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THE GLOVEL TOMATO

By William S. Porte, *assistant pathologist, Division of Fruit and Vegetable Crops and Diseases, Bureau of Plant Industry;* H. S. Wolfe, *horticulturist,* and W. M Fifield, *assistant horticulturist, Florida Agricultural Experiment Station*

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ORIGIN AND SELECTION

The new scarlet-red (commonly called "pink") local-market and shipping variety of tomato named Glovel was produced cooperatively by the United States Department of Agriculture and the Florida Agricultural Experiment Station. It was developed from a cross made in the Department greenhouses at Washington, D. C., between Globe and Marvel, a very wilt-resistant variety developed by selection from the French variety, Merveille des Marches. The new variety therefore has the same parentage as the scarlet (called "red") variety Marglobe but is not a selection from that variety. Marvel was chosen as one of the parents because of its vigorous vine, its abundant and continuous fruit setting habit, its long bearing period, and its high degree of resistance to fusarium wilt and to the nailhead rust of the fruit. Although Marvel produces fruits that are smooth, uniformly red, and well flavored, they are a little small, somewhat flat, rather late in maturity, and not sufficiently solid for a desirable shipping variety. Globe was selected as the other parent because it produces large thick-walled, scarlet-red, globular fruits, although it is very susceptible to nailhead rust, which in some years causes very heavy damage in the winter tomato-shipping sections of the South.

The primary purpose in developing the Glovel tomato was to produce a scarlet-red (pink) fruited variety having the disease-resistant characteristics of Marvel combined with the fruit qualities of Globe for markets and consumers that prefer a pink-fruited tomato variety instead of a red one like Marglobe.

CHARACTERIZATION

The Glovel variety of tomato produces medium large vines (fig. 1) of vigorous growth, with moderately open growth habit somewhat similar to Globe. However, the internodes are a little shorter, making the vine appear somewhat more compact, particularly before first

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harvest. The basal portions of the lower branches are decumbent with terminal portions upright. Although during early development the fruits are amply shaded, the mature vine is distinctly more open than that of Marglobe, partially exposing the mature fruits. This open type of growth is favored by many growers because the mature-green fruits are readily seen by the pickers, and not only is time saved in picking but also fewer fruits are overlooked, and they are more likely to be uniformly picked at the right stage of maturity.

The fruit has the same general appearance as Globe, approaching an apparently globular shape and ripening to a rich scarlet-red (pink) color (fig. 2). In the green-wrap stage, the color is a little darker green than that of Globe, but somewhat lighter in shade than that of Marglobe. The fruits average medium in size with thick outer and

FIGURE 1.—Plant of Glovel tomato just before first harvest.

inner walls which give them considerable firmness, an important quality for a local market and shipping tomato. The color of the flesh is a uniform scarlet red when matured and ripened under normal seasonal conditions. Glovel fruits have been notably free from growth cracks under the test conditions observed thus far.

The Glovel tomato is about a week earlier than Marglobe and usually matures the bulk of its crop within a shorter harvest period, although under good cultural conditions in the North it will bear until killed by frost.

TECHNICAL DESCRIPTION

SEASON

Medium early; generally 65 to 75 days from transplanting medium-sized plants that have not reached flowering stage to first commercial harvest. Peak of harvest usually 90 to 100 days after transplanting.

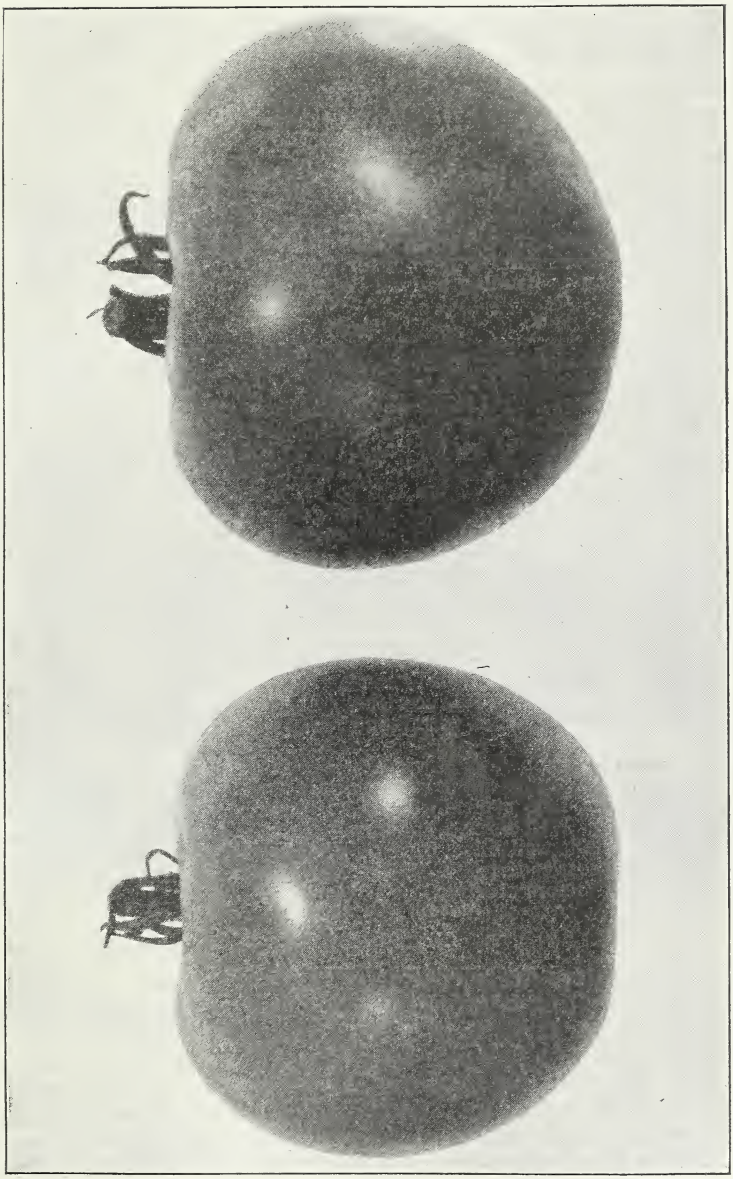

FIGURE 2.—Typical fruit of Glovel tomato (natural size).

PLANT

Size medium large; at time first fruit ripens, plant typically 60 cm (24 inches) tall, with maximum spread of 160 to 180 cm (5¼ to 6 feet), or three times the height. When planted closely in rows in the South, height 68 cm and spread 138 cm, or only twice the height.

Habit semidecumbent; basal portions of the lower branches decumbent with terminal portions upright; growth vigorous; foliage moderately dense; fruit usually well shaded early in season and partially exposed as first fruits approach maturity.

Branches many, typically 9 to 11; medium long, 90 to 110 cm (3 to 3½ feet), internodes medium long. First main branches thick, 1.0 to 1.4 cm (⅜ to ½ inch) in diameter at base. Main stem medium, 1.9 to 2.5 cm (¾ to 1 inch) in diameter at base.

Leaves large, long, and broad; petioles rather long, 5 to 6 cm (2 inches); blades 25 to 30 cm (10 to 12 inches) long, and 23 to 27 cm (9 to 10⅝ inches) wide. Leaflets large, medium cut, upper surface cypress green (medium dark yellow-green, 23 L 6)[1], lower surface asphodal green (dark yellow green, 21 J 5).

Flowers medium in number per cluster, typically 5 or 6, rarely fasciated; style medium short. not protruding beyond the anthers. Normally sets 3 to 4 fruits per cluster.

FRUIT

Exterior.—Sepals medium in number, typically 7; long and large, especially under conditions conducive to heavy vegetative growth.

Immature fruits spherical in shape (fig. 3), pale green in color, except darker green area about the stem end which persists until fruit begins to turn color.

Mature fruits medium large, typically 170 to 200 g (6 to 7 ounces) in weight, apparently spherical in shape, 7.0 to 7.5 cm (2¾ to 3 inches) at greater equatorial diameter and 6.7 to 7.0 cm (2⅝ to 2¾ inches) at lesser diameter; depth 6.0 to 6.5 cm (2⅜ to 2½ inches). When grown under drought conditions the polar diameter tends to be longer in proportion to the equatorial diameter; when vine growth is excessively vigorous so that oversized fruits are produced, the equatorial diameter tends to be longer in proportion to the polar diameter.

Cavity medium shallow, 0.3 to 0.4 cm (⅛ to 3/16 inch) deep, sides of cavity very gradually sloping; usually very shallow, slight creases radiating from the stem. Corky scar tissue about stem usually not prominent, majority of fruits without basins, when present, small and shallow, stylar ends of fruit usually smooth and well rounded, stylar scar usually small.

External color, a uniform pale scarlet red at first-ripe stage, developing a deep brilliant scarlet red to English vermilion (1 L 10 to 3 L 10) when fully ripe. Skin colorless.

Interior.—Outer walls thick, typically about 0.6 cm (¼ inch), but varying from 0.5 to 0.8 cm; inner walls very thick, 0.7 to 0.9 cm. Cells visible upon cutting at equator, few, typically 5 to 7, somewhat irregular in shape, usually radially arranged. Well defined, solid, central fleshy mass, large fleshy placentae. Cells medium small, well filled with pulp; seeds relatively few, creamy white. Flesh firm, color scarlet red (1 L 10–11); flavor sweet and mildly subacid when properly matured before picking.

ADAPTABILITY

The cooperative tests conducted during the past 4 years with special reference to conditions in the extensive winter tomato-growing area of the lower east coast of Florida indicate that Glovel is well adapted for use as a shipping tomato especially in those areas where the soil is infested with fusarium wilt or in those sections subject to outbreaks of nailhead rust. It should also fill a useful place in districts specializing in the marketing of fresh ripe tomatoes, particularly where the market shows a preference for a pink (scarlet-red) fruited variety.

Notes made by R. C. Wright, physiologist, Division of Fruit and Vegetable Crops and Diseases, Bureau of Plant Industry, on a test

[1] References are to plate, column, and row: e. g. 23 L 6 refers to the following: MAERZ, A., and PAUL, M. R., A DICTIONARY OF COLOR. Pl. 23, column 2, row 6. New York. 1930.

shipment of Glovel, Marglobe, and Globe, shipped by express from Homestead, Fla., to Washington, D. C., in commercially packed lugs, indicate that Glovel will stand shipping very well. The average resistance of single firm ripe Glovel fruits to crushing stresses was 13.4 pounds. This is slightly higher, though not significantly so, than the averages obtained with firm ripe fruits of Marglobe and Globe, two of the most extensively shipped varieties. Glovel and Globe developed color in storage distinctly faster than Marglobe.

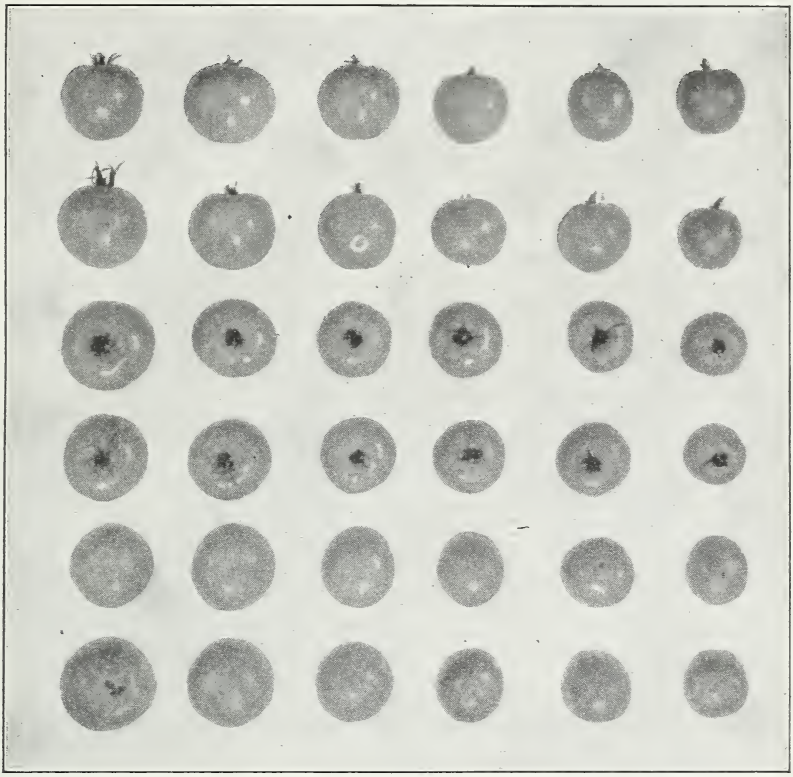

FIGURE 3.—Typical field-run Glovel fruits, showing lateral, stem-end, and blossom-end views (one-sixth natural size).

At the end of 1 week's storage at 70° F., 72 percent of the Glovel fruits, 82 percent of the Globe fruits, and 49 percent of the Marglobe fruits were firm ripe.

SOURCES OF SEED

The United States Department of Agriculture and the Florida Agricultural Experiment Station have no seed of this or other varieties for general distribution. A large number of commercial seed growers and seed firms are being supplied with a limited quantity of Glovel seed for trial and for purposes of seed increase. The wide distribution of stock seed in this manner should enable the seed trade to promptly supply all demands for seed of this new variety.

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