



Research Note

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Evaluation of hybrids with high yield and yield attributes in bitter gourd (*Momordica charantia* L.)

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ABSTRACT : The hybrids of bitter gourd were evaluated for high yield and yield attributes. The research study were carried out at Western Block of Horticultural College and Research Institute, Periyakulam. Five hybrids were used for evaluation in the study. Among the entries evaluated, 09/BIGHY B4 recorded earlier flowering (78 days) followed by the entry 09/BIGHYB7 (80 days) and PDM(80 days) which were at par. The fruit length was high in 09/BIGHYB7 while increased fruit weight was recorded in MC 84. Number of fruits per plot was high in the entry 09/BIGHYB4. The entry MC 84 recorded increased fruit weight, highest yield per plot and total yield per hectare. The entry 09/BIGHY B4 can be selected for earliness. The hybrids 09/BIGHYB7 and MC 84 also proved to be superior hybrids and hence, can be selected for further use in breeding programme.

KEY WORDS : Bitter gourd, Evaluation, Hybrids, Yield

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Bitter gourd (*Momordica charantia* L.) is one of the nutritionally and commercially important cucurbitaceous vegetables. It is one of the most popular vegetable in China, Taiwan, Vietnam, Thailand, India and Philippines. Bitter gourd also called bitter melon, has an acquired taste. The plant is grown mainly for the immature fruits although the young leaves and tips are edible. Bitter gourd being a cross pollinated crop offers scope for heterosis breeding. High heterotic vigour for yield in bitter gourd had been reported earlier by Tewari and Ram. (2001). The present investigation was, hence, taken up to evaluate bitter gourd hybrids for higher yield and other yield attributing characters.

The experiment was carried out at Western Block of Horticultural College and Research Institute, Periyakulam. Five hybrids were used for evaluation in the study. The varietal trial were carried out in RBD with three replications with a spacing of 3.0 x 0.5 m. The plot size adopted was 10 x 3.0 m. Observations were recorded on vegetative and yield characters. Cultural practices were followed as per the package of practices. Observations were recorded from 5 randomly selected plants in each genotype. The statistical analysis was done as per the method suggested by Panse and Sukhatme (1967).

Among the entries evaluated, 09/BIGHY B4 recorded earlier flowering (78 days) followed by the entry 09/BIGHYB7 (80 days) and PDM(80 days) which were at par. The flowering was delayed in MC 84(88 days) (Table 1). The fruit length was high in 09/BIGHY B7 (38.10) followed by MC84 which recorded the fruit length of 17.18 cm. Decreased fruit length was recorded in the entry 09/BIGHY B5(13.42 cm). Similar findings were reported by Sit and Sirohi (2002) and Janakiram, and Sirohi (1992) in bitter gourd and Maurya *et al.* (1993), Pitchaimuthu (1991) in bottle gourd.

Increased fruit weight (122.2 g) was recorded in MC 84 followed by PDM (102.9 g), The fruit weight was reduced in the entry 09/BIGHY B7 (80.6 g). Both the entry 09/BIGHY B4 and PDM were at par. Both recorded a fruit weight of 102.9 g. Number of fruits per plot (108) was high in the entry 09/BIGHY B4 followed by MC 84 (96 nos). The results are in consonance with the findings of Chaubey and Ram (2004), Sirohi and Choudhury (2000) and Tewari and Ram (2001) in bitter gourd.

The entry MC 84 recorded the highest yield per plot (11.82 kg) and total yield per hectare (87.55 q) followed by 09/BIGHY B4 which recorded the highest yield per plot (10.80 kg) and total yield per hectare (81.56 q). The entry 09/BIGHY B7 recorded the lowest yield per plot (5.90 kg) and decreased