# A key for identification of pomegranate cultivars

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## ABSTRACT

A key for identification of 12 leading commercial Indian pomegranate (*Punica granatum* L.) cultivars *viz.,* Bassein Seedless, Dholaka, Ganesh, G – 137, Jalore seedless, Jodhpur Red, Jyoti, Mridula, Muskat, P – 23, P -26 and Yercaus Local based on morphological characters was prepared. Qualitative characters, being more stable and dependable than quantative ones have been given prior importance. Seed hardness and seed shape were most important characters were used as primary and secondary characters, respectively. Colour of various organs were useful in preparation of a key.

**Key words :** Pomegranate, Key, Identification

**P**omegranate (*Punica grantum* L.) an important fruits commands a major share in foreign exchange. A taxonomic study becomes more and more reliable and useful when more and more number of characters are studied by the taxonomist. Of course, while doing so, the stability of the character is also important. And therefore, search for more characters obviously increase the possibility of having more number of useful/ stable characters. This aspect can be handled easily at higher level of taxa where the differences in OTUs (Operational Taxonomic Units) are striking. However, it is rather difficult at lower levels such as cultivars where the differences are very minute. Desai (1996) stated that, pomegranate improvement programme by selection as also by hybridization generates large progeny; but genotype vary minutely for many characters and it goes difficult to identify them.

Cultivars identification in crop like pomegranate is very difficult, where cultivar differences are minute, but it is essential too. Recent advances in biotechnology offers tools for cultivar identification. However, for general workers and many of the users of such knowledge, the importance of morphological expression remains unquestioned. Pareek (1982) stated that "Although a rich germplasm has been collected at different centres of All India Co-ordinated Research Project on Arid Zone Fruits, no reliable documents are still available on typical cultivar characteristics and hence, it is very difficult to identify a cultivar on present information". In present study, several new characters were identified and this communication deals with identification of 12 Indian cultivars of pomegranate on the basis of a newly devised key. Such a key is of considerable utility for Horticulturist and systematic pomologists.

## MATERIALS AND METHODS

Twelve leading commercial Indian Pomegrante cultivars *viz.,* Bassein Seedless, Dholka, Ganesh, G – 137, Jalore Seedless, Jodhpur Red, Jyoti, Mridula, Muskat, P - 23, P -26 and Yeacaud Local were used in present studies. Morphological characters were recorded. For recording colour of various organs, it was done with Methuen Hand Book of Colour (Kornerup and Wanscher, 1978).

## RESULTS AND DISCUSSION

For proper systematic study to enable one to make identification of the individuals, meaningful selection of characters is essential. Any character may be useful for deciding the relationship among the OUTs. However, for practical utility in –field identification, the ease of scoring a character and its visibility assume paramount importance. Some characters stand out conspicuously and strikingly. Such characters become more valuable than the others while preparing a key. A combination of several characters was more reliable to establish the identity of a pomegranate cultivar rather than depending upon single character. More so the qualitative characters, being more stable and dependable than quantitative ones, have been given the prior importance in present study.

Seed hardness was used as primary character. The 12 cultivars could be separated into two distinct groups on the basis of this important character. The cultivars Bassein Seedless, Dholka, Ganesh, G – 137, Jalore Seedless, Jyoti and Mridula were soft seeded, while cultivars Jodhpur Red, Muskat, P -23, P -26 and Yeacaud Local had medium- hard to hard seeds.

Seed shape is another most important character for classification of cultivars. The cultivars could be classified in three categories as conspicuously pyramidal – clear