

**PEMODELAN SISTEM DINAMIS PRODUKSI GULA PASIR PADA
PABRIK GULA GENDING PTPN XI DAN KONSTRIBUSINYA
TERHADAP KEBUTUHAN
GULA NASIONAL**

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ABSTRACT

Probolinggo is one of the regions that is quite advanced in the industrial sector. One of the industries in the Probolinggo area is a state-owned company (BUMN), an agribusiness plantation with sugar sugar core business. The company is even the only SOE that is engaged in a single commodity, namely sugar with a contribution of around 16-18% to national production. Most of the raw material comes from the people's sugar cane which is cultivated by local farmers through a partnership with a sugar factory (PG) located in Sebaung Village, Gending District, Probolinggo Regency, which is Gending Sugar mill. And it is quite beneficial for sugarcane farmers, which consists of two parts, namely the Historical area and Expansion where the historical area is dry land. When viewed in terms of the ease of obtaining raw materials, finished materials and labor, location can be said to be strategic because labor is easily obtained around the factory. Therefore, companies need business development so that the right development in developing their business can be known. The method used is the Expert System Based on the Expert System there are 8 factors that affect the first five factors that influence the selection of an appropriate basis for materiality calculations. The sixth and seventh factors influence the choice of percentage level to be multiplied by the basis of materiality, and the eighth factor is used to modify the results of calculations. The strength factor of development every year that can be developed by the sugar mill is that it has good quality raw materials, the selling price of the product is not too high, and skilled human resources. Furthermore, there are development weaknesses that must be addressed such as new modern production equipment, the availability of manpower for marketing, and the lack of media information dissemination activities, An alternative strategy to be taken by the Gending Sugar Factory is to maintain the selling price of the product and the quality of raw materials included in the key activities component.

Keywords: modeling, Sugar Production, Dynamic systems