

calyx (eye) is usually open and is set in a deep and wide cavity with prominent five ribs at the opening.

TREE CHARACTERS

Chaubattia Anupam is a healthy, vigorous, highly productive and regular bearing plant. The variety has been evaluated for five years at the Government Gardens, Chaubattia. The growth of the plant is upright with spreading or upright branches.

Stem and main branches are very stout, slender, smooth and ash colored. Lenticels are scattered and very closely placed.

Leaves are medium to large, lanceolate with wavy and dentate margins. Flowers are medium sized, light pink in color and spreading at the time of opening. Flowers appear very early, i.e., in the last week of March to first week of April. Fruits are ready for the harvest in the first week of July.

The Mark Apple Rootstock

ROBERT F. CARLSON¹

The Mark rootstock was selected 20 years ago from a group of seedlings obtained from open pollinated trees of M. 1 through 16, Robusta-5 and Alnarp-2. The flower parent of Mark was M. 9 and it was propagated and tested as Michigan Apple Clone 9 (MAC-9). The name Mark was coined to designate its place of origin, namely M for Michigan; A for apple; R for rootstock and K for klone. Since its selection, Mark has been tested for compatibility, dwarfing and precocity with McIntosh, Jonathan and Delicious (Red Prince strain).

Nomenclature: Over the years, clonal rootstocks have been designated by letters and numbers, such as EM-VII, more recently M. 7. This serves a good purpose while in the testing stages, but can lead to confusion in the nursery and grower trade. The East Malling Station in England has suggested that all fruit tree rootstock clones be given a name when released and introduced to the industry. For example, they have named one plum clone Pixy and a cherry clone Colt.

MARK CLONE DESCRIPTION

Leaves: Dark green, oval tapering toward apex with margins obtuse to sawtooth with a brownish, faintly tomentose petiole. Average leaf size varying from 30 mm wide to 60 mm long. The stipules are inconspicuous to small (Figure 1).

One year old stems: Bark gray/brown, slightly tomentose with widely spaced, inconspicuous yellow/whitish lenticles.

Flowers: Medium apple-size white flowers with faint reddish streaks toward base of petals.

Fruit: Small, medium oblong to round fruit, red to scarlet-red in color with stripes, tasteless, of no commercial value, but serves a purpose in identification of the clone.

Propagation characteristics: Mark propagates readily in stoolbeds, having some of the M. 9 spreading (slightly away from upright) characteristics; however, as liners it grows straight. It is productive in the stoolbed, com-

¹Department of Horticulture, Michigan State University, East Lansing, MI 48824.

paring favorably with MM 106 in this respect. It, also, propagates fairly well both from hard-wood and soft-wood cuttings, comparing in this respect to M. 7.

Cultivar bud compatibility: No bud incompatibility has been noted either in nursery or orchard trees with several commercial cultivars. Nursery trees propagated from uniform rooted clones compare in quality to those prepared from other apple clones of the M. or MM series.

Performance of apple cultivars budded on Mark rootstock: Although most testing to date has been with McIntosh, Jonathan and Red Prince Delicious, other cultivars have been tested. The most extensive testing has been the 1970 planting with the non-spur Red Prince on several of the MAC clones, including Mark.

Tree stability: Trees on Mark are very strongly anchored and non-suckering. Delicious on Mark trees for the past nine years have been exposed to strong, prevailing winds without any noticeable leaning.

Precocity: In precocity, Mark compares to that of M. 9, initiating flower buds on cultivars the first and second year in the orchard.

Productivity: Cultivars on Mark rootstock are very productive and show noted superiority toward annual production under varying conditions.

Longevity: To date no tree loss has been recorded in orchard tests with several scion cultivars.

Virus status: Since this clone Mark was selected as a seedling, the probability of carrying a virus is less than five percent. However, indexing it on Spy 227, early checks indicate that it has chlorotic leaf spot and mosaic. Although the clone is being increased with this in mind, Mark is being cleaned from any virus that it may contain.

Dwarfing: Mark is a dwarf rootstock having a vigor range of M. 9 to M. 26. On a light, sandy soil it produces a free-standing tree the size of M. 9; whereas, on a stronger, clay loam soil a free-standing tree slightly larger than on M. 26.

1981 MEETING

AMERICAN POMOLOGICAL SOCIETY

AUGUST 8 - 14, 1981

MARRIOTT HOTEL — ATLANTA, GEORGIA

Concurrently with

AMERICAN SOCIETY FOR HORTICULTURAL SCIENCE