

ABSTRACT

Production efficiency is a crucial element in ensuring the sustainability of micro, small, and medium enterprises (MSMEs), particularly in the traditional food industry. Rumah Onda Bandung, an MSME that has been producing onde-onde since 1968, faces various challenges in raw material planning. These challenges include delays in material supplies, overstocking and understocking, unstructured ordering schedules, and suboptimal inventory control.

These inefficiencies not only hamper smooth production but also increase operational costs and reduce business competitiveness. This study aims to optimize the raw material requirements planning process at Rumah Onda Bandung through the application of the Material Requirement Planning (MRP) method. The main objectives of this study are to analyze the current planning situation, apply the MRP method to accurately determine raw material requirements, and evaluate its impact on production efficiency.

This research uses a quantitative approach with a case study method. Data collection was conducted through production record documentation, direct observation, and analysis of the Master Production Schedule (MPS), Bill of Materials (BOM), inventory records, and supplier lead times. The study focused on production data from October to December 2024 and used the Lot-for-Lot (LFL) technique to determine order quantities. The results showed that implementing the MRP method improved inventory management accuracy, reduced raw material waste, minimized production delays, and supported more efficient procurement planning.

With better coordination between production schedules and material availability, Rumah Onda Bandung can operate more efficiently and be more responsive to market demand. This research is expected to provide practical and academic contributions to MSMEs in the food sector by offering applied solutions to improve operational performance. Furthermore, this research can serve as a reference for MSMEs seeking to implement a more structured, data-driven planning system to strengthen their competitiveness and long-term business sustainability.

Keywords: Material Requirement Planning (MRP), production efficiency, raw material planning, Rumah Onda Bandung MSME.