

## Breeding of Roselle ‘Taitung NO.6-Black Crystal’

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### Abstract

Roselle is an important special crops in Taitung county, and the main part to be utilized is the fleshy calyx. In order to enhance its high value application, the breeding goal was toward to high anthocyanin content. The variety was crossed between line A123 (♀, anthocyanin-rich calyx) and line A129 (♂, an upright plant and closely spaced calyx) in 2013. The hybrid progeny selected and fixed the traits by bulk method for eight generations, conforms to distinctness, uniformity and stability by DUS tests. The new variety named as ‘Taitung No. 6’ in 2021, with the trade name black crystal. The calyx of the variety was deep purple-red in color, upper side of fruit semi-open, and has excellent characteristics such as high yield, high anthocyanin content of calyx (30.6 mg/g DW), consistent calyx maturity, and suitable for one-time harvesting. It is an excellent source of anthocyanin raw material, making it a stable ingredient for the production of functional foods, enhanced the added value and a positive influence on the development of the roselle industry.

**Keywords:** Roselle, Calyx, Anthocyanins

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