

'Monte Verde' Tomato

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'Monte Verde' is an inbred, fresh-market tomato (*Lycopersicon esculentum* Mill.) cultivar. It resulted from a breeding program to develop a cultivar with a jointless pedicel for easier harvest and improved marketable yield for mature-green production.

Origin

'Monte Verde', an F₇ generation inbred line from the cross of 'Flora-Dade' × 'Summit' (Gardner, 1985), was developed using the pedigree breeding method.

Description

'Monte Verde' has a vigorous, determinate (*sp*) growth habit. Staked plants are slightly taller than are 'Colonial' and 'Flora-Dade' and shorter than 'Summit' plants. 'Monte Verde' has good adaptability to the short-stake, string-weave system of trellis culture. Foliage cover is similar to that of 'Colonial' and provides good fruit protection against weather-related defects.

Fruit of 'Monte Verde' have a waxy finish. Shoulder color of nonripe fruit is dark green. Fruit are deep oblate to flattened globe, are symmetrical, and typically have a small blossom scar. Fruit pedicels are jointless (*j-2*). Based on the amount of ripe fruit at the first harvest in several trials (data not presented),

maturity of 'Monte Verde' is intermediate between those of 'Flora-Dade' and 'Summit' and slightly later than that of 'Colonial'. Fruit weight of 'Monte Verde' is similar to that of 'Sunny' and 'Colonial' (Table 1), with most of the fruit grading into the extra-large and large size categories desired for mature-green harvest. In ripening studies with mature-green fruit, 'Monte Verde' colored as well as 'Sunny' and 'Colonial', developing uniformly red external and internal color with good firmness and acceptable flavor (subjective ratings by author).

'Monte Verde' averaged lower total yields than did 'Sunny' and 'Colonial' in replicated trials over a 5-year period (Table 1). However, because of its consistently smooth fruit and small blossom scar, 'Monte Verde' was higher in percent U.S. combination grade (U.S. No. 1 + U.S. No. 2) fruit than were 'Sunny' and 'Colonial'. The U.S. combination grade yield of 'Monte Verde' exceeded that of 'Sunny' and was equivalent to that of 'Colonial' (Table 1). 'Monte Verde' has performed well in numerous observational trials in research station and grower fields throughout North Carolina. In extensive grower plantings in western North Carolina, 'Monte Verde' had a higher percentage pack-out than did 'Colonial' because of its consistently smoother blossom scar.

'Monte Verde' is resistant (*I, I-2* genes) to races 1 and 2 of *Fusarium oxysporum* f. sp. *lycopersici* (Sacc.) Snyder and Hans., the incitant of fusarium wilt, and is resistant (*Ve* gene) to race 1 of *Verticillium dahliae* Kleb., the incitant of verticillium wilt. 'Monte Verde' is resistant to radial and concentric fruit cracking. It has moderate resistance to cuticle cracking (weather check), similar to that of 'Flora-Dade', 'Summit', and 'Colonial' and superior to that of 'Sunny'. 'Monte Verde' has excellent resistance to rough blossom scar (catfacing).

Use

'Monte Verde' is intended for mature-green production for the fresh market. In research station and grower trials throughout the eastern United States it has shown adaptability to spring and summer production over a wide geographical area. Because of its improved blossom scar compared to other tomato cultivars with a jointless pedicel, 'Monte Verde' should be useful as a parent line in F₁ hybrids and in breeding for improved blossom scar.

Availability

'Monte Verde' was released on an exclusive basis to Ferry-Morse Seed Co. Small samples of seed for trial and breeding purposes are available from R.G. Gardner, Mountain Horticultural Crops Research and Extension Center, Fletcher, NC 28732-9244. A Plant Variety Protection Certificate (9300161) has been granted for 'Monte Verde'.

Literature Cited

Gardner, R.G. 1985. 'Summit' tomato. HortScience 20:787.

Table 1. Comparison of yields of mature-green fruit of 'Monte Verde', 'Colonial', and 'Sunny' tomato cultivars in staked trials at Fletcher, N.C.^z

| Cultivar | Yield (Mg·ha ⁻¹) | | | Wt/fruit (g) |
|---------------------|------------------------------|-------------------------------------|----------------------------|--------------|
| | Nongraded | U.S. combination grade ^y | U.S. combination grade (%) | |
| Monte Verde | 74 | 53 | 71 | 233 |
| Colonial | 85 | 49 | 58 | 230 |
| Sunny | 82 | 43 | 52 | 221 |
| LSD _{0.05} | 4 | 6 | 7 | NS |

^zBased on nine replicated trials conducted over a 5-year period.

^yU.S. No. 1 + U.S. No. 2 grade fruit.

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