

***Analysis of Quality Control for Oyster Mushroom Baglog Production
Using the Six Sigma Method with the DMAIC
Approach at PT Mitra Jamur Indonesia
Supervisor: Ariesia Ayuning G., S.Pi., M.P.***

Nabila Alifia Rizky Arjani
*Agroindustry Management Study Program
Department of Agribusiness Management*

ABSTRACT

Baglog is the main planting medium that heavily determines the success of oyster mushroom harvest productivity. PT. Mitra Jamur Indonesia is an agro-industrial company producing oyster mushroom baglogs in Jember Regency. The problem faced by the company is that some of the produced products do not meet quality standards; in other words, the baglog products experience defects. This study aims to: 1) determine the quality control implemented in the oyster mushroom baglog production at PT. Mitra Jamur Indonesia, 2) determine the Defect Per Million Opportunity (DPMO) value and the sigma level of the baglog products, and 3) analyze the factors causing product defects. The method used in this research is Six Sigma. Six Sigma is a quality improvement tool based on the use of data and statistics with five phases, namely define, measure, analyze, improve, and control (DMAIC). The results showed that the types of product defects include striped baglogs, baglogs contaminated with wild mushrooms, and baglogs with no mycelium growth, with contaminated baglogs and baglogs with no mycelium growth being the most dominant defects. Based on the results of the p control chart (p-chart), it can be concluded that the production process is not yet fully under statistical control, as there are defect proportions located outside both the upper and lower control limits. The results of the quality measurement calculation show that the obtained DPMO value is 68,871, meaning that in one million units of the production process, there is a possibility of product non-conformance amounting to 68,871 units, achieving a quality level of 2.98 sigma.

Keywords: DPMO, Oyster mushroom baglog, Quality control, oyster mushroom Six Sigma.