

# **Performance Evaluation of On-Farm Paddy Dryer Coupled with a Gasifier**

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## **ABSTRACT**

Freshly harvested paddy with high moisture content should be dried to a moisture content of 12 per cent (w.b) approximately within 24 hours for safe storage and milling of paddy. It was observed that to bring down from a high moisture content of 25 % (w.b) to a final moisture content of 12.6% (w.b.), it took 13 h at 45 °C drying air temperature, 9 h at 52.5 °C and 8 h at 60 °C respectively. The overall thermal efficiency of the developed dryer was found to be 46.83%. The average heat utilization factor was found to be 0.86, 0.69 and 0.46 for drying air temperatures 45 °C, 52.5 °C and 60 °C respectively. The average values of coefficient of performance for on-farm paddy dryer coupled with a gasifier was found to be 0.5, 0.3 and 0.4 for drying air temperatures of 45 °C, 52.5 °C and 60 °C respectively.