Decision Support System for Mangosteen Agroindustry Development  
(case study in Kabupaten Bogor, West Java)

Andri Fauzan Rachman and Eriyatno 
Department of Agroindustrial Technology, Faculty of Agricultural Technology, Bogor Agricultural University, IPB Darmaga Campus, PO BOX 220 Bogor, West Java, Indonesia. 
email: andri.fauzan11@yahoo.com

ABSTRACT
Mangosteen has become the Queen of commodities to export fresh fruit to foreign countries. But the numbers are still about 20% of the total production in Indonesia is mostly caused by low quality of the fruit. For that, they need diversified commodities processed mangosteen products. The objectives of this research to develop a model of decision support system for mangosteen agroindustry development in bogor district and recommend a strategy for planning and development of the agroindustry to the government of Bogor district and mangosteen prospective employers. Decision support system for mangosteen agroindustry development implemented into a computer program package called mangosteen 1.0 by using Pascal programming language in Embarcadero Delphi XE which consists of six models, including model of prospective product, site analysis model, model of the mangosteen cultivation financial feasibility, model of agro-industry financial feasibility, and model of mangosteen development strategy. Decision support system using the comparison eksponensial method (MPE), and analitical Hierarchy Process method (AHP). This mangosteen agro-industrial is plan to be located in Dramaga based on site selection using MPE method with a capacity of 50,000 bottles of mangosteen xanthone per month. This research programme shows that the mangosteen agro-industrial of xanthone is feasible with NPV Rp. 8,804,311,994, IRR 52%, Pay Back Period (PBP) 3 years and 3 months, and B/C Ratio 2.76. 

Keywords: decision support systems, mangosteen, xanthone, AHP method