bary). They also note a few cases of the mosaic diseases, leaf roll, and streak. In general, this variety has been comparatively free from serious diseases during the six years it has been grown at the Tennessee Station.

TABLE 5—Time and extent of tuber formation, at Knoxville, 1932.

Variety	Largest cross-diameter				
	September 3		September 13		
	Average number per hill		Average number per hill		
	¾ to ½ inch	Over ½ inch	¾ to ½ inch	Over ½ inch, less than 1½ inch	1½ inch and over
Jersey Redskin.....	None	None	3	None	None
Green Mountain.....	"	"	1 ½	"	"
Spaulding No. 4.....	"	"	None	"	"
Russet Rural.....	"	"	10 ½	1	None
October 11			October 23		
Jersey Redskin.....	8 ½	5 ½	7 ¾	3 ¾	8 ½
Green Mountain.....	3 ½	5 ¼	3 ½	3 ¾	4 ¼
Spaulding No. 4.....	½	2 ¼	1 ¾	1 ½	2
Russet Rural.....	3 ½	2 ½	4 ¼	¼	9

ORIGIN

Stuart³ is of the opinion that Jersey Redskin is probably Crimson Beauty renamed. The latter variety was listed in 1888 by F. Ford and Sons. The present name is supposed to have originated through its being grown rather generally in southern New Jersey as a late variety. The following is a brief list of synonyms: Southern Wonder Red Skin³, The Best Potato, California Red, Victor Rose, Canada Red, and Old Early Rose.

DESCRIPTION

The tubers are somewhat rough, oblong, flattened, and tapering gradually toward each end, as shown in the illustration on the title page. Size usually medium and fairly uniform. Eyes usually shallow

²Jehle, R. A., and Sanders, P. D. Potato Production at Lower Costs by Disease and Insect Control. Univ. of Md. Ext. Ser. Bul. No. 68, 1931.

³A letter of December 6, 1932, from Wm. Stuart.

but strongly marked. Skin medium in thickness and tough, of a distinctly pink or reddish color. Flesh white or nearly so, solid, brittle, and rarely hollow. Sprout medium in length and thickness; base very slightly enlarged, usually clear or tinted with rose-lilac leaf scales; and tips creamy white or tinged with rose-lilac.

SUMMARY

Full-crop white, or irish, potatoes are a home or local-market crop in Tennessee, and the Station suggests a trial of the Jersey Redskin for this crop, because—

1. This variety has sprouted well when planted in late June and early July, which appear to be favorable dates for planting.

2. It has given a large, vigorous, leafy growth during periods of hot, dry weather, when other varieties have not.

3. In both yields and grade of tubers, the Jersey Redskin, for six consecutive seasons, has equalled or surpassed other varieties with which it has been compared.

4. Vines of the Jersey Redskin variety are seldom injured by late blight.