NORTH CAROLINA AGRICULTURAL RESEARCH SERVICE
NORTH CAROLINA STATE UNIVERSITY
RALEIGH, NORTH CAROLINA

NOTICE OF NAMING AND RELEASE OF 'MOUNTAIN FRESH' TOMATO

The North Carolina Agricultural Research Service announces the release of a new fresh-market tomato cultivar, 'Mountain Fresh'.

'Mountain Fresh' resulted from a breeding program to develop a cultivar with a combination of very large fruit, smooth blossom scar and improved flavor adapted to vine-ripe production in North Carolina. 'Mountain Fresh' (trialed as NC 88289 and STEP 724) is the F_1 hybrid of NC 84173, a large-fruited line released in 1990 as a parent of the hybrid 'Mountain Spring', and NC 109 (Fig. 1).

'Mountain Fresh' has a vigorous, determinate (sp gene) plant with attractive dark bluish-green foliage. Plant vigor is slightly less than that of 'Mountain Pride', providing good adaptability to the short stake, string weave system of culture. Foliage cover is slightly less dense than that of 'Mountain Pride' and provides good protection to the fruit.

Non-ripe fruit of 'Mountain Fresh' have a uniform, glossy, light green finish (u gene). Fruit pedicels are jointed. Fruit ripen to a uniform red exterior and interior color, free of white tissue. Fruit flavor has been rated very good for a determinate cultivar and superior to that of 'Mountain Pride' and 'Mountain Delight'. Fruit are flattened globe to deep oblate in shape, are symmetrical, and have a small, smooth blossom scar. Fruit size is very large, generally exceeding that of 'Mountain Pride' and 'Mountain Delight'. Much of the fruit of 'Mountain Fresh' grades into the Jumbo category (>3½" diam.) with most of the remainder going into the extra-large category. Fruit are firm in the ripe stage. The fruit wall is thick resulting in good handling at the breaker and light pink stages during harvesting and packing.

'Mountain Fresh' produced total non-graded fruit yields equivalent to 'Mountain Pride' and 'Mountain Delight', the predominant cultivars grown in North Carolina, over a 3-year period. The percentage of fruit of 'Mountain Fresh' in U.S. Combination Grade exceeded that for other cultivars in most trials because of smoother blossom scar. Yield of U.S. Combination Grade fruit for 'Mountain Fresh' has consistently been high, generally exceeding that for other cultivars currently grown in North Carolina. 'Mountain Fresh' was trialed in the 1990 STEP observational trials as STEP 724. Based on its outstanding performance at various locations, it was recommended for advancement to the 1991 STEP replicated trials. In 1991, it had higher marketable yields than the check cultivar Flora-Dade at four of six locations and was rated as having superior fruit appearance. 'Mountain Fresh' has performed well in several experiment station trials throughout the eastern U.S., indicating wide adaptability. 'Mountain Fresh' was trialed in several grower plantings of ½ to 1 acre each in North Carolina in 1990-1992. Grower acceptance has been very favorable.

'Mountain Fresh' has the Ve gene for resistance to verticillium wilt and has the I and I-2 genes, conferring resistance to races 1 and 2 of *Fusarium oxysporum* f. sp. *lycopersici* (fusarium wilt). Although 'Mountain Fresh' was not developed specifically for early blight resistance, it has shown good tolerance to early blight in research station and grower field plantings.

'Mountain Fresh' was released on an exclusive basis for commercial seed production and sales to Ferry-Morse Seed Co. Breeder seed of the parent lines will be maintained by the North Carolina Agricultural Research Service. Small samples of 'Mountain Fresh' and its parental lines for trial and breeding purposes are available from R. G. Gardner, Mountain Horticultural Crops Research and Extension Center, Fletcher, NC 28732-9216.

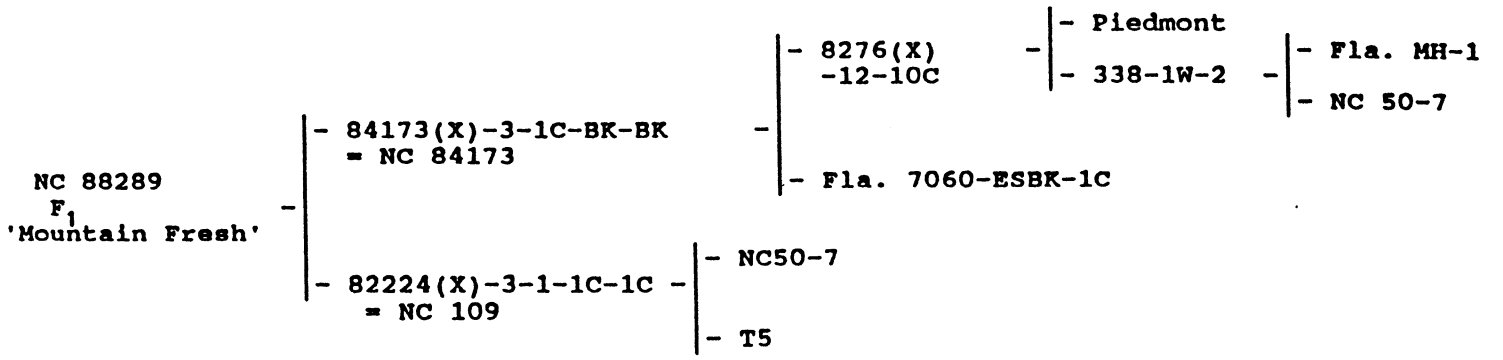

Fig. 1. Pedigree of 'Mountain Fresh' F_1 hybrid tomato and its parent lines, NC 84173 and NC 109.

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Date