

***Analysis of Production Process Implementation and Quality Control in  
Reducing Defect of Corn Seed Products at PT Agricorn Putra Sejati***

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***Abstract***

*This study aims to analyze the implementation of production processes and quality control in reducing defect levels of hybrid corn seeds at PT Agricorn Putra Sejati. The research employs a quantitative descriptive method using the Six Sigma approach through the DMAIC stages. With results In the Define stage, three Critical to Quality (CTQ) categories were identified: undersized seeds, oversized seeds, and broken seeds. The Measure stage indicates a consistent reduction in defect percentage from 17.51% in the first semester of 2021 to 7.58% in the second semester of 2024, with a total of 22,219 defect units dominated by undersized seeds. Quality performance improvement is reflected in the decrease of DPMO from 25,680 to 5,933 and the increase in sigma level from 3.60 $\sigma$  to 4.10 $\sigma$ . The Analyze stage identified major defect causes, including labor competency, moisture content variability, machine calibration, work methods, and warehouse conditions. The Improve and Control stages were conducted through process standardization, operator training, machine calibration, and the use of check sheets to ensure continuous quality control.*

***Keywords:*** *Production Process, Quality Control, Product defects, Six Sigma, DMAIC, Quality Control*

**Analisis Penerapan Proses Produksi Dan *Quality Control* Dalam Menekan  
Defect Produk Benih Jagung Pada PT Agricorn Putra Sejati**

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**Abstrak**

Penelitian ini bertujuan menganalisis penerapan proses produksi dan quality control dalam menekan tingkat defect benih jagung hibrida di PT Agricorn Putra Sejati. Metode penelitian yang digunakan adalah deskriptif kuantitatif dengan pendekatan Six Sigma melalui tahapan DMAIC. Dengan hasil pada tahap Define, diidentifikasi tiga kategori Critical to Quality (CTQ), yaitu ukuran benih kurang dari standar, ukuran melebihi standar, dan benih pecah. Tahap Measure menunjukkan penurunan persentase defect secara konsisten dari 17,51% pada Semester I 2021 menjadi 7,58% pada Semester II 2024, dengan total defect sebesar 22.219 unit yang didominasi oleh ukuran kurang dari standar. Peningkatan kualitas tercermin dari penurunan DPMO dari 25.680 menjadi 5.933 serta kenaikan level sigma dari 3,60 $\sigma$  menjadi 4,10 $\sigma$ . Tahap Analyze mengidentifikasi penyebab utama defect meliputi kompetensi tenaga kerja, variasi kadar air, kalibrasi mesin, metode kerja, dan kondisi gudang. Tahap Improve dan Control dilakukan melalui standardisasi proses, pelatihan operator, kalibrasi mesin, serta penggunaan check sheet untuk pengendalian berkelanjutan.

**Kata Kunci :** Proses Produksi, Quality Control Defect produk, Six Sigma, DMAIC,