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Temperature Sensitivity of Four Tomato Cultivars

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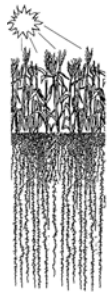

TEMPERATURE SENSITIVITY OF FOUR TOMATO CULTIVARS

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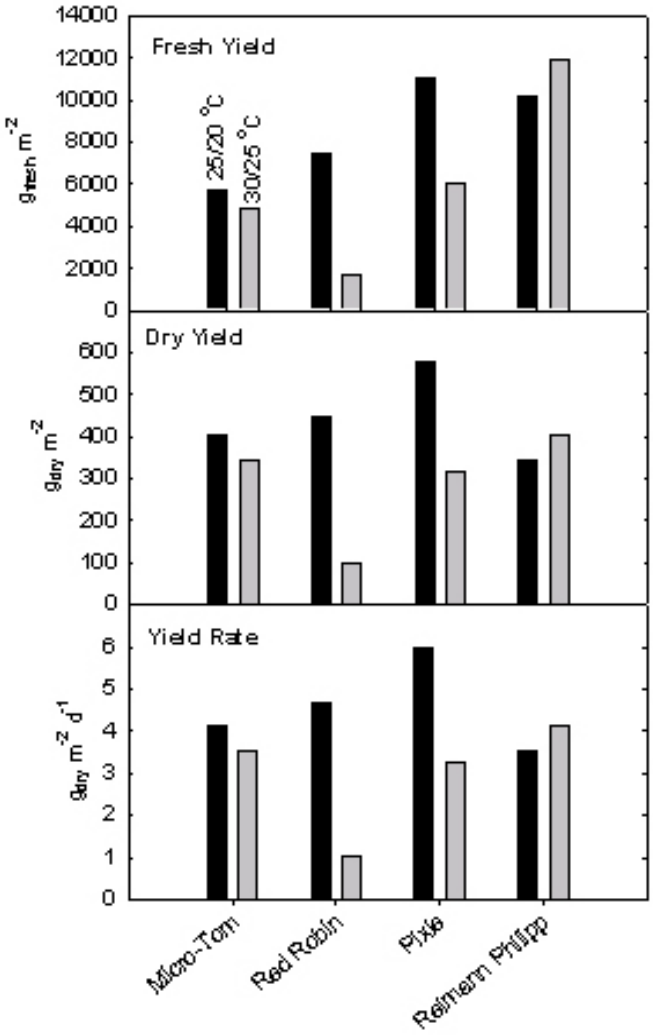
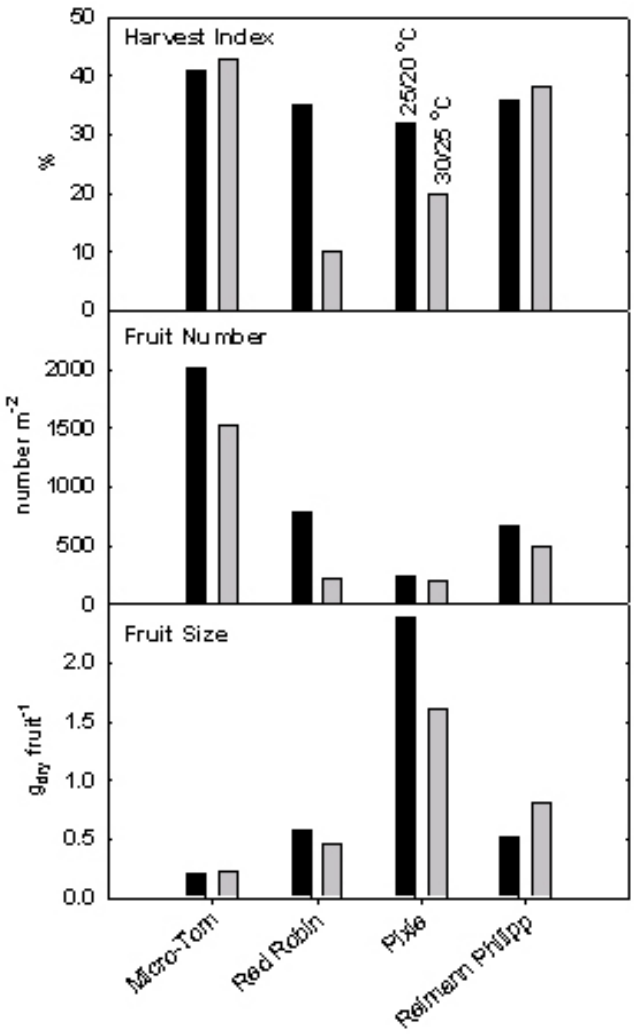
We evaluated 4 tomato cultivars, selected based on height (Red Robin and Micro-Tom) and familiarity (Pixie and Reimann Philipp) for their sensitivity to temperature. Each cultivar was grown in four 12-cm pots from seeding to form canopies in either 30/25 or 25/20 °C day/night temperature.

Yield of all cultivars except Reimann Philipp decreased with warmer temperatures with Red Robin and Pixie showing the most sensitivity. Fresh yield of the two dwarf varieties were lower than the taller cultivars, but due to higher percent dry matter in the fruit of the Micro-Tom and Red Robin (see Cultivar Screening summary), the dry yield of the dwarf varieties exceeded that of Reimann Philipp. Yield rate was highest in Pixie and similar in the other cultivars.

Harvest index was highest in Micro-Tom. Micro-Tom produced many small fruit while Pixie produced few large fruit. Fruit of Pixie were smaller in warm temperatures, but Reimann Philipp were larger in warm temperatures. Reimann Philipp stands 40-cm tall at maturity, but collapses as the fruit enlarge making harvest difficult.