

## Exploring promising diversity in acid lime

There is a wide genetic diversity in growth habit, leaf morphological characters, bearing habit, fruit physico-chemical characters and incidence of citrus canker in acid lime, offering immense opportunity to explore germplasm for superior genotypes from existing population growing under semi-arid climatic conditions of central Gujarat. Genetic diversity in acid lime has got immense potential to raise quality fruit production and productivity, yet the conservation and use of these genotypes have not yet been carried out extensively. In absence of identification, conservation and utilization of indigenous acid lime genotypes, losses of such valuable genotypes occurs and will continue to occur. Therefore, identification of elite valuable genotypes, their proper use and conservation of these valuable unique resources is essential to increase quality production for domestic consumption and export. The acid lime germplasm were explored for *ex-situ* conservation and characterization at CHES, Godhra. Some of the local genotypes of acid lime were elite and these genotypes could be recommended for commercial cultivation after evaluation.

**A**CID lime is one of the important cash crops grown in semi-arid areas of central Gujarat. The total area, production and productivity of acid lime in Gujarat are 0.29 m ha, 2.84 mt and 9.90 t/ha. Till date, few improved cultivars have been developed and those do not perform well due to one or another reason in a particular geographical region. This may be attributed to lack of certain desirable qualities and tolerance to biotic and abiotic stresses. Since, genetic diversity is one of the vital source of crop improvement for developing promising varieties for various purposes, hence its collection, conservation and characterization which is an essential prelude for better selection was carried out under rainfed

conditions of semi-arid ecosystem during 2016-17, so as to identify and conserve the source of promising genes for its further utilization in creating better yield, quality and having high medicinal significance and resistance to abiotic stress through selection and hybridization. To address the issue of consistent loss of acid lime germplasm, it is better to establish field gene bank, so that available diversity could be preserved, simultaneously the desirable horticultural qualities could be used further in improvement programme. To generate information on genetic variability is of great importance for crop improvement programme. Greater is the variability in a population, greater the chance of effective selection for desirable types. In this respect, extensive survey of diversity rich

