

**North Carolina Agricultural Research Service**

**North Carolina State University**

**Raleigh, North Carolina**

**Notice of Release of 'Mountain Majesty' Hybrid Tomato Cultivar**

North Carolina Agricultural Research Service announces the release of 'Mountain Majesty' hybrid tomato cultivar. 'Mountain Majesty' is the F1 hybrid of NC 714 x NC 1CS (see pedigree in Fig. 1; see Notice of Release of parent NC 714, which is being released at the same time). It resulted from an NC State University tomato breeding effort to develop a superior, large-fruited hybrid tomato with improved fruit color based on the crimson gene and combined with fusarium wilt, verticillium wilt and tomato spotted wilt virus resistances adapted to vine-ripe production in North Carolina (NC). The resultant hybrid, NC0848, first crossed in the fall of 2007, was tested in replicated and observational trials at the Mountain Horticultural Crops Research Station (MHCRS), Mills River, NC, in 2008-2010 and widely tested in grower plantings in 2009 and 2010.

When averaged over six replicated trials conducted at MHCRS in early and late plantings in the summer seasons of 2008-2010, 'Mountain Majesty' was equivalent to 'Mountain Fresh' (Gardner, 1999) in total yield, U.S. combination grade yield, percent combination grade fruit, and fruit size. A high percentage of the fruit of 'Mountain Majesty' were in the Jumbo size category (> 3.5" in diameter), which is highly desirable for vine-ripe tomatoes and for which growers are often paid a premium over smaller fruit sizes. 'Mountain Majesty' exceeded the TSWV-resistant hybrids 'Mountain Glory' and 'Fletcher' in total yield, combination grade yield, and fruit size when averaged over the six replicated trials.

Fruit of 'Mountain Majesty' develop deep red color resulting from the crimson (*og<sup>c</sup>*) gene and are firm in the fully ripened stage. Immature fruits have a glossy, uniform green color (*u* gene). Fruit pedicels are jointed. The fruit are deep oblate to flattened globe in shape with generally smooth blossom end scars and have good resistance to fruit cracking and weather check. 'Mountain Majesty' has performed well in numerous observational trials in research station and grower fields throughout the mountains and piedmont of NC, and in coastal area of SC. Flavor of 'Mountain Majesty' has been rated good in subjective taste evaluations in research station plots and by growers and consumers of fruit produced and marketed from grower trial plantings.

'Mountain Majesty' has a vigorous determinate plant (*sp* gene) similar in height to that of 'Mountain Fresh' when staked. Foliage provides adequate cover for fruit protection. 'Mountain Majesty' has resistance (*Ve* gene) to *Verticillium dahliae* Kleb., resistance (*I*, *I-2* genes) to races 1, 2 of *Fusarium oxysporum* f.sp. *lycopersici* (Sacc.) Snyd. and Hans., and resistance to TSWV (*Sw-5* gene). Total and marketable yield of 'Mountain Majesty' was significantly higher than 'Mountain Fresh' in 2008 when there was severe TSWV infection in the field. Fruit of 'Mountain Majesty' have been free of graywall in grower plantings where fruit of 'Mountain Fresh' exhibited some graywall symptoms.

Breeder seed of 'Mountain Majesty' hybrid tomato and each parent is available by contacting Dr. Dilip Panthee, Mountain Horticultural Crops Research and Extension Center, 455 Research Drive, Mills River, NC 28759 or by telephone: 828.654.8590; fax: 828.684.8715; email address: [dilip\\_panthee@ncsu.edu](mailto:dilip_panthee@ncsu.edu). To acquire seed of the parents of 'Mountain Majesty' or the hybrid for non-exclusive, non-transferrable research purposes, a fully executed tomato seed transfer agreement (parents) or plant trial agreement (hybrid) is required with NC State University's Office of Technology Transfer. NCSU will invite proposals from interested tomato seed companies and select one company to enter into an exclusive production and marketing agreement for 'Mountain Majesty'.

W David Smith

W. David Smith

Director, North Carolina Agricultural Research Service

8/8/11

Date

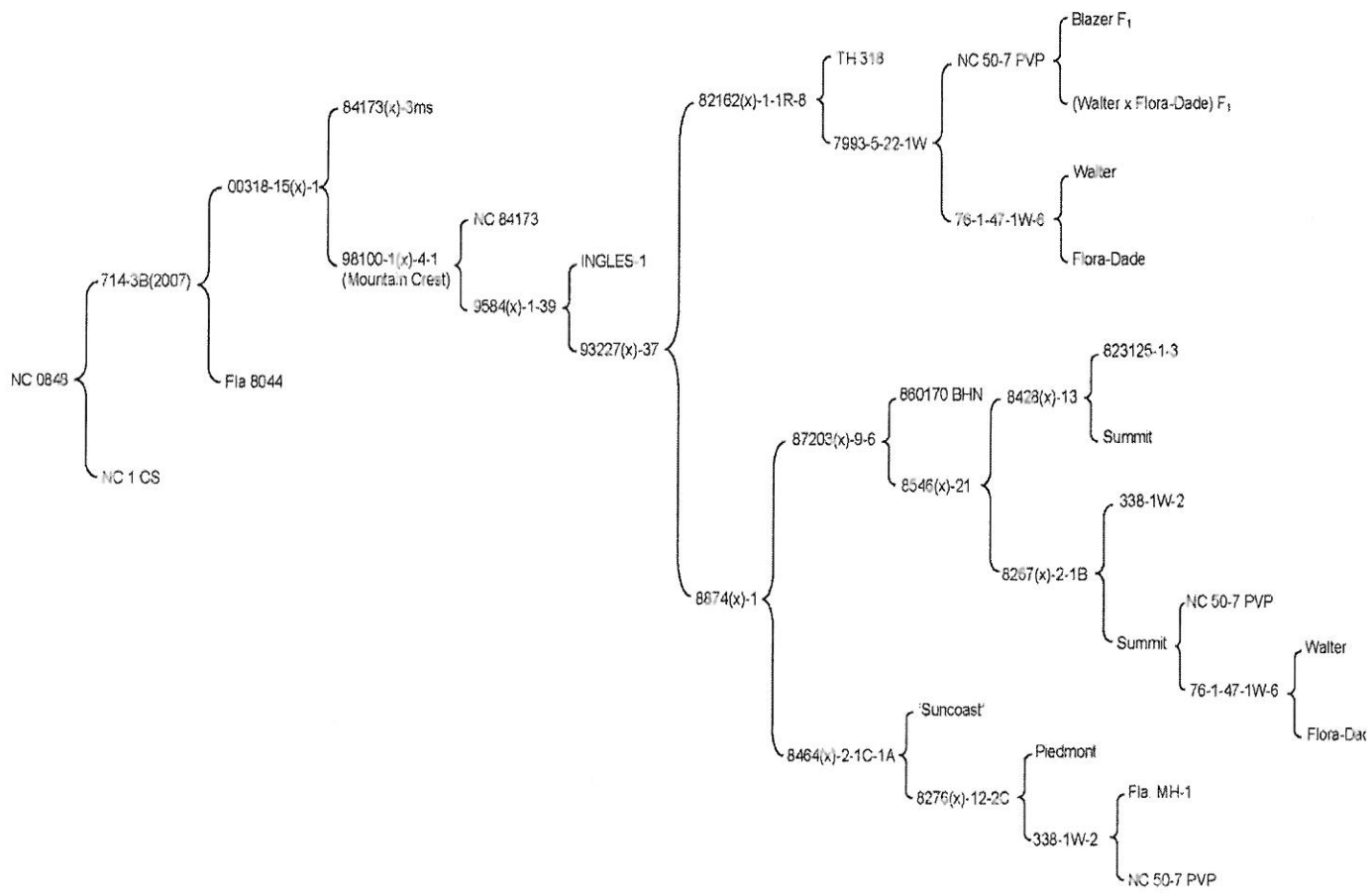


Fig. 1: Pedigree of 'Mountain Majesty' hybrid tomato.