

**Sistem Klasifikasi Jenis Pohon Mangga Berdasarkan Bentuk dan Tekstur
Daun Menggunakan Metode *Backpropagation***

*Mango Tree Type Classification System Based on Leaf Shape and Texture Using
Backpropagation Method*

Raya Akbar Jaya

Study Program of Informatics Engineering

Majoring of Information Technology

Program Studi Teknik Informatika

Jurusan Teknologi Informasi

ABSTRACT

Mango trees are high-level plants whose trunk structure (habitus) belongs to the arboreus group, namely woody plants that have a stem height of more than 5 m, even reaching a height of 10-40 m. The community distinguishes between types of mangoes by looking at the characteristics of the fruit, while mangoes require sufficient time. long to bear fruit. Besides being able to be distinguished by the characteristics of the fruit, mangoes can also be distinguished based on the shape and texture of the leaves because mango leaves have variations in terms of shape, size and color of the leaves, which indicates a fairly wide genetic diversity. Mango tree species classification has been done manually and the possibility of prediction error is also greater, because mango tree species are difficult to distinguish with the naked eye, so we need a system that can classify mango species computerized (using computer technology) such as digital image processing. Therefore, the researchers created a system with the title Mango Tree Type Classification System Based on Leaf Shape and Texture Using Neural Networks. In this study, the input used was 22 features, namely length, width, area, perimeter, metric, eccentricity, asm 0°, contrast 0°, idm 0°, entropy 0°, asm 45°, contrast 45°, idm 45°, entropy 45°, asm 90°, contrast 90°, idm 90°, entropy 90°, asm 135°, contrast 135°, idm is 135°, and entropy is 135°. The results of this study indicate that the system accuracy level is 74.67% in the testing program and 80% accuracy in the training program.

Key words : *Mango trees, Backpropagation Neural Network, Shape Feature, Texture Feature*