

Variation in physico-chemical characters guava (*Psidium guajava* L.) accessions surveyed and collected from Gujarat

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Guava is one of the main fruit crops cultivated in Gujarat. It is mainly grown in Ahmadabad, Bhavnagar, Rajkot and Bharuch districts of Gujarat with a total production 140.80 thousand tonnes from an area of 10.80 thousand ha with an average productivity of 13.0 t/ha. Most of the planted guava orchards in this region are of seedling origin; therefore, there is wide genetic and morphological variability in existing population. Such diversity can be made useful through selection and evaluation of elite genetic material having comparative advantages to improve the productivity of this fruit crop. Assessment of genetic variability is a prerequisite for identifying potential parents in breeding programmes, germplasm conservation and development of improved types. In view of this, 25 guava genotypes collected from different locations of Gujarat were studied for their physico-chemical characters during 2016-2017. Fruit morphological characters showed wide range of variability in terms of fruit shape, peel colour, pulp colour, shape at stalk end, calyx cavity, longitudinal ridges on fruit surface and relief of fruit surface. The pulp colour varied as white in CHESG-1, CHESG-3, CHESG-6, CHESG-7, CHESG-8, CHESG-10 and CHESG-22; red in CHESG-2; creamish white in CHESG-4, CHESG-5, CHESG-17, CHESG-19; creamish in CHESG-23; creamish light pink in CHESG-25; pink in CHESG-9; light pink in CHESG-12, CHESG-14; pale pink in CHESG-15, CHESG-20, CHESG-21, CHESG-24 and yellow white in CHESG-18. Results of study revealed that average fruit weight ranged from 53.50 g in CHESG-12 to 318.50 g in CHESG-8; fruit length 4.09 cm in CHESG-22 to 9.95 cm in CHESG-21, fruit width 4.30 cm in CHESG-12 to 8.25 cm in CHESG-8; length of seed core 2.5 cm in CHESG-12 to 5.45 cm in CHESG-5; pulp thickness 1.20 cm in CHESG-9 to 2.30 cm in CHESG-8; number of seed/fruit 55.30 to 609 and seed weight/fruit 0.94 g in CHESG-12 to 9.12 g in CHESG-20. Among the studied genotypes, the chemical composition also varied significantly. TSS ranged from 10.80°B in CHESG-19 to 16.33°B in CHESG-24; titrable 0.28% in CHESG-5 to 0.70% in CHESG-24; TSS:acid 20.37 in CHESG-19 to 39.82 in CHESG-5; ascorbic acid (mg/100g) 136.50 in CHESG-22 to 280.50 in CHESG-7 and CHESG-7 had the maximum reducing (7.61%) and total sugar 5.70 % in CHESG-12 to 9.78% in CHESG-7. Wide range of variability in physico-chemical characters of guava accessions indicated the scope for individual plant selection based on these parameters.



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