

'Superb Hybrid', 'NewIda', and 'Gold Dust' Tomatoes

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Within northern vegetable-growing areas, the number of adapted tomato (*Lycopersicon*

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esculentum Mill.) cultivars is limited by a short growing season and low average temperatures. Cultivars must be short-season types to produce economic yields and must be resistant to physiological defects often triggered by fluctuating or low temperatures. Within early lines, fruits tend to be small (Bemier et al., 1962, Fogle and Currence, 1950; Gibrel et al., 1982; Kerr, 1955), al-

though the association does not preclude simultaneous improvement of fruit size and achieving early maturity. Beginning in 1965, the tomato breeding program at the Univ. of New Hampshire focused on selecting early to second early material resistant to excessive cracking, lobing or catfacing, and to blotchy ripening. These attributes were combined within plants of compact, determinate habit amenable to close spacing. All breeding selections were routinely screened for resistance to vascular wilts, but emphasis was placed on verticillium wilt, caused by *Verticillium albo-atrum* Reinke & Berth.

Origin

The parents of 'Superb Hybrid' (Fig. 1) contain some common germplasm, particularly those cultivars and breeding lines used as sources of firmness and color. Thus, the hybrid would not be expected to exhibit the

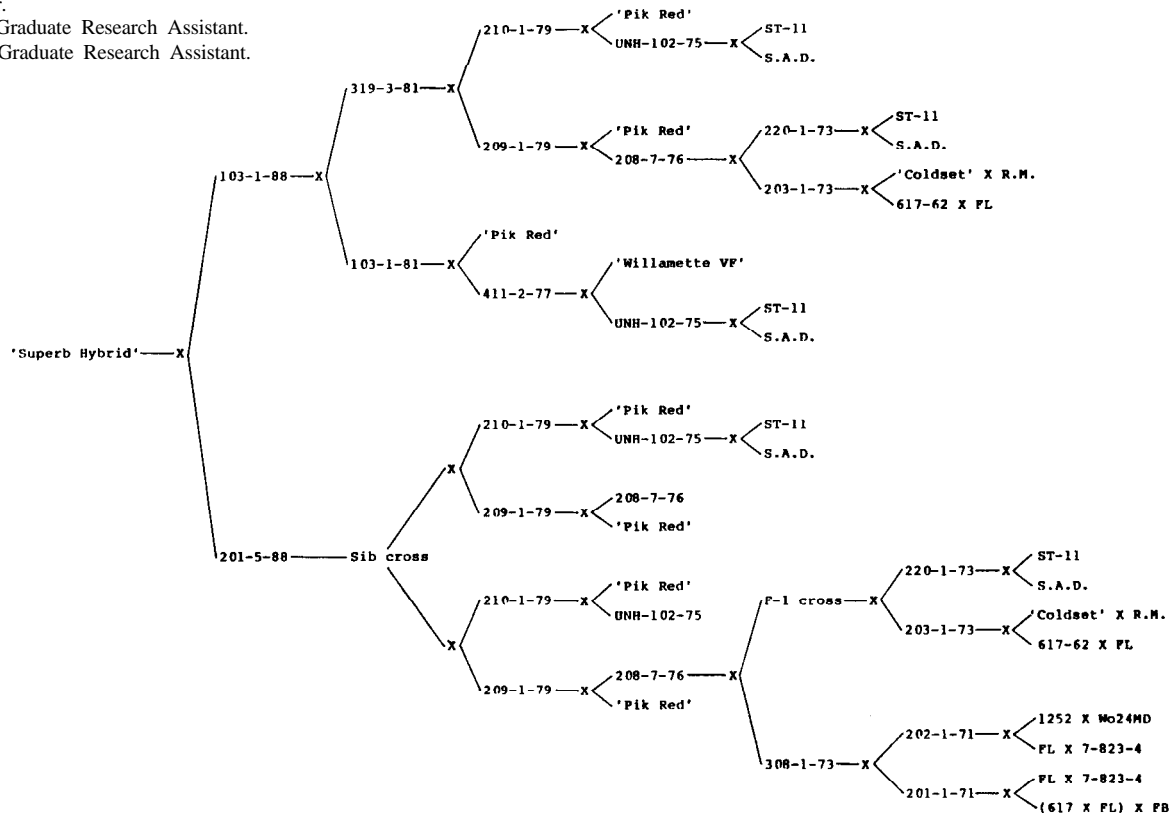


Fig. 1. Pedigree of 'Superb Hybrid'. Original lines 617-62 and 1252 were from Iowa State Univ. Wo24MD was obtained from C. Walkof, Morden, Man., Canada. FL was a mass selection from Joseph Harris Co., Rochester, N.Y. St-11 was obtained from J.G. Metcalf, Trenton, Ont., Canada. S.A.D. = 'Sub Arctic Delight'; R.M. = 'Red Miniature'.

heterotic increase in yield normally attributed to F₁ hybrids of genetically diverse parents. 'NewIda' (Fig. 2) was developed by an open-pollinated pedigree selection from a cross of 'Ida Gold', released early in the 1980s by the Idaho Agricultural Experiment Station, and NC 50-7, a breeding line from North Carolina that included disease resistance, large fruit, and firm texture. 'Gold Dust' (Fig. 3) includes some of the same parentage as 'Superb Hybrid' but is a standard (open pollinated) type in which the tangerine gene was obtained from 'Orange Queen' and 'Golden Delicious'.

Description

'**Superb Hybrid**'. The plant of 'Superb Hybrid' is compact, low-growing, and determinate, with excellent leaf cover that is somewhat more compact than 'Pik Red'. Plants hold up well into the fall if kept picked and protected from foliage diseases. The globe-shaped fruit average 235 g for early harvest, falling to 185 g late in the season. There is little or no cracking or blotch (Fig. 4, Table 1), and fruit are very firm and smooth, free from lobing and an excessively large blossom scar. Unripe color is uniformly green (u), and interior ripe color is a bright, deep red in both flesh and gel. The

core is moderately small. The flavor is somewhat acid, and the fruit has a juicy texture. Outer and inner walls are thick. The maturity class of 'Superb Hybrid' is second early, the fruit maturing 3 to 7 days before those of 'Pik Red' and 'Valley Girl'. The compact habit allows a planting density of 0.9 to 1.1 m²/plant in twin rows, and plastic mulch is recommended in northern regions. One parent, 103-1-88, carries the *Ve* gene and is responsible for the verticillium resistance of the hybrid. Neither inbred carries resistance to fusarium wilt.

'**NewIda**'. 'NewIda' is especially suited for home gardens in far northern areas because of exceptional earliness. The plant is very open, exposing many small (Table 1), elongate gold (tangerine) fruit. The fruit epidermis will crack, primarily concentrically, but not as severely as with 'Ida Gold'. Timely harvests will minimize cracking damage. The interior flesh is deep gold and meaty with a slightly acidic flavor. The fruit are firm for an early tomato and have a very small core. There is no blotchy ripening, but the green shoulder may persist until the fruit are fully ripe. 'NewIda' can be grown at high population densities. In Durham, N.H., ripe fruit were harvested on 24 July 1991 from transplants seeded 27 Apr. 'NewIda' is resistant to verticillium and fusarium wilts (race 1)

and shows the same susceptibility to early blight as does 'Ida Gold'.

'**Gold Dust**'. 'Gold Dust' is remarkable for the many fruit produced on a small vine. Plant habit is open, and its very compact size makes it equally suitable for high density field production or for container culture in urban sites. The fruit are globe-shaped (Fig. 5), very firm, and moderate in size (≈160 g), with as many as 10 to 11 fruit ripening on a single plant at one time. There is little or no cracking or blotchy ripening (Table 1), no lobing, and the blossom scar is small under normal environmental conditions. Unripe color is uniform (*u* gene), ripening to a deep orange. Interior color is also deep orange and uniform throughout the fruit. Inner and outer walls are meaty, and core size is slightly smaller than average. The flavor and texture are similar to those of 'Superb Hybrid'. 'Gold Dust' is resistant to verticillium wilt.

Availability

Seeds of each introduction have been made available to research institutions and seed producers for testing. Increase and distribution to home gardeners and commercial growers will be through the seed trade. Small test samples can be obtained from the Dept. of Plant Biology, Univ. of New Hampshire.

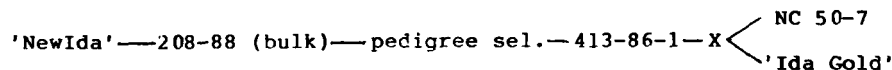


Fig. 2. Pedigree of 'NewIda'.

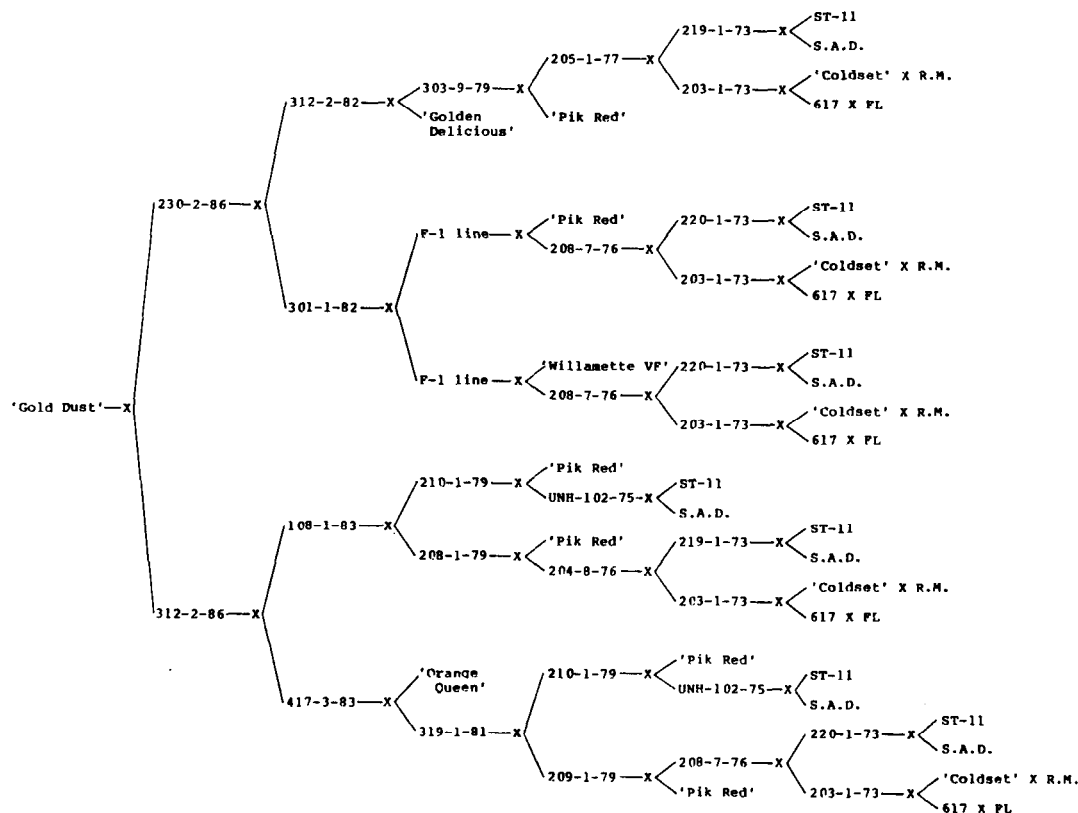


Fig. 3. Pedigree of 'Gold Dust'. The line 617 was obtained from Iowa State Univ. St-11 was obtained from J.G. Metcalf, Trenton, Ont., Canada. S.A.D. = 'Sub Arctic Delight'; R.M. = 'Red Miniature'.



Fig. 4. 'Superb Hybrid'.

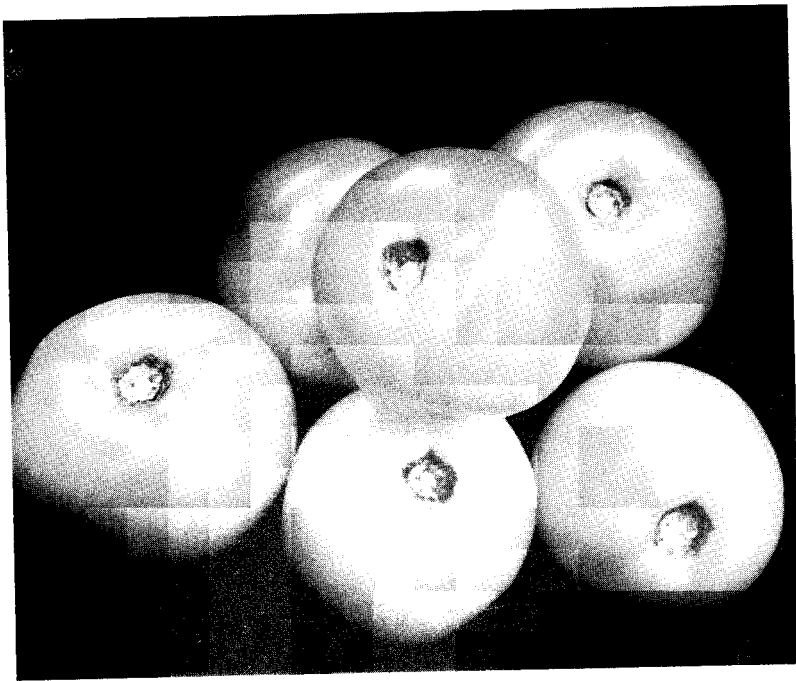


Fig. 5. 'Gold Dust'.

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