



Variability studies in phenological characters of guava genotypes

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ABSTRACT

The present investigation was carried out on ten genotypes of guava viz., GRS₁, GRS₂, GRS₃, GRS₄, GWS₅, GWS₆, GWS₇, GWS₈, GWS₉ and L-49 during winter season of 2009-10 in randomized block design with three replications of each genotype. The results were obtained for the phenological characters like, tree habit, mature leaf colour, leaf apex, flowering habit, colour of fruit, colour of pulp and shape of fruit were visually observed. Spreading tree habit and medium dense canopy type was observed in most of the genotypes of guava studied i.e. GWS₅, GWS₆, GWS₇, GWS₈ and GWS₉, genotypes GWS₅, GWS₇, GWS₈ and GWS₉ had pale green colour of leaves. Leaf apex was obtuse in genotypes viz., GRS₄, GWS₅, GWS₆, GWS₇, GWS₈, GWS₉ and L-49 whereas, it was acute in GRS₁, GRS₂ and GRS₃. Flowering habit was found solitary in all genotypes viz., GRS₁, GRS₂, GRS₃, GRS₄, GWS₅, GWS₆, GWS₇, GWS₈, GWS₉ and L-49. The fruits of genotypes GRS₁ and GRS₃ were light yellow in colour, whereas, genotypes GRS₄ and GRS₂ showed dark yellow coloured fruits. Genotypes GWS₅ and GWS₈ showed whitish green coloured fruits. Genotypes GWS₆, GWS₇, GWS₉ and L-49 showed whitish yellow coloured fruits. Most of the genotypes viz., GWS₅, GWS₆, GWS₇, GWS₈, GWS₉ and L-49 had white pulp colour. Light pink colour of pulp was observed in genotypes GRS₁, GRS₂ and GRS₃, whereas, it was medium dark pink in GRS₄ genotype. The genotypes viz., GRS₁, GRS₂ and GRS₄ noted cuneate shaped fruits. The genotypes GWS₅, GWS₆, GWS₈ and GWS₉ had oblong shaped fruits, while, genotypes GRS₃, GWS₇ and L-49 had round shaped fruit. Soft seeds were present in GRS₄ genotype. Hard seeds were found in genotypes GWS₅, GWS₆, GWS₇, GWS₈, GWS₉ and L-49. While, rest of the genotypes viz., GRS₁, GRS₂ and GRS₃ had intermediate seed hardness.

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Guava (*Psidium guajava* L.) is one of the most important fruit crop in India after mango, banana and citrus. It is native to tropical America which was introduced in India in the 17th century by Portuguese. It is a delicious fruit rich in ascorbic acid, sugars, pectin and also a fair source of vitamin A and vitamin B along with the minerals viz., iron, calcium and phosphorus. The guava is a large shrub or small spreading tree that may grow up to 10 m in height with fairly thin trunk and scaly multicolored bark. Young shoots are quadrangular with almost sessile, opposite, light green, simple, oval leaves. Flowers are white epigenous and develop on current growth in cyme or solitary in leaf axils. The flowers produce an abundance of pollen (Hamilton and Seagrave, 1954). Fruits are round to pyriform and vary drastically in size. In view of this, experiment study was conducted with the aim to study the variability among the various guava genotypes in respect of phenological characters.

MATERIALS AND METHODS

The experiment was conducted at Instructional-cum-Research Farm, Department of Horticulture, College of Agriculture, Latur on well established five years old orchard of guava planted at 5.0 X 5.0 m. Total ten genotypes were identified for study viz., GRS₁, GRS₂, GRS₃, GRS₄, GWS₅, GWS₆, GWS₇, GWS₈, GWS₉ and L-49. Among them four genotypes were red fleshed selection (GRS) and five genotypes were white fleshed selection (GWS) and one was Sardar as a control. The recommended package of agronomical practices and plant protection measures obligatory to raise a good crop were followed. The experiment was laid out in Randomized Block Design (RBD) with three replications as per the procedure outlined by Panse and Sukhatme (1967).

RESULTS AND DISCUSSION

The results obtained from the present investigation