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Studies on variability in jamun (*Syzygium cuminii Skeels*) from Gujarat

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Abstract **:** Jamun is found scattered throughout Gujarat. A survey was carried out to identify the elite genotypes. Flowering, fruiting and fruit quality attributes of sixteen genotypes were studied. The study revealed that there was a wide variation among the genotypes. Earliest flowering (Mid February) took place in GJ-1, GJ-2, GJ-3 and GJ-10. Maximum panicle length (15.50 cm) and number of fruits per panicle (28.00) were found in GJ-2. Collection number Gj-3, Gj-2, GJ-10 and GJ-14 have been found earliest (First Week May) in ripening period, while GJ-16and GJ-13 ripened at the last (Last June). Maximum yield per plant was recorded in GJ-2 (152.00 kg). Individual fruit weight ranged from 9.80 to 21.50 g, length from 1.98 to 3.20 cm and pulp percentage from 79.67 to 86.37. There was a wide variation in chemical characters also. T.S.S. per cent varied from 9.60 to 12.30, total sugar 7.40 to 9.14% and vitamin C 33.00 to 43.00 mg/100g. On the basis of overall performance GJ-2, GJ-3 and GJ-8 were found to be promising among all the genotypes.

Key words **:** Jamun, Genetic resources, Panicle length, Fruit weight

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Jamun (*Syzygium cumini* Skeels) is an under exploited indigenous fruit tree of India. It is a hardy crop and can tolerate drought as well as heavy rainfall conditions. The tree is evergreen but sheds its leaves under drought conditions. It produces purple delicious fruits with prominent seeds. Because of its medicinal values and suitability for planting as wind brake, its demand is increasing day by day and that will require selected plants of superior quality and high yield potential (Prince *et al.*, 1998). As majority of jamun trees are of seedling origin, they show tremendous variation in their morphology and physico-chemical attributes (Keskar *et al*; 1989a, Geetha *et al*., 1992, shete *et al*., 1999). The extent of variability increases when this highly cross-pollinated plant multiplied sexually. Therefore, studies were conducted to understand the variability in morphomatric and physico-chemical traits of different genotypes so that the horticulturlly important germplasm could be protected from being eroded and at the same time their utilization is also maximized.

RESEARCH METHODS

The Jamun trees are found scattered through out Gujarat from cultivable land to waste lands. An extensive survey was made in different parts of Gujarat during fruiting season of 2001and 2002 to identify elite types of germplasm among its population. The observations were recorded on flowering, fruiting and fruit quality attributes for two consecutive years and pooled data were presented in the tables. Twenty healthy panicles in each tree were randomly selected to record time of flowering, panicle length and number of fruits per panicle. The ripe fruits differing in shape, size and appearance of various genotypes were collected to study the variability in physico - chemical attributes. The trees were free from pests and diseases. Firm and healthy fruits of sixteen land races were harvested. T.S.S. and titratable acidity were determined by standard methods. Vitamin C and sugars were analyzed by the method advocated by AOAC, 1980.

RESEARCH FINDINGS AND DISCUSSION

Perusal of the information collected from the studies on genetic resources of Jamun in Gujarat revealed that the different trees differ widely in bearing behaviour. It is evident from the Table1 that peak period of flowering was earliest (Mid