

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

NOTICE OF RELEASE OF NC 2Y TOMATO BREEDING LINE

The North Carolina Agricultural Research Service announces the release of a new fresh-market tomato breeding line, NC 2Y.

NC 2Y was developed using the pedigree breeding method. Crosses of sister lines of the NC 822 yellow-fruited (t gene) family were made to the University of Florida red-fruited releases 'Suncoast' and FLA 7060 with resultant yellow fruited selections crossed to develop NC 2Y (Fig. 1).

NC 2Y produces very large fruit with a round to slightly ovate shape. Immature fruit are uniform light green (u gene). Fruit ripen to a bright yellowish-orange exterior and interior color and have a firm texture. Fruit pedicels are jointed. Vine type is determinate (sp gene) with moderate foliage cover for the fruit.

NC 2Y has the I and I-2 genes for resistance to races 1 and 2 of fusarium wilt and the Ve gene for resistance to verticillium wilt. Fruit are highly resistant to the physiological fruit ripening disorder of graywall. Fruit are moderately susceptible to radial stem cracking and weather check resulting in a lower percentage of fruit in U.S. Combination grade (U.S. No. 1 + U.S. No. 2) than other yellow tomatoes tested. Total and U.S. combination grade fruit yields averaged lower than other yellow tomatoes trialed. Early yield was lower than that of 'Carolina Gold' and NC 1Y but not significantly lower than 'Mountain Gold' when averaged over 7 trials.

NC 2Y is useful as a parent in producing large fruit in F<sub>1</sub> hybrids. When crossed with NC 1Y to produce 'Carolina Gold', it imparts large fruit size without the late maturity or crack susceptibility associated with NC 2Y itself.

Breeder seed will be maintained by the North Carolina Agricultural Research Service. Small samples for trial and breeding purposes are available from R. G. Gardner, Mountain Horticultural Crops Research and Extension Center, Fletcher, NC 28732-9216. Application is being made for a Plant Variety Protection Certificate.

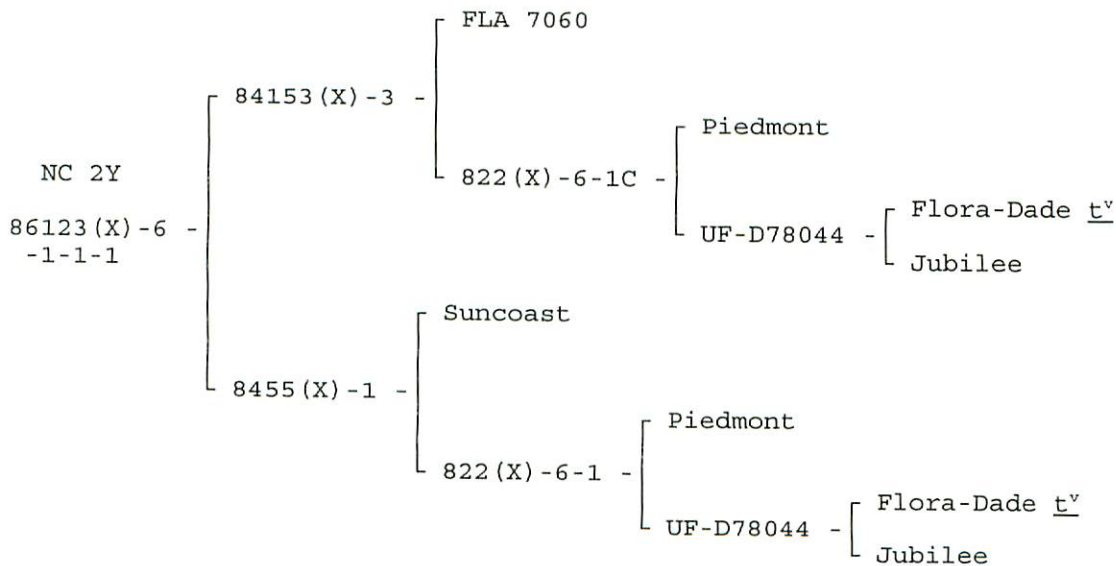


Fig. 1. Pedigree of NC 2Y tomato line.

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 Date