

Category	: International Rice Research Conference
Select Theme	: Disruptive technologies and innovations
Endorsement email	:
Keyword 1	: Innovation systems
Keyword 2	: Social inclusivity of technologies
Keyword 3	: Modeling and systems biology
Title of Entry	: Improving Drying Efficiency, Milling Quality, Stabilization and Safety of Rough Rice using Infrared Radiation Heating
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Select only one type of presentation	: 15 minute oral presentation

Abstract : Infrared (IR) drying as a novel technology has a promising potential to achieve high drying rate, energy saving and improvement in the quality of dried rice. Our consecutive researches investigated the feasibility of simultaneous drying, disinfestations, disinfection and stabilization of rough rice using infrared radiation heating. Our results revealed that IR heating has a great promise to improve the drying efficiency and milling quality, achieve effective disinfestations and disinfection of rough rice, and effective stabilization for rice bran and improve its utilization without affecting the quality of rice bran oil. Also IR heating can be used as an effective method to improve the storage stability of brown rice. Moreover, we have systematically investigated and proved the technical feasibility of using IR heating as energy efficient technology for rice drying. The results provided guidance for determining appropriate conditions of infrared heating, tempering and cooling treatments to achieve high drying efficiency, quality, and effective disinfestations, disinfection and stabilization of rough rice.

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