

## ABSTRACT

This research was made to verify the influence of corn cob granule size in its insulating property when utilized as ceiling particleboard. Taking into consideration that corn cob is generally an agricultural waste, this study poses an economical and sustainable building material with an efficient insulating property.

Granulated corn cobs and wood glue were used to fabricate the corn cob ceiling particleboard. Using the fabricated particleboards, the thermal conductivity test was conducted to determine the K-Values needed for the evaluation of their thermal insulating capability which were also used to compute for their thermal resistance. Through the assessment of the K and R-Values acquired, the researchers confirmed that the corn cob granule size really does affect the thermal insulating capability of the particleboard. With this experimental research, it was identified that the larger the corn cob granule size, the better the thermal insulating capability of the corn cob particleboard.