Studies of different guava cultivars (*Psidium guajava* L.) for nutritional and livelihood security suited to degraded soils

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**ABSTRACT**: Guava trees are well adapted to a wide range of soil types including sands, loams, rock-based soils, muck degraded soils. A soil pH of 4.5 to 7 is ideal but plants do well in high pH soils (7-8.5) if supplied with chelated iron materials. Guava trees produced by air-layering or cuttings generally have a shallow root system with most roots within 12 to 18 inches (30-45 cm) of the soil surface. Three varieties, *viz.,* Lucknow-49, Allhabad safeda and Apple guava are of immense commercial importance but the physico-chemical studies of these varieties have not been taken up by any previous workers who have described various guava varieties. The present studies, therefore, provides a details information on physico-chemical characteristics of the varieties collected from the guava orchards of the fruits Research farm, Imalia, JNKVV, Jabalpur (M.P.). An investigation was carried out to evaluate the physical character *i.e.* weight, size length, diameter and specific gravity. Guava variety Allahabad safeda was found to top the list in relation to all the parameters and observed maximum values and proved significantly superior over both the varieties Lucknow-49 and Apple guava, respectively. Chemical composition of the fruits of Lucknow-49 showed superior with respect to pH, acidity, ascorbic acid, pectin, fibre, total soluble solid, total sugar, reducing and non-reducing sugars compared to Allahabad safeda and Apple guava. The above findings clearly indicate that the variety Lucknow-49 is to be the best variety with respect quality constituents required for making various guava processed products for nutritional and livelihood security.

**KEY WORDS**: Processed products, Physical parameter, Chemical composition, Reducing sugar, Non-reducing sugar