A new mathematical drying model for paddy rice via thermal imaging

ABSTRACT

This study presents a new drying model for paddy rice that uses thermal imaging as the measurement instrument. The proposed model is in the form of an ordinary differential equation and a change in mean intensity with respect to time required for establishing a drying model. The main aim of this research was to design a new drying model that incorporates computer vision for detecting the rate of changes in paddy rice moisture over time. Employing this approach provides us rapid control of the moisture content. The efficiency of the suggested model and its practical insights are presented in a numerical form.