

Genetic Diversity of *I. tinctoria* L. as Natural Batik Dye Based on Morphological Characters

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Abstract *Indigofera tinctoria* is one of the most important species frequently used to produce natural blue dye commercially. The leafy twigs are the main sources of indigo dye use since very ancient time for dyeing textile blue. The source of blue colour is indigo, derived from indican. Some communities had been used as a dye since 352-395 AD in Indonesia. The aims of this research were: to analyze morphological characters of *Indigofera* and studied the relationships among *Indigofera* species based on morphological data. Forty-nine samples of *I. tinctoria* L. were collected from 37 locations in Java and Madura islands. The results revealed that the characters length of petiole, the color of dried foliage upper surface, the color of dried foliage lower surface, crown shape, vexillum shape, indumentum bract, anther trichome, elevation and soil pH can group four accessions. The similarity value among accessions was 50% and divided *I. Tinctoria* accessions into four groups in accordance with the sampling sites.

Keyword: blue dye, diversity, indigo, indicant, *Indigofera*, morphological characters

Penanya:

Dorly

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Pertanyaan:

- a. Sudahkah *Tinctoria* dibudidayakan?
- b. Apakah ada karakter dari daun *Tinctoria* sebagai penanda penghasil warna biru?

Jawaban:

- a. Akan dibudidayakan, karena untuk tanaman *Tinctoria* sendiri bisa hidup dengan mudah di daerah Jawa, dan tetap hidup juga meski pada lingkungan yang kering. Untuk memperbanyak tidak bisa dilakukan secara vegetative, melainkan menggunakan biji (secara generative)
- b. Penanda warna biru pada daun menggunakan color cat untuk tanaman