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

NOTICE OF RELEASE OF NC50-7 TOMATO BREEDING LINE

The NCARS announces the release of a new fresh market tomato breeding line NC50-7.

NC50-7 is an inbred line in the F_6 generation. It resulted from the 4-way cross ['Blazer' F_1 x ('Walter' x 'Flora-Dade') F_1]. It has been tested in North Carolina since 1978.

Fruit of NC50-7 are deep oblate with small to medium blossom scars. Shoulders are smooth and have the uniform green character (u gene). Pedicels are jointed and are tightly attached to the fruit. Fruit finish is very glossy and colors to a uniform deep red. Internal fruit color and structure are good. Fruit are firm at the ripe stage, comparable to 'Flora-Dade', and the pericarp softens slowly giving good shelf life. Fruit are larger than 'Flora-Dade' and approximately one week later in maturity. Vine type is strong determinate (sp gene), taller growing than 'Flora-Dade' when staked and pruned. Foliage is very dense with broad, dark green leaflets similar to those of 'Flora-Dade'. Unstaked plants are dense and compact in growth habit.

NC50-7 is resistant to race 1 (I gene) of Fusarium oxysporum f. sp. lycopersici (Fusarium wilt) and to race 1 (Ve gene) of Verticillium dahliae (Verticillium wilt). NC50-7 is resistant to the fruit disorders graywall and puffiness and highly resistant to cracking and black shoulder.

NC50-7 produced total yields similar to 'Flora-Dade' in 1979 and 1980. Yield of U.S. Combination Grade fruit of NC50-7 exceeded 'Flora-Dade' by 13% in 1979 and by 40% in 1980. This resulted primarily from the greater resistance of NC50-7 to fruit cracking and black shoulder in mid and late season.

NC50-7 is not intended for use as a cultivar. It is being released primarily for its use as the male parent of 'Mountain Pride', a F_1 hybrid being released concurrently with NC50-7. In addition, NC50-7 has shown excellent combining ability and should be useful as a parent in developing firmness and crack resistance in new cultivars.

Breeder seed will be maintained by the North Carolina Agricultural Research Service and will be made available to the North Carolina Foundation Seed Producers, Inc., for distribution. Proposed release date is August 28, 1981. Application is being made for a Plant Variety Protection Certificate.

H. J. Bateman
Director, North Carolina Agricultural Research Service, Raleigh, N.C.

August 28, 1981
Date