

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

NOTICE OF RELEASE OF NC EBR-6 TOMATO BREEDING LINE

The North Carolina Agricultural Research Service announces the release of a new fresh-market tomato breeding line, NC EBR-6.

NC EBR-6 is an early blight resistant plum (Roma-type) inbred tomato line in the F₇ 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). A cross to the large-fruited tomato line NC 13G provided the brachytic (br) and crimson (ocr) genes and very firm fruit.

NC EBR-6 has a compact determinate (sp and br genes) plant with dense, dark green foliage closely resembling that of '71B2'. When grown using the short stake, string weave trellis system, plant height is generally around 2 feet.

Fruit of NC EBR-6 have 2 to 3 locules and are elongate in shape resembling 'Peto 882' with a slight taper from the shoulder to blossom end. Fruit sometimes have a slight nipple at the blossom end. Non-ripe fruit are glossy uniform light green in color (u gene). Fruit are well-filled and ripen to a bright red exterior and interior color as a result of having the crimson gene. Fruit have a small core and are free of internal white tissue. Ripe fruit are very firm and remain firm for an extended period after ripening on the plant. Fruit size is slightly smaller than that of 'Peto 882'.

Total and marketable yields of NC EBR-6 have been equivalent to those of 'Peto 882' in replicated early and late summer trials at Fletcher, NC. Season of maturity is slightly later than that of 'Peto 882'. Observations in early and late season in piedmont NC indicate NC EBR-6 to have good fruit setting ability under low temperature stress and moderate fruit setting ability under high temperature stress.

NC EBR-6 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 of NC EBR-6 are highly resistant to all types of fruit cracking.

NC EBR-6 is being released in conjunction with release of the early blight resistant plum tomato cultivar Plum Dandy (NC EBR-5 x NC EBR-6). The unique combination of early blight resistance, crimson fruit color, and brachytic growth habit should make NC EBR-6 useful to other breeders.

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.

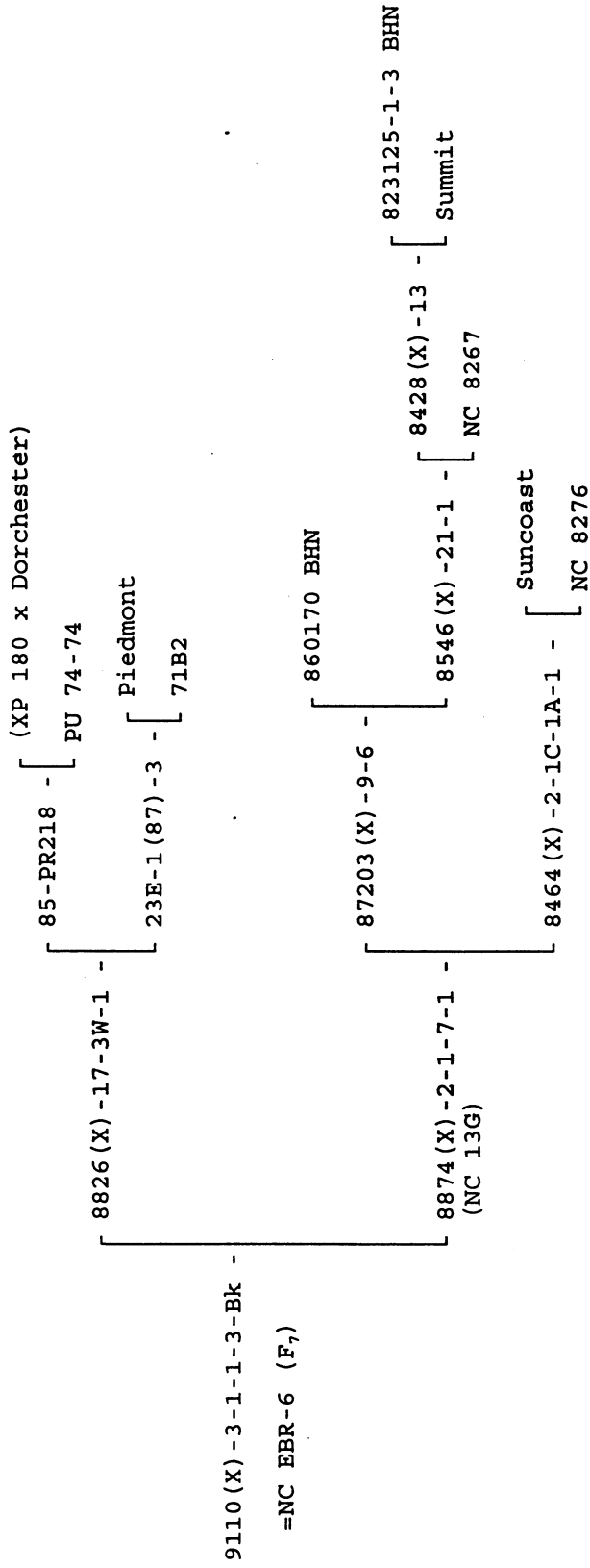


Fig. 1. Pedigree of NC EBR-6 early blight resistant tomato.

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 Date