

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

NOTICE OF RELEASE OF NC EBR-5 TOMATO BREEDING LINE

The North Carolina Agricultural Research Service announces the release of a new fresh-market tomato breeding line, NC EBR-5.

NC EBR-5 is an early blight resistant plum (Roma-type) inbred tomato line in the F<sub>8</sub> generation. It was developed from crosses involving the early blight resistant USDA processing tomato cultivar 71B2 and an inbred line, 85-PR218, from Dr. Warren Henderson's processing tomato breeding program in North Carolina (Fig. 1).

NC EBR-5 has a vigorous determinate plant (sp gene) with dense foliage closely resembling that of '71B2'. Under good cultural conditions plants grow to a height of 4 feet or more when using the short stake, string weave trellis system.

Fruit of NC EBR-5 have 2 or 3 locules and are elongate in shape with a slight taper from the shoulder to blossom end. Under some growing conditions, a few fruit may develop a slight nipple at the blossom end. Fruit resemble those of 'Peto 882' in shape and are equivalent in size to 'Peto 882'. Non-ripe fruit are uniform light green in color (y gene). Fruit pedicels are jointed. Fruit are well-filled and ripen to a uniform bright red exterior and interior color. Fruit have a small core and are generally free of internal white tissue.

NC EBR-5 is resistant to verticillium wilt (Ve gene) and to race 1 of fusarium wilt (I gene). It has early blight resistance derived from '71B2' and has shown much less early blight than 'Peto 882' and other plum tomato cultivars in early blight test plots at Fletcher and Waynesville, NC. Fruit are highly resistant to radial and concentric cracking and fairly resistant to weather check.

NC EBR-5 has produced total and marketable yields equivalent to or greater than 'Peto 882' in replicated trials at Fletcher, NC. Season of maturity is a week or more later than 'Peto 882'. NC EBR-5 has poor fruit set ability under low and high temperature stress.

NC EBR-5 is being released in conjunction with release of the early blight resistant plum tomato cultivar Plum Dandy (NC EBR-5 x NC EBR-6). Because of its excessive vigor, poor set under temperature stress, and late maturity, NC EBR-5 is not deemed suitable for use as a cultivar.

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.

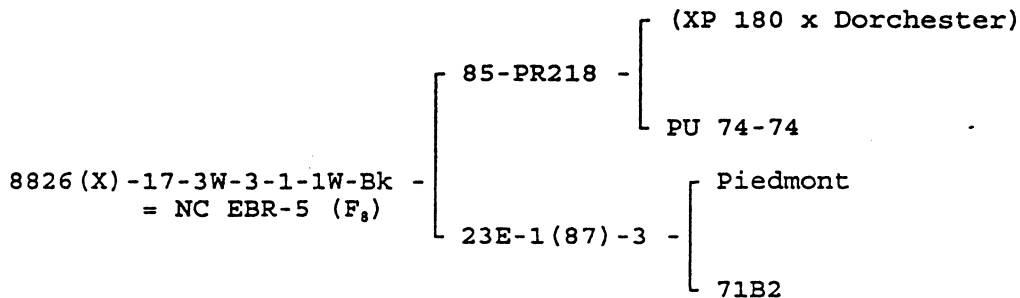


Fig. 1. Pedigree of NC EBR-5 early blight resistant tomato.

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 Date