

Study of "Green Manufacturing" on Rural Crystal Coconut Sugar SMEs

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Abstract	<p>Crystal coconut sugar production will produce waste which will have an impact on environmental pollution. Waste generated is liquid waste and solid waste. Waste reduction handling can be applied to "green manufacturing" principle. Research aims are: (1) identify waste generated, (2) determine green manufacturing opportunities, (3) green manufacturing opportunities analyze feasibility, and (4) green manufacturing implementation determine priority. Research phase includes: (1) quick scan analysis, (2) material, energy and waste flows identification, (3) alternative green manufacturing opportunities, (4) feasibility analysis (financial, technical and environmental), and (5) determination green manufacturing implementing priority. Results showed that ant sugar production produces waste in excrement on sap form, ashes from combustion, energy loss, crystal nuclei, and spilled sugar. Green manufacturing alternatives that are technically, environmentally and financially feasible are ash into inorganic fertilizers utilization, replacing cooking furnace, modifying drying equipment, replacing process materials, repairing and modifying screening, drying and packaging equipment. Implementing green manufacturing priority alternatives indicates that main alternatives to implemented are repairs and screening, drying and packaging equipment modifications which are considered technical and technological capabilities good in criteria, finance, human resources (HR), and environment. These results indicate that "Green Manufacturing" in rural SMEs crystal coconut sugar to increase global competitiveness "Green Economy".</p>
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Author	ROPIUDIN, S.TP, M.Si