

# 'Vermillion' Tomato<sup>1</sup>

E. C. Tigchelaar<sup>2</sup>, M. L. Tomes<sup>3</sup>, and P. E. Nelson<sup>4</sup>  
*Purdue University, West Lafayette, Indiana*

## Availability

Trial samples of seed will be available to interested experiment stations upon request. It will be available in quantity from commercial sources<sup>5</sup> for the 1974 production season.

'Vermillion' is a productive, determinate, crimson tomato (*Lycopersicon esculentum* Mill.) with excellent fruit color. Its name, which gives attention to its outstanding fruit color, honors a county in Indiana.

## Origin

'Vermillion' is an F<sub>6</sub> selection from a cross involving 'Heinz 1350' and a determinate, crimson line of complex parentage (Fig. 1) developed at Purdue University by breakage of the very close repulsion phase linkage between genes for indeterminate habit of growth (*sp*<sup>+</sup>) and crimson (*og*<sup>c</sup>). These genes are less than 1 map unit apart on chromosome 6 (1). Selection from 1967 through 1971 was made in an attempt to develop a high color, main-season, cultivar suitable for whole pack. 'Vermillion' was tested as PX711.

## Description

'Vermillion' is a main-season, determinate (*sp*), crimson cultivar (*og*<sup>c</sup>), with good foliage cover and concentrated fruit set with resistance to race 1 of *Fusarium oxysporum* f. *lycopersici* (Saccardo) and *Verticillium albo-atrum* (Reinke and Berthold). Crack resistance and fruit firmness are comparable to 'Heinz 1350' making it poorly suited to machine harvest and bulk handling. 'Vermillion' possesses deep globe, uniform ripening fruits averaging 105 g in size with moderate stem scar and core. Internal and external color are significantly superior to cultivars in current use. Early and total yield and other raw product quality components were comparable to 'Heinz 1350' (Table 1).

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<sup>2</sup>Assistant Professor, Department of Horticulture.

<sup>3</sup>Professor, Department of Botany and Plant Pathology.

<sup>4</sup>Associate Professor, Department of Horticulture.

## Outstanding characteristics and uses

The outstanding feature of 'Vermillion' is its red fruit color which is enhanced by the *crimson* gene. It is intended as an interim replacement for 'Heinz 1350' for early and main season production for whole pack. Scar and core size necessitate coring for whole pack processing. 'Vermillion' may also have value for home garden and fresh market. 'Vermillion' contains approx. 70% of the pro-Vitamin A of non-crimson standard cultivars (Table 1).

## Literature Cited

1. Tomes, M. L., H. T. Erickson, and R. J. Barman. Crimson, its location, inheritance and modification of fruit color. *Rpt. Tomato Gen. Coop.* 16:38.
2. Thompson, A. E., M. L. Tomes, H. T. Erickson, E. V. Wann, and R. Armstrong. 1967. Inheritance of Crimson fruit color in tomatoes. *Proc. Amer. Soc. Hort. Sci.* 91:495-504.

<sup>5</sup>Castle Seed, Morgan Hill, California, 95037. Joseph Harris Seed, Rochester, New York, 14624.

Table 1. Performance of 'Vermillion' and 'Heinz 1350' (Lafayette, Indiana, 1972).

Cultivar	Yield (tons/ha)		$\beta$ carotene ( $\mu$ g/g fresh wt)	Fruit size (g)	Color <sup>z</sup>	°Brix	pH
	Early	Total					
Vermillion	7.9	69.1	4.9	105	66.1	5.3	4.39
H1350	6.1	57.4	6.7	105	59.8	4.6	4.30
LSD 5%	4.0	14.1					

<sup>z</sup>Tomato color index.

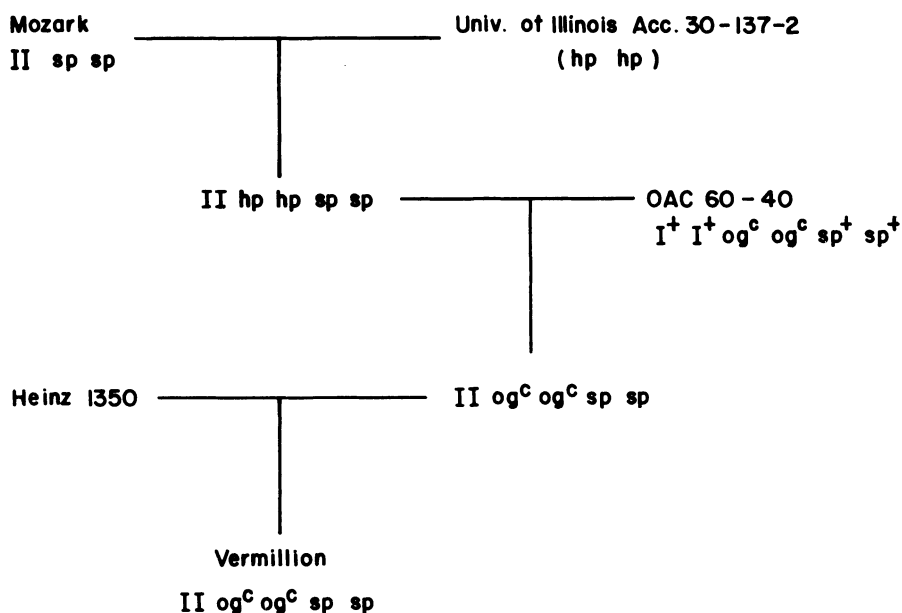


Fig. 1. Pedigree of 'Vermillion' tomato.