Empirical Research to Improve Performances of Paddy Columnar Dryer

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Abstract : Good practices of mechanical drying can reduce losses of grain quality. Recently, with demands of higher capacity for paddy drying in the Mekong River Delta of Vietnam, columnar dryers have been introduced rapidly in this area. To improve the technology, this study was conducted to investigate and optimize the parameters for drying Jasmine paddy using an empirical cross-flow columnar dryer. The optimum parameters were resulted in air flow rate and drying temperature that are $1-1.5 \text{ m}^3 \text{ s}^{-1} \text{ t}^{-1}$ of paddy and $40-42^{\circ}\text{C}$, respectively. The investigation also addressed a solution of reversing drying air to achieve the uniformity of grain temperature and quality. Results of this study should be significant for developments of grain drying, contributing to reduce post harvest losses

Keywords : paddy drying, columnar dryer, air flow rate, drying temperature

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