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Scientific Breeding Gives New Jersey the Rutgers Tomato

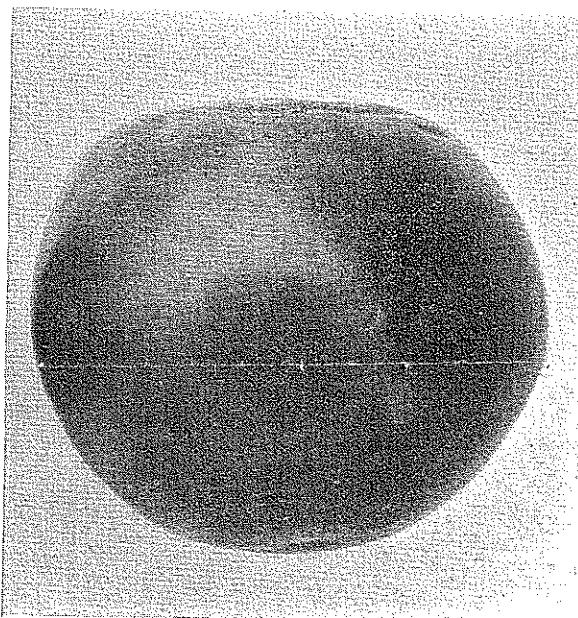
L. G. Schermerhorn

The tomato for market and manufacture is one of New Jersey's most important commercial vegetable crops. In 1933 New Jersey produced 9,000 acres of tomatoes for market and 27,000 acres for manufacture, making a total of 36,000 acres, which was 22.5 per cent of the total vegetable acreage in the state with an estimated value of \$1,986,000.

The most popular varieties during the past ten years have been the Bonny Best, J. T. D., Marglobe, Greater Baltimore and Pritchard. Most of these varieties have some undesirable characteristic either from the standpoint of the market or canner. Some of these are insufficient foliage, lack of solidity and inside color in the fruits and tardy ripening in the fall.

The certified seed acreages from 1925 to 1934 indicate a definite trend toward the importance of the use of better varieties. The acreage Bonny Best certified in 1925 was 344 and in 1934 only 28; the acreage of Greater Baltimore declined from 238 in 1925 to 91 in 1934; the acreage of J. T. D. was 110 in 1927 and 61 in 1932 and 155 in 1934. Pritchard was represented by 99 acres in 1933 and 182 acres in 1934, while Marglobe increased from 431 acres in 1927 to 2,005 acres in 1934 and now represents about 81.4 per cent of the total certified tomato seed acreage in New Jersey.

The breeding of better varieties and the selection of improved strains of existing varieties has had an important place in the research program of the Vegetable Department of the New Jersey Agricultural Experiment Station since 1926. The objects in mind at the time the to-



A Typical Fruit of the Rutgers Tomato

tomato breeding work was started were to produce (1) a smoother, early tomato to take the place of Earliana and (2) a second early or late variety with an inside color that would meet the requirements of the U. S. No. 1 grade for canhouse tomatoes. When the manufacture of tomato juice began in New Jersey it was necessary to find a variety that would have a pleasing flavor in addition to a sparkling red color.

The Rutgers tomato was developed by selections from a cross made in 1928 between the Marglobe and J. T. D. varieties. In 1929 about 75 of the best individual plants were selected for earliness, vigor of foliage, freedom of the fruit from cracks and disease, smoothness, productiveness and uniformity of type. During the next two years these selections were further reduced by field tests. In 1933 about 25 different individual plant selections were sent out for trial to a number of New Jersey tomato growers. In 1934 the four most promising selections, Nos. 444, 490, 497 and 500, were sent out for more extensive trials to 75 farms in New Jersey scattered from Montague in Sussex County to Rio Grande in Cape May County. The results indicated that while these four

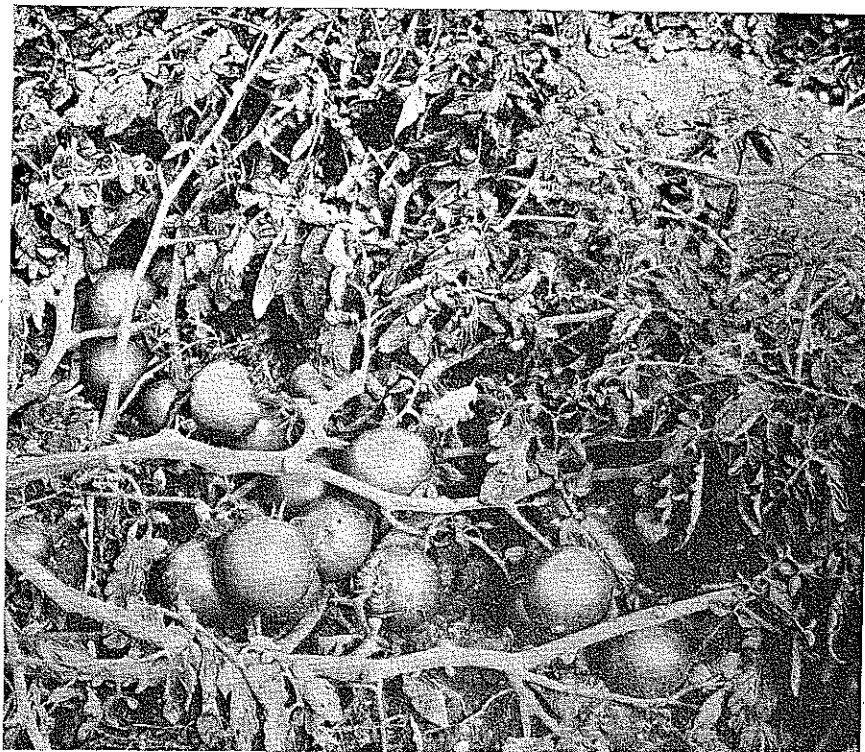
selections are practically identical that 500 was slightly superior as a rule. This new tomato was consistent in the production of a heavy crop of fruit, uniform in shape, bright red inside color and smoothness of fruit. These facts appeared to indicate that the variety was now ready for general distribution and on September 19, 1934, it was named "Rutgers."

The principal characteristics of the Rutgers tomato follow in detail. Seedsmen and growers are urged to select seed on the basis of this standard.

The Rutgers tomato produces a large plant with thick stems and an abundance of vigorous foliage to protect the fruits from sunscald. Owing to the natural ability of this variety to develop a strongly vegeta-

(Over)

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The Rutgers Tomato Develops a Large Plant with Adequate Foliage

The Rutgers Tomato

tive plant, growers should not apply as much nitrogen early in the season as is necessary to produce sufficient foliage on the Pritchard variety. If fertilized in the same manner as Pritchard the vines may be too rank and the fruit will be late in setting and developing.

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The fruits are medium to large, similar in shape to Marglobe, except that they are more flattened at the stem end, with a very small styler scar at the blossom end. The average size of the fruits is 2.7 inches by 2.3 inches with an average weight of 5.8 ounces.

The fruit has thick outer and inner walls, with very small seed cavi-

ties, producing few seeds (about .5 lbs. to the ton of fruit). The flesh is firm and red. The ripening begins at the center so that when the fruits are red on the outside they are well colored throughout. This is an important factor when picking tomatoes for canning and juice manufacture. The flavor of the fruit is very pleasing and makes a juice with a medium high percentage of sugar with a low acidity which is just intermediate between the sweet Marglobe and the tart J. T. D.

It is a second early variety. The first pickings from early set plants near Swedesboro, N. J., in 1934 were made from July 3-11. In Burlington Co. plants set about May 20th gave the first picking on July 17 and plants at New Brunswick on Aug. 7.

It is adapted for canning, market and home garden and is particularly suited for the manufacture of a fine flavored, highly colored juice.