

Abstracts

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TS1: P-13

Developing monoecious line of muskmelon (*Cucumis melo* L.)

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Muskmelon (*Cucumis melo* L.) is an important cucurbitaceous crop grown as a 'Dessert Crop' throughout the warmer parts of world. Being cross pollinated crop, it showed heterosis for earliness, fruit size, fruit weight, flesh thickness, total soluble solids, fruit flavour, transportability and fruit yield. Presently, the main attention is on the development of F_1 hybrids due to high yield, uniform fruit shape, size as well as consistently excellent quality. Muskmelon is predominantly andromonoecious in sex expression however, monoecious sex form is also found in natural populations (More *et al.*, 1980 and Wall, 1967). The cost of hybrid seed production is high due to emasculation in the available andromonoecious cultivars of muskmelon. The use of genetic male sterile lines also involves difficulties in identification and rouging of 50% male fertile plants and maintenance of male sterile plants which makes the hybrid seed production costly. Therefore, the breeders are interested in the development of female parent with monoecious sex expression to minimize the cost of hybrid production in muskmelon.

In the course of investigations on evaluation and characterization of muskmelon genotypes at CIAH, Bikaner, a monoecious land race was identified from the genetic stock collected from Sirohi district of Rajasthan and designated as AHMM/BR-8. The monoecious plants were self pollinated and the seeds were collected separately. The individual plant progenies of selected plants were raised for generation advancement. Single plant selection was exercised based on earliness, fruit size, flesh colour and TSS. The obtained population was also tested for stability and observed monoecious sex form in all plants. Plants of this line produced round fruits with salmon orange coloured flesh of 3.2-4.0 cm thickness, 10.8-11.3 TSS and 478-570 g/cm² hardness. Plants start to produce female flowers in 45-48 days after sowing. The number of fruits/ plant was found to be 3.47-4.27 weighing 0.8-1.10 kg which develop full slip at ripening. The biochemical analysis was also done for total sugar (336.9 mg/g), tannin content (0.12 mg/g), phenol content (34.7 mg/g) and flavonoid content (1.05 mg/g) on dry weight basis. Thus, the presence of stable monoecious sex form in this line could be utilized in F_1 hybrid production of muskmelon.

TS1: P-14

Amaranth an underutilized crop potential food crops of tomorrow's world

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Neglected and underutilized plants are those that could be and, in many cases, historically have been used for food and other uses on a larger scale. Such crop species have also been described as "minor", "orphan", "promising" and "little-used". They continue to play an important role in the subsistence and economy of poor people throughout the developing world, particularly in the agro biodiversity-rich tropics. As in near future, there is problem of food security then up to some extent the under utilized crops are fulfill the food requirement.