

# **GROWTH CHARACTERISTICS AND YIELD OF DOMESTICALLY COLLECTED AND INTRODUCED GAC (*Momordica cochinchinensis* (Lour) Spreng) VARIETIES IN DAKNONG PROVINCE**

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Gac (*Momordica cochinchinensis* (Lour) Spreng), is a perennial creeper plant, unisexual flower (male and female flowers on separate creeper). Being a valuable characteristic plant, Gac is increasingly released in the market, especially functional food and some medicinal products. Most of these products are exported to gain highly economic return. In Gac cultivation, besides yield, the critical role of  $\beta$ -caroten and Gac oil essence quality are leading criteria. Beside of cultivation techniques, variety is considered as a decided factor for Gac yield and quality.

The current Gac cultivation in Vietnam is still in small scale and most of growers do not have the origin of their Gac varieties. Gac is mainly grown by seed, collected from local market or current farms leading to low yield and poor quality. In southern provinces, especially in central highlands with large land areas and favorite ecological condition, but Gac cultivation has not been developed. It is, therefore, necessary to survey and evaluate growth characteristics and yield of the Gac collection to select suitable varieties for local ecological condition.



The survey results showed that there are great fluctuations of yield criteria, fruit weight and fruit numbers on plant of current Gac collection. Gac Nep Dak Lak, Dak Nong and Tay Ninh exhibited extra yield as well as fruit numbers in comparison with other Gac varieties. The yield of Gac Nep is highest with 17.8 tons/ha and fruit weight of 1.480 kg/fruit. Gac collected from Ha Noi has lower criteria in comparison with the rest and this is not suitable for varietal selection in the next stage.  $\beta$ -carotene content of the rest varieties is rather high as reach standard of quality for pharmaceutical material.

From the collected Gac varieties for growth ability, yield and fruit quality surveys, Dak Lak Gac, Nep Ninh Thuan and Nep Dak Nong have good growth and development abilities, high yield and fruit quality satisfying the demand for processing material. Simultaneously, these are also suitable for soil and climate condition in Dak Nong province