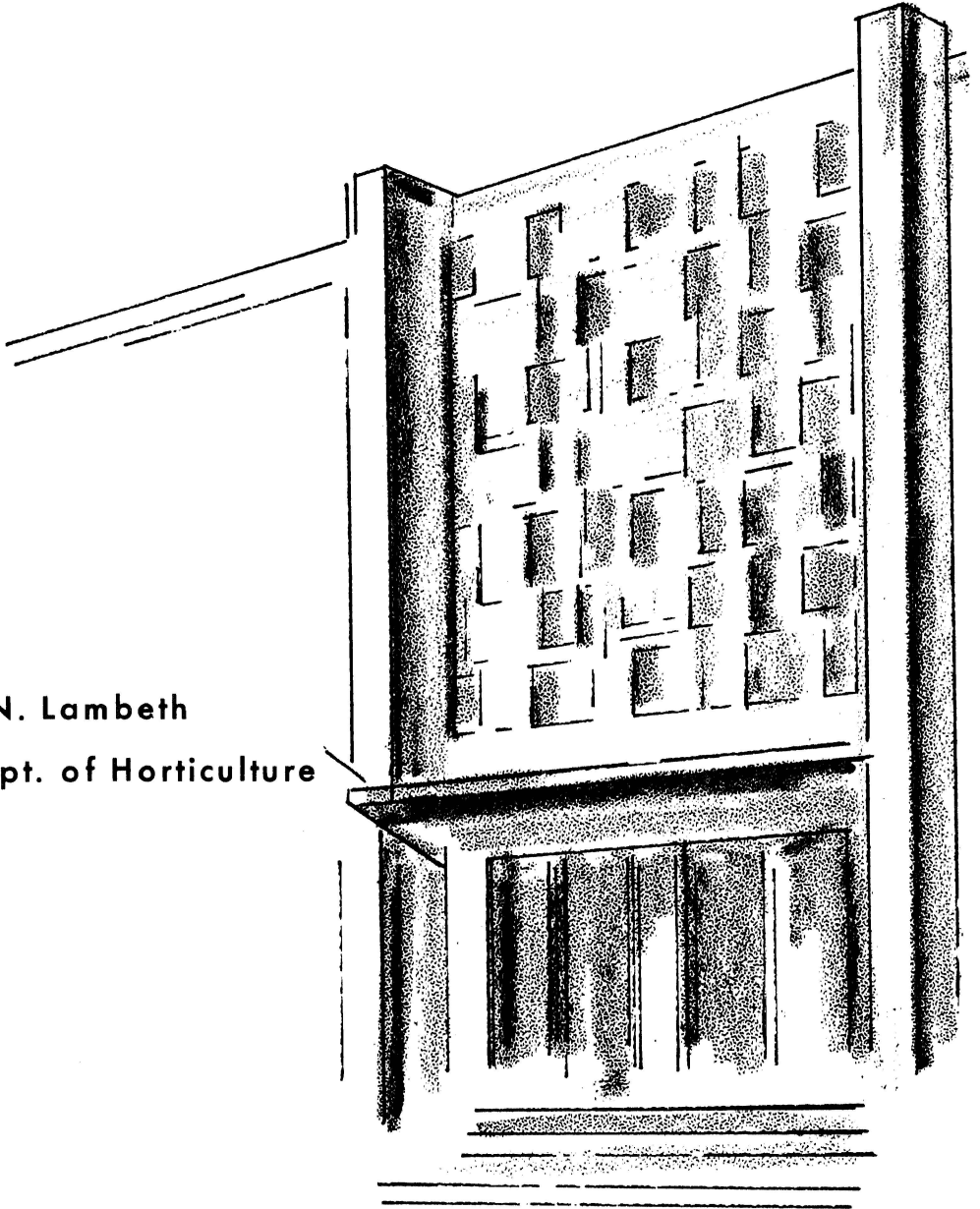


Release of Greenhouse Tomato Line 399

by
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The Missouri Agricultural Experiment Station announces the release of tomato breeding line 399 as a source of germplasm, not as a finished variety. Promising hybrid combinations for forcing in greenhouses and plastic structure are resulting from hybridization of this line with other inbred lines from the Missouri, Purdue, and Ohio Agricultural Experiment Stations.

Description

Line 399 is of good horticultural type. Fruits are pink, 5-6 oz. in size, smooth, flattened globe in shape. They have five or more loculi and a tough skin.

Line 399 shows tolerance to harvest cracking (burst), a common deficiency of pink-fruited varieties. It carries the Bay State Forcing resistance to common races of *Cladosporium fulvum* and low level resistance to *Fusarium oxysporium* f. *Lycopersici* (Sacc.) Snyder and Hansen.

Pedigree

Line 399 originated from a cross of Tucker's Forcing and Crack-proof Pink. Following the original cross, individual plant selections were made of plants having pink fruits showing tolerance to harvest cracking and resistance to *Cladosporium fulvum*. Breeding line 399 is the F₈ generation of a selection made from the original cross. Other designations of the line include IV-313-3 p. 10, II-358-2 p. 1 and 379.

Performance in hybrid combinations.

Most hybrid combinations of 399 demonstrate significant heterosis as shown by higher yields and earlier maturity.

To date, of several hybrid combinations involving line 399, hybrid 520 has been particularly promising. Data in Table 1 compare the performance of hybrid 520 with its P42 parent and two well established cultivars. The P42 parent (Purdue AES) contributes larger fruit size and resistance to additional races of leaf mold.

Availability of Seed

A limited amount of seed is available on a pro rata basis to breeders upon request from the Department of Horticulture, University of Missouri, Columbia.

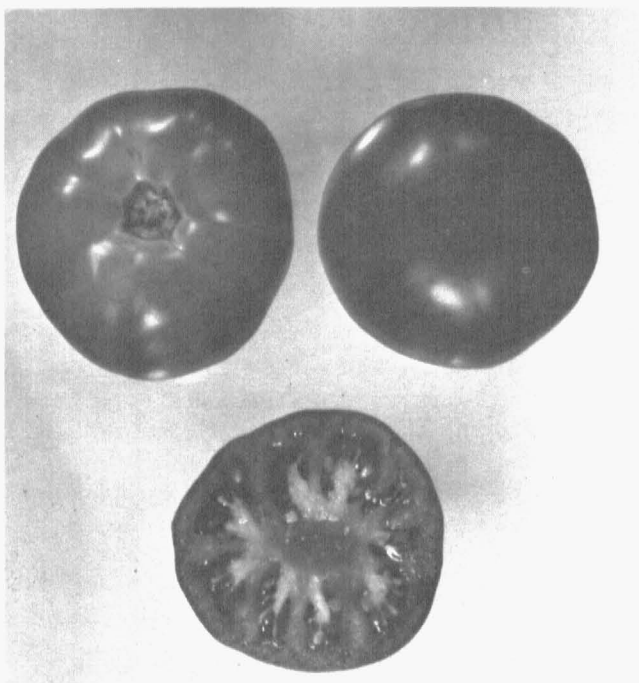


TABLE 1. SEASONAL PERFORMANCE OF HYBRID 520 (399 X P42)

Test Year	Marketable Yield (Lbs./plant)				Avg. Fruit Size (Oz./Fruit)			
	Hy 520	Tuck- cross 0	Ohio 7	P42	Hy 520	Tuck- cross 0	Ohio 7	P42
1964	12.7	10.9	8.2	8.7	6.4	4.5	8.4	8.5
1965	10.7	9.8	5.1	6.9	6.8	5.7	7.8	7.2
1966	14.3	14.5	11.4	9.5	7.4	5.3	7.3	8.0