

The development and subsequent application of a computer program for simulating mill yard operations at Mumias Sugar Company (MSC) is described. The mill yard performance measures selected were milling rate, cane delivery rate and the average hourly waiting time. It was established that the program predicted lower average hourly waiting times, but consistency was observed in the rates of cane delivery and milling. The prediction of lower average hourly waiting times by the program was attributed to the existence of other time-consuming operations in the yard that were considered negligible when the program was formulated. The program was applied to model various configurations of the MSC mill yard through simulation experiments. It was established that the average waiting time was shortened to well under 30 min/h if 3 gantry cranes were kept operational throughout factory operation. It was concluded that the program can be useful in modelling the existing MSC mill yard operations with a view to performing subsequent simulation experiments to ascertain the most efficient configuration for the MSC mill yard.