

6. ECONOMIC ANALYSIS OF RUBBER PLANTATION WASTES

Detailed economic analysis is given in Appendix A. It was analysed that the annualized capital cost was estimated at 13,458 Baht/year. The annual operating cost depends on the size of the screw press. The sizes of the screw presses selected for the analysis are 20 and 4 kW. This will effect the total annual cost as summarized in Table 6.

Table 6**Annualized Cost of Waste Acquisition and Densification**

Annualized capital cost independent of size of the screw press (see Appendix A). Assume the rubber leaves are obtained free of charge.

Power of press (kW)	ACC (Baht)	AOC (Baht)	Total annual cost (Baht)	Working period (month/year)
20*	13,458	51,588	65,046	2.5
4*	13,458	44,907	58,365	12.5

ACC = Annualized Capital Cost.

AOC = Annual Operating Cost.

** Electricity cost 2.43 Baht/kW-h*

The annual income was estimated at 19,888 Baht. It is obvious that the waste utilization is not economically feasible if electricity gets involve in the processes. If a diesel engine is a prime mover the break even cost for the fuel is -13,643 Baht/year which is not possible. It can be concluded that mechanization for the waste collection-densification is technically possible but is not economically feasible.