

Design of A Corn Grinding Machine With Automatic Weighing Using Autodesk Inventor Software

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ABSTRACT

The corn grinding process, which is not yet integrated with an automatic weighing system, has relatively low efficiency in the livestock sector. It is still carried out separately and manually, which takes longer and can lead to inaccuracies in livestock feed measurements. This study aims to design and develop a corn kernel grinding machine with an automatic weighing system using a load cell sensor to improve efficiency for livestock farmers. The research method employed is Research and Development (R&D), encompassing problem identification, design development, stress analysis simulation, design implementation, and expert validation. Based on the test results, the designed device has good weighing accuracy and is capable of grinding corn kernels efficiently. This device is practical, as demonstrated by the design feasibility test conducted using a validation questionnaire, which yielded a score of 84%. Additionally, the results of the stress analysis simulation indicate that the design meets safety requirements, making it safe for use.

Keywords: *Design, Stress Analysis, Corn Kernels, Corn Kernel Grinder*