'Ohio 8245' Processing Tomato

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'Ohio 8245' is a main-season processing tomato (*Lycopersicon esculentum* Mill.) adapted for machine harvest and bulk handling, especially suited for the production of peeled, coreless whole-canned tomato (whole-pack), as well as juice and pureed products. Extensive test hectares of 'Ohio 8245' have been grown by the midwestern and eastern United States and by the Canadian tomato processing industry. The cultivar has been well received by growers and processors and is already being grown extensively.

Origin

Breeding of 'Ohio 8245' began in 1978, and it is a sixth generation selection derived from a cross between 'Ohio 7870' and 'Heinz 722'. The line is productive. Fruit size, firmness, jointless pedicel (*j2*), concentration of set, and uniformity of ripening make it suitable for machine harvest. It has been evaluated extensively in the midwest United States and Canada, where its adaptability has been excellent (Berry et al., 1990).

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Description

Vines of 'Ohio 8245' are medium in size, determinate (*sp*), and adapted to high plant population, direct-seeded, or transplant culture. The relatively upright vines (semi-prostrate toward maturity) are manageable for culture suited to once-over machine harvest. Foliage cover is adequate for helping insure good fruit quality, and at maturity the vines cover the row area uniformly. The average mean yields in 1989 from a replicated trial at Fremont, Ohio (Berry et al., 1990), for 'Ohio 8245', 'Ohio 7983', and 'Heinz 6285' were 56.0, 47.5, and 42.3 t·ha⁻¹, respectively. Fruits of 'Ohio 8245' weigh an average of 60 g. They are blocky and plum-shaped, smooth with a small stem scar and core, and uniform in ripening (*u*). The cultivar readily responds to ethephon application for hastening ripe fruit accumulation.

'Ohio 8245' is resistant to *Fusarium* wilt caused by race 1 of *Fusarium oxysporum* Schlecht f. *lycopersici* (Sacc.) J. & H. (*I*) and to *Verticillium* wilt caused by *Verticillium dahliae* Kleb (*Ve*). It has a high level of resistance to Anthracnose fruit rot caused by *Colletotrichum* spp., which is also true of its parent, 'Ohio 7870' (Berry and Gould, 1982). Excellent resistance to radial and concentric fruit cracking and the ability to store ripe fruit on the vine for extended periods before harvest contribute to high yields of usable fruit in once-over machine harvest.

From experimental and extensive com-

mercial trial plantings, 'Ohio 8245' sampled raw and as a processed product is characterized by a suitable soluble solids concentration (SSC), titratable acidity, color, and vitamin C. These characteristics allow it to be used in a variety of tomato products. In pilot plant trials of 'Ohio 8245' (Wiese and Berry, 1990), the product showed SSC of 5.8% vs. 4.9% for 'Ohio 7983'; the respective values for processed juice were 6.1% and 5.8%. Total acid contents, expressed as citric, for the two cultivars tested as raw products (0.20% vs. 0.19%) and for processed juice (0.24% and 0.25%) were nearly identical. The vitamin C contents for 'Ohio 8245' and 'Ohio 7983' were also nearly identical (24 vs. 23 mg·g⁻¹⁰⁰, respectively). 'Ohio 8245' has been especially suited for the production of whole-pack and diced tomatoes with excellent quality. Its jointless pedicel (free-stemming trait), small core, and adaptability to lye or steam-peeling make it especially desirable for efficient processing without coring in automated production operations. It has also been used very effectively in the manufacture of sauce and paste products. These quality characteristics, along with excellent adaptability and productivity, have contributed to its wide use.

Availability

The Ohio State Univ. has applied for Plant Variety Protection for 'Ohio 8245'. Commercial quantities of 'Ohio 8245' seed are available from Terra-Vegetable, Carmel, Ind. Trial seed samples are available from the Dept. of Horticulture, Ohio State Univ., Wooster.

Literature Cited

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