

ABSTRACT

Indonesia is one of the largest tea exporting countries in the world. Therefore, Indonesia must produce quality tea in order to compete with other exporting countries. One of the companies engaged in the plantation business is PT. Perkebunan Nusantara VIII (PTPN VIII). PTPN VIII has plantations spread across West Java and Banten. One of the tea gardens under the auspices of PTPN VIII is the Malabar Tea Plantation. In the production process, there are still problems with defective products that are rejected by the head office because the products are not in accordance with the Company's Work Plan and Budget.

The purpose of this study was to apply the Six Sigma method to the tea production process at the Malabar Tea Factory to reduce the level of tea product defects. This research was conducted using the define, measure, analyze, improve, and control (DMAIC) stages, identify Critical To Quality (CTQ), calculate DPMO and sigma values, describe the factors causing defects, and provide suggestions for improvement.

The results of this study obtained a sigma value of 3.82 with a DPMO value of 10,510,32 and a decrease in costs of Rp. 117,527,350 after process improvement. This shows that the Six Sigma method can effectively reduce the level of product defects that occur in the Malabar Tea Factory.

Keywords: Quality Control, Six Sigma, Tea Commodity.