

***Sardine Product Quality Control Using Six Sigma Method at PT Sarana Tani Pratama*** (Pengendalian Kualitas Produk Sarden Menggunakan Metode Six Sigma Di PT Sarana Tani Pratama)

Ir. Wahyu Suryaningsih, M.si. (Dosen Pembimbing)

**Rahmania Anisa Putri**

**Study Program of Food Engineering Technology**

**Department of Agricultural Technology**

Program Studi Teknologi Rekayasa Pangan

Jurusan Teknologi Pertanian

***ABSTRACT***

*Quality control is the effort made to control damage. The quality control for the canning process of 155-gram sardines consists of four processes: can sealing, sterilization, wiping, and packing. Body dents, buckles, leaks, spinners, loose seams, panels, and vees are types of defects in the process. The potential defects found were body dents, buckles, and vees. The quality control aims to determine the process stability value, Defect Per Million Opportunities (DPMO), sigma level, the main causes of sardine product defects, and improvement proposals. The research method used is Six Sigma with P-diagram and fishbone tools. The results for the **can sealing** process showed a DPMO value of 4.95634 and a sigma level of 4, with a probability of 290,358 defective cans per million. The wiping process had a DPMO value of 5.02779 and a sigma level of 5, with a probability of 252,128 defective cans per million. The packing process had a DPMO value of 5.25579 and a sigma level of 5, with a probability of 199,609.8 defective cans per million. The sigma values have exceeded the Indonesian standard sigma level of 2. The main causes of defects in the can sealing, wiping, and packing processes are: machine age > 21 years, the number of machines used, work experience, work performance, training in OHS (Occupational Health and Safety) and SOP (Standard Operating Procedures), thin packaging, fish waiting time, and lack of competency. Improvements for the can sealing, wiping, and packing processes were conducted by calculating the feasibility efficiency, analyzing production capacity sufficiency, and providing spare parts. Improvements also include increasing skills and competency through training, implementing work shift schedules, regularly checking fish temperature, and improving the quality of can thickness to meet company standards.*

**Keywords:** *seamer machine, Six Sigma, process stability, proposed improvements.*