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COLLEGE OF AGRICULTURE
AGRICULTURAL EXPERIMENT STATION
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Origin and Release of Tomato Line 3 1-St-29 and Hybrid Show-Me

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COLUMBIA, MISSOURI



SHOW-ME

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The Missouri Agricultural Experiment Station announces the simultaneous release of tomato breeding line 31-St-29 and hybrid SHOW-ME. SHOW-ME, a very firm, red-fruited hybrid for fresh market and home gardens, utilizes 31-St-29 as a parent line.

Line 31-St-29

Description

Line 31-St-29 has midseason maturity and good horticultural type. The fruits are red, above 6 oz. average size, globe shaped, uniform ripening (apple green) and show high tolerance to both radial and concentric cracking. Plants of line 31-St-29 are indeterminate with moderate foliage density and possess field immunity to *Fusarium oxysporium f. Lycopersici* (Sacc.) Snyder and Hansen.

Pedigree

Line 31-St-29 is an F₆ selection of VFN 8 (California) x line 89-3-60-1 (Missouri). Line 89-3-60-1 was derived from Glamour x NY 55-542 (Cornell), both of which contributed resistance to radial and concentric fruit cracking. VFN 8 contributed field immunity to *Fusarium*.

Use

Line 31-St-29 is not intended for use as a variety but as a genetic stock in pedigree breeding programs and as a parent in the production of F₁ hybrids. Numerous hybrid combinations have given superior types indicating good combining ability.

SHOW-ME

Description

Hybrid Show-Me is currently the best of several firm-fleshed market-type hybrids under consideration by this station. The dark red fruits are deep blocky shape, very firm, average about seven oz. and possess good tolerance to radial and concentric cracking and harvest cracking (bursting). Superior fruit firmness of Show-Me was contributed by Florida 1011, a dual purpose, market-processing tomato genetic stock. Fruit of Show-Me have shown the following fruit quality attributes: Brix 5.8%, pH 4.25, titratable acidity 0.447% citric acid equivalent. Maturity is about 70 days.

Plants of Show-Me are indeterminate with moderate to heavy foliage density and, like that of both parents, possess field immunity to *Fusarium*. SHOW-ME also has shown tolerance to early blight (*Alternaria*) and grey leafspot (*Stemphylium*), which presumably came from Florida 1011.

Pedigree

Hybrid Show-Me is an F₁ of Florida 1011 x Mo. 31-St-29.

Performance

The superior dependable performance of Show-Me has been established with six years of testing at the Horticultural Research Facility, New Franklin, Mo., three years of evaluation in the Southern Tomato Exchange Program (as STEP 631) and in numerous commercial and home gardens.

Table 1. Comparative Yielding Performance of Tomato Cultivars. Horticultural Research Facility, New Franklin, Mo.

Cultivar	Yield, Tons/Acre	
	1976	1977
Homestead 24	16.1	28.1
Floradel	17.2	—
Walter	16.2	24.6
SHOW-ME	21.5	33.3

Availability of Seed

A limited amount of foundation seed of 31-St-29 is available upon written request to the Department of Horticulture, University of Missouri, Columbia, Mo. 65201. Seed of SHOW-ME should be available from commercial seed sources in 1978.