Thesis Title	Managing moist paddy by fluidization drying, tempering and ambient air ventilation
Thesis Credits	12
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Abstract

The objective of this research was to investigate a strategy for reducing moisture in paddy to 16.5 %d.b. by using fluidized bed drying, tempering and ambient air ventilation. The criteria for considering were a total usage time and milling qualities.

Experimental results showed that after the three processes, moisture content was reduced from 33%d.b. to 16.5 %d.b. within approximately 53 min. During the first process, a fluidized bed dryer was used for reducing moisture content of paddy down to 19.5%d.b. within 3 min. Then the paddy was taken to tempering process for 30 min. Finally, it was cooled by ambient air with an air velocity of 0.15 m/s (300 m^3/min-m^3paddy at bed depth 3 cm) for 20 min. Quality of paddy in terms of head rice yield and whiteness was acceptable. Tempering was useful for increasing head rice yield and increasing moisture reduction during ambient air ventilation. Ventilation with low ambient air velocity could reduce moisture in paddy better than ventiration with high ambient air velocity.

Keywords : paddy drying / fluidization / tempering / ambient air ventilation / milling quality