

Title	Shallot (<i>Allium Ascalonicum</i>) Germplasm Collections and Genetic Diversity Study by Using SSR Markers
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ABSTRACT

Shallot (*Allium ascalonicum*) is one of the most economically important vegetable in Southeast Asia. Various types of shallot are grown in Thailand but the genetic diversity among them is still obscure. Therefore, this study was aimed to study genetic diversity of commercial and local shallot variety. The fifty nine accessions of shallot bulb from six provinces and have commercially accessions of shallot seed were collected. Results showed that shallot accessions had diverse morphological characteristics such as bulb color, multiple clove in bulb and single bulb. Genetic diversity analysis using SSR markers found that ten out of twenty one primers showed polymorphic bands ranged from 1-3 bands. The average number of alleles was 1.6 allele per marker and average gene diversity ranged from 0.18 to 0.85 with a mean of 0.47 ± 0.19 . Polymorphism information content (PIC) values ranged from -0.56 to 0.91 with an average of 0.50 ± 0.44 . In addition, analyses of antioxidants found that shallots grown from bulb had lower amounts of antioxidants than those grown from seed.