

## Evaluation of Quick Covering Machine for Grain Drying Pavement

**Authors :** Fatima S. Rodriguez, Victorino T. Taylan, Manolito C. Bulaong, Helen F. Gavino, Vitaliana U. Malamug

**Abstract :** In sundrying the quality of the grains are greatly reduced when paddy grains were caught by the rain unsacked and unstored resulting to reduced profit. The objectives of this study were to design and fabricate a quick covering machine for grain drying pavement; to test and evaluate the operating characteristics of the machine according to its deployment speed, recovery speed, deployment time, recovery time, power consumption, aesthetics of laminated sack; and to conduct partial budget and cost curve analysis. The machine was able to cover the grains in a 12.8 m x 22.5 m grain drying pavement at an average time of 17.13 s. It consumed 0.53 W-hr for the deployment and recovery of the cover. The machine entailed an investment cost of \$1,344.40 and an annual cost charge of \$647.32. Moreover, the savings per year using the quick covering machine was \$101.83.

**Keywords :** quick covering machine, grain drying pavement, laminated polypropylene, recovery time

**Conference Title :** ICSRD 2020 : International Conference on Scientific Research and Development

**Conference Location :** Chicago, United States

**Conference Dates :** December 12-13, 2020