

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

NOTICE OF NAMING AND RELEASE OF 'MOUNTAIN GOLD' TOMATO

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

'Mountain Gold' is an inbred line in the F<sub>2</sub> generation. It was developed from crosses involving a University of Florida breeding line, UF-D78044, which provided the source of the tangerine gene (t) for yellow fruit color. The cultivar 'Piedmont' and breeding line NC 8288, previously released from the North Carolina fresh market tomato breeding program are in the pedigree of 'Mountain Gold' (Fig. 1).

The plant type of 'Mountain Gold' is determinate (sp gene). When grown using the short stake and string weave system of culture, 'Mountain Gold' has shown acceptable vigor and has not required plant topping as is needed for indeterminate yellow-fruited cultivars, such as 'Sunray' and 'Jubilee'. Foliage cover has been adequate for good fruit protection.

'Mountain Gold' has the u gene for uniform light green color of non-ripe fruit in contrast to the dark green shoulder color of 'Sunray' and 'Jubilee'. Fruit are globe to flattened globe in shape with a relatively smooth blossom scar and fairly good resistance to fruit cracking. Fruit pedicels are jointed. Ripe fruit are firm and develop a uniform, deep yellow-orange color characteristic of the t gene. Fruit of 'Mountain Gold' are similar in acidity to 'Sunray' but are lower in soluble solids. The lower sugar content of 'Mountain Gold' than 'Sunray' likely results from the effect of the determinate growth habit, since it has been shown in isogenic lines that cultivars with the indeterminate growth habit are higher in sugar level than determinate versions of the same cultivars. Flavor of 'Mountain Gold', although not as good as that of 'Sunray' (likely due to lower soluble solids) is acceptable. Buyer acceptance of 'Mountain Gold' has been very good because of much superior appearance, firmness, shelf-life and larger fruit size of 'Mountain Gold' compared to 'Sunray' and 'Jubilee'.

In replicated trials in North Carolina, 'Mountain Gold' had higher total yields than 'Sunray', the primary yellow-fruited cultivar grown in N.C., and much higher yields of U.S. Combination Grade (U.S. No. 1 + U.S. No. 2) and marketable grade (No. 1 + No. 2 + No. 3) fruit than 'Sunray'. Fruit size of 'Mountain Gold' is very large with over 50% of the fruit greater than 3½" diameter in staked trials in North Carolina. 'Mountain Gold' is mid-season in maturity and is earlier than 'Sunray'.

'Mountain Gold' is resistant to races 1 and 2 (I and I-2 genes) of Fusarium oxysporum f. sp. lycopersici (Fusarium wilt) and to race 1 (Ve gene) of Verticillium dahliae (Verticillium wilt). 'Mountain Gold' has shown much better resistance to the physiological disorder of blossom-end-rot than 'Sunray' and 'Jubilee'. In addition, 'Mountain Gold' is resistant to fruit angularity and puffiness, which can be severe with both 'Sunray' and 'Jubilee'. Some susceptibility to graywall has been observed in 'Mountain Gold' under conditions highly conducive to development of the disorder.

'Mountain Gold' offers growers an improved, disease-resistant cultivar more adaptable to the short stake, string weave system of culture than the tall growing, indeterminate cultivars 'Sunray' and 'Jubilee'. It also offers the potential for long distance shipment of fruit, which has not been possible with previous yellow-fruited cultivars because of their soft fruit.

Breeder seed of 'Mountain Gold' will be maintained by the North Carolina Agricultural Research Service. Limited seed of 'Mountain Gold' is being produced by the North Carolina Foundation Seed Producers, Inc., P. O. Box 33245, Method Station, Raleigh, NC 27607-0245 to be made available for sale in 1991. Small samples for trial and breeding purposes are available from R. G. Gardner, Mountain Horticultural Crops Research and Extension Center, Fletcher, NC 28732-9216. 'Mountain Gold' will be released on a restricted basis to one or more seed companies and should be available through commercial seed channels in 1992. Application is being made for a Plant Variety Protection Certificate.

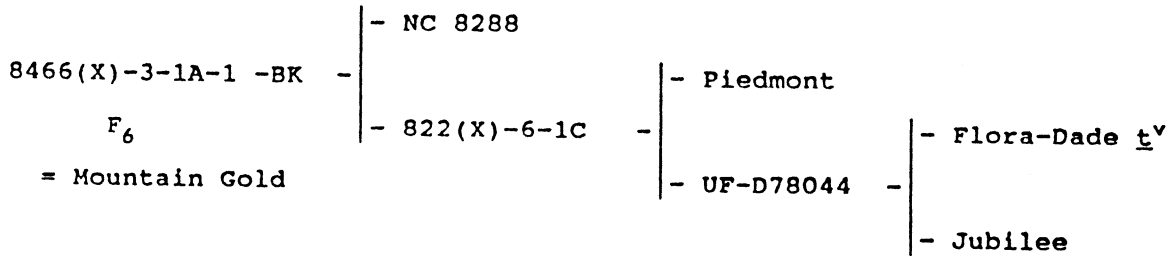


Fig. 1. Pedigree of 'Mountain Gold' tomato.

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