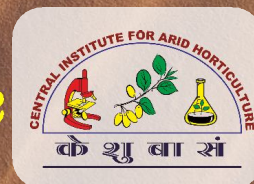


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2.15

Maintenance and evaluation of native Round melon germplasm under Hot arid environment

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Round melon commonly known as tinda / tensi (*Praecitrullus fistulosus*) is a potential arid cucurbit. In general, dark-green and whitish-green colour fruit type landraces are found growing in traditional cropping under rainfed situations. The tender fruit quality of dark green colour type of local variety (popularly known as Bikaneri Green) is very poor but it is adapted to drought and abiotic stresses including high temperature conditions (44°C) of arid region. The tender fruit quality of whitish-green colour type is good for vegetable culinary but it is highly susceptible to high temperature (40–42°C) and abiotic stresses, in addition the plants exhibited slow initial growth, susceptible to mites, viral diseases and high level of fruit fly infestation. The native germplasm was initially collected during 1995 and 1996 from hot spot areas of Nagaur, Churu and Bikaner districts of Rajasthan as regional diversity. The primary material was used over the years for purification and two groups *i.e.* AHRM-1 (whitish green type fruits) and AHRM-2 (dark green type fruits) were formed at CIAH and this is native genetic resource for conservation and utilized in hybridization. During 2017, the maintained germplasm was evaluated for 25 parameters and range for characters such as leaf length (7.49–15.38 cm), leaf width (8.84–18.92 cm), ovary length (0.59–0.84 cm), ovary width (0.46–0.73 cm), fruit length (3.52–5.02 cm), fruit diameter (4.67–7.11 cm), tender fruit weight (44.82–120.73 g) and number of fruits / plant (8.47–17.53) were taken for understanding distinctiveness.

2.16

Correlation and Path coefficient analysis in twenty Ber genotypes under Semi-arid conditions of Rajasthan

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A study was undertaken to analyses the correlation and path coefficient for different characters in twenty ber (*Ziziphus mauritiana* Lamk.) genotypes grown at Asalpur Farm, Department of Horticulture, SKN College of Agriculture, Jobner during two consecutive years of 2014-15 and 2015-16. In general, the genotypic correlation coefficients were higher than the respective phenotypic correlations which might be from modifying effect of environment on the association of characters at genotypic level. Further, the fruit yield/ tree showed significant positive correlation at phenotypic level with fruit set, fruit retention, number of fruit pickings, pulp weight, specific gravity, fruit breadth, fruit weight, pulp: stone ratio, fruit length, plant spread (E-W), duration of fruiting, stone weight, plant spread (N-S), total acidity and canopy volume. However it had significant negative correlation with fruit drop, TSS: acid ratio, total days taken to first harvesting, total days taken to complete harvesting and reducing sugar in fruit. Similarly, path coefficient analysis at phenotypic level revealed that total days taken to first harvesting had highest positive direct effect on fruit yield/ tree followed by pulp weight, fruit length, specific gravity, duration of fruiting, fruit breadth, fruit set, volume of fruit, plant height, fruit weight, stem girth, canopy volume, non-reducing sugar, ascorbic acid content, reducing sugar and duration of flowering. These characters may be simultaneously selected to develop the high yielding varieties as they exerted high positive direct effect as well as had positive association with fruit yield.