

**DESIGN, FABRICATION, AND TESTING OF A CORN SHELLER
FOR BARANGAY BADIANGAN, AJUY, ILOILO**

A Project Study Report

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The Faculty of the Mechanical Engineering Department

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By

Fainsol, Francis Elizer R.

Lachica, Vincent A.

Lee, Ian Jr. P.

Otañes, Janille Faye H.

Perez, Luke T.

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ABSTRACT

Designing, fabricating, and testing of a corn sheller for the beneficiary barangay at Ajuy Iloilo are the main goals of this study. The corn sheller is a machine that utilizes a shelling cylinder to separate the kernels from its cob and will function through the use of a diesel engine. The corn sheller was designed and fabricated based on a range of 2000 – 2500 kg/hr shelling capacity with a chosen 800 rpm speed on the shelling cylinder. The fabrication was done at New Canaan Agri-Machineries at San Jose, Antique. With several considerations, the researcher selected flat bars and angle bars, round bar plain, round bar deformed, square bar, steel plate, CR sheet, BI pipe schedule 80, GI pipe schedule 40, CR shafting, perforated sheet, bearing, belt, pillow block, pulley, set screw, and bolt ordinary as the materials for the whole fabrication. The testing was done last June 01, 2022 at Western Visayas Agricultural Research Center Hamungaya, Jaro, Iloilo City and was aligned with Philippine National Standard from PAES.

The result shows that the shelling capacity of the corn sheller is at 2870.27 kg/hr which successfully surpassed the range of 2000 – 25000 kg/hr and a shelling efficiency of 100% which was 0.5% higher than the requirement from PAES standards of 99.5%. The results exhibited a highly effective corn sheller which could hugely assist the farmers from brgy. Badiangan, Ajuy, Iloilo.