TREES AUGUSTINE PATTIASINA. Investment Analysis of Nipa Palm (Nypa fruticans) Development in Supporting Rural Energy Self-reliance in Bintuni Bay District West Papua Province (RITA NURMALINA as a Chairman and ANNA FARIYANTI as a Member of the Advisory Committee).

Nipa palm is one plant that can be used to produce bioethanol. Nipa palm development investment planning needs to be done well because of the complexity of investment issues in the Bintuni Bay, such as the high cost of investment. The aims of this study were to (1) analyze the feasibility of non-financial development of nipa palm, (2) analyze the financial and economic feasibility development of nipa palm from farming subsystem to processing industry subsystem in supporting self-reliance in rural energy in Bintuni Bay, (3) analyze the best alternative in various scenarios of nipa palm development, and (4) analyze the impact changes in output price, input, and labor on investment feasibility development of nipa palm. Cost Benefit Analysis was performed to calculate the financial and economic feasibility. Results showed that (1) nipa palm development in supporting rural energy self-reliance is feasible based on non-financial aspects, (2) nipa palm development of farming subsystem to processing industry subsystem is feasible based on financial and economic analysis, except for bioethanol plant with a capacity of 100 liters per day at 13% discount rate, (3) according to analysis of various scenarios, all alternatives are feasible and the best alternative is tapping nipa palm and plant bioethanol 1,000 liters per day, and (4) sensitivity analysis showed that bioethanol price increase is more sensitive to changes in feasibility levels.

Keywords : nipa palm, financial feasibility, economic feasibility, cost benefit analysis