

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

NOTICE OF NAMING AND RELEASE OF 'SUN LEAPER' TOMATO

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

'Sun Leaper' resulted from a breeding program to develop an improved tomato cultivar with high temperature fruit set ability adapted to summer and fall production in piedmont and eastern North Carolina. 'Sun Leaper', trialed as NC 92191 and as STEP 744, is the F₁ hybrid of NC HS-1 x NC 84173 PVP. NC HS-1 derives heat tolerance from 'TH-318', a high temperature fruit-set cultivar developed by Dr. Paul Leeper in the Texas A&M tomato breeding program at Weslaco (Fig. 1). NC 84173 PVP was released in 1990 and is a parent in the hybrids 'Mountain Spring' and 'Mountain Fresh'.

'Sun Leaper' has a vigorous determinate plant (sp gene) with medium green foliage color. Plant vigor is greater than that of other high temperature fruit set hybrids such as 'Solar Set', 'Heat Wave', and 'Equinox' and provides good, but not dense, foliage cover for fruit protection. The plant habit is well adapted to the short stake, string-weave system of culture.

Non-ripe fruit of 'Sun Leaper' have a uniform, glossy, light green finish (u gene). Fruit pedicels are jointed, and the calyx separates easily from fruit during harvest. Fruit ripen to a uniform red exterior and interior color and have flavor comparable to other determinate cultivars. Fruit are flattened globe to deep oblate in shape, are symmetrical, and have a small, smooth blossom-end scar. Fruit size is large, comparable to or exceeding that of other heat tolerant cultivars. Fruit are firm at the ripe stage and have a thick fruit wall, resulting in good handling characteristics at the breaker or pink stages of ripeness.

'Sun Leaper' produced U.S. Combination grade yields exceeding those of 'Solar Set' and 'Equinox' in replicated trials at Fletcher, NC as a result of lower incidence of fruit defects of rough blossom scar, fruit cracking, and angular fruit shape. 'Sun Leaper' had high marketable yields in the 1994 STEP replicated trials, exceeding 'Equinox' at 4 of 6 locations. In extensive grower trials of several acres in piedmont North Carolina over the last 4 years, 'Sun Leaper' consistently produced high yields of large, smooth fruit under high night temperature conditions when other heat tolerant cultivars were unacceptable due to a high incidence of rough blossom scar. Observations in Florida summer plantings indicate that the heat set ability of 'Sun Leaper' may be less than that of 'Solar Set' and 'Heat Wave'.

'Sun Leaper' 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 wilt. Observations in piedmont North Carolina and coastal South Carolina indicate that 'Sun Leaper' may be less susceptible to bacterial spot than many other cultivars.

'Sun Leaper' has been released on an exclusive basis for commercial seed production and sales to Rogers Seed Company. Breeder seed of the parent lines will be maintained by the North Carolina Agricultural Research Service. Small samples of 'Sun Leaper' 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.

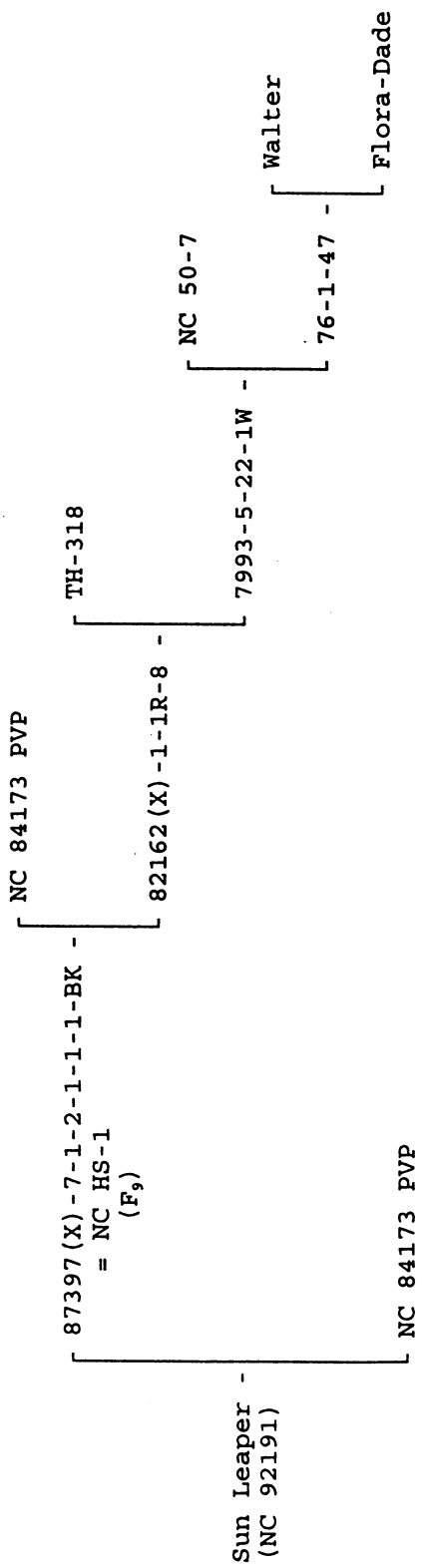


Fig. 1. Pedigree of 'Sun Leaper' F₁ hybrid tomato.

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 Agricultural Research Service

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 Date