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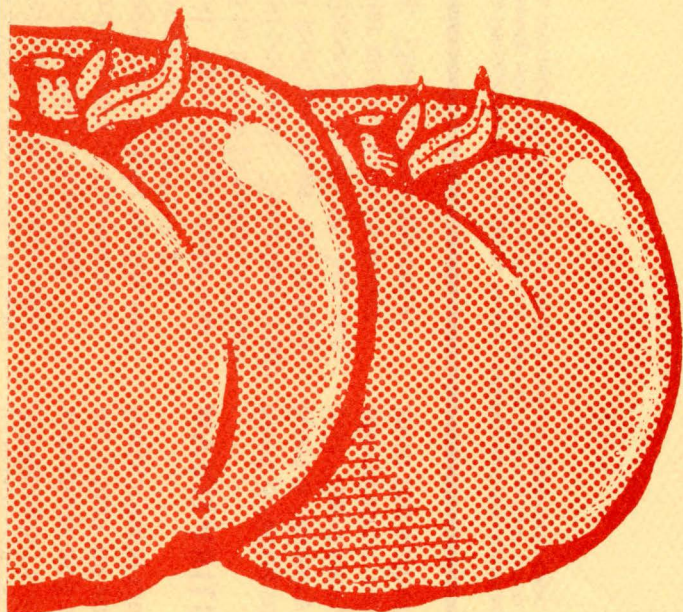
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A NEW HYBRID TOMATO

FROM THE SOUTH DAKOTA
AGRICULTURAL EXPERIMENT STATION

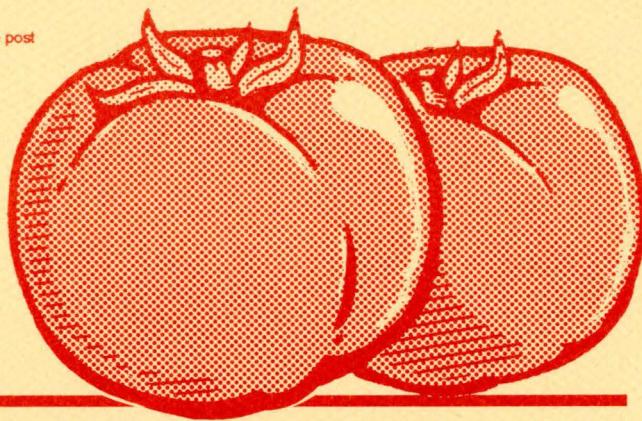


Agricultural Experiment Station
South Dakota State University
U.S. Department of Agriculture



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'SUPER CHIEF' TOMATO HYBRID



Paul Prashar, professor, and Myron Enevoldsen, research associate, Department of Horticulture, Forestry, Landscape and Parks, SDSU

Agricultural Experiment Station • South Dakota State University • U.S. Department of Agriculture

'Super Chief' is the F₁ hybrid resulting from a cross of SD 82-106 x SD 85-048-1. Both parents were developed in the South Dakota fresh-market tomato breeding program. The hybrid was evaluated as 87-13.

DESCRIPTION

The new hybrid is vine-type determinate. Mature plants are 31 to 36 inches (80-90 cm) in diameter. Plant foliage is medium-green. Good foliage canopy prevents fruit sunburn.

The fruit is a flattened-globe to globe shape with a smooth blossom scar and good resistance to cracking. Non-ripe fruits are a uniform, very light green, almost white, and have a glossy, firm finish. External fruit color develops to a uniform bright red. Internal characteristics include many locules, clear jelly, "meatiness," and thick septa.

The new tomato produced a higher total fruit yield than most hybrids used in the midwest during 5 years of testing. Early yield is consistently larger and fruit size is excellent (over 2.75 inches [7 cm] in diameter) in

replicated trials. The yield of marketable fruit was higher than most of the hybrids with which it was compared.

The tomato has demonstrated good resistance to radial and concentric cracking. It has a very small blossom-end scar, and the stem-end scar is shallow and medium in size. The plant is resistant to race 1 of *Verticillium albo-atrum*, Reinke and Berthod, and race 1 of *Fusarium oxysporum* f. sp. *Lycopersici* (Saccardo), Snyder and Hansen.

The plant produces fruit of excellent quality. Mature tomatoes are large, mild in flavor, firm, and crack resistant, and fruits ripen to a uniform bright red color. Over 5 years of testing, fruit weight was 7.5-8.5 oz (210-240 grams) early in the season and 5.8-6.3 oz (165-178 grams) toward the end of the season. Average fruit weight for the season was 6.3-7.6 oz (178-215 grams). The average yield was 23.75 to 25.5 lb (10.8 to 11.6 kilograms) per plant. The plants had 62-71 fruit per plant. Fruit look like those of SD 82-106, but are meatier and contain far fewer seeds. The red fruit has excel-

lent flavor and texture. Processed fruit has retained excellent bright red color in the jar. The hybrid is rated as high quality for fresh and processed use.

The cultivar matures early, with the first picking in east-central South Dakota about 62-68 days after the plants are transplanted.

The hybrid results from a cross between SD 82-106 as a female parent and SD 85-048-1 as a male parent. The first cross was made in the fall of 1982 in the greenhouse and tested the following years. Parent line SD 82-106 is the result of several matings designed to combine resistance to verticillium wilt and fusarium wilt and to incorporate the ability to set fruit with the fluctuating temperatures of this region. Line SD 85-048-1 is the result of several matings and selection for large, early fruit set and other desirable horticultural characteristics.

AVAILABILITY

Seed is being sold by Gurney Seed & Nursery Co., Yankton, S.D. Seed samples for testing or observation can be obtained from the authors.



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