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Design and tested a pilot scale of solar hybrid dryer for fermented cassava chips

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A pilot scale of solar hybrid dryer for fermented cassava chips with wood-burning stoves as additional energy was designed and evaluated. The dimension of dryer was 9.2 m of length, 3.8 m of wide, and 3.54 of high, with capacity 768 kg. The dryer building was made from iron as main frame, polycarbonate sheet 2 mm of thickness as wall and cement as roof. Tray was made from stainless steel wire mesh with wood and iron as a frame. The test results gave that 768 kg of fermented cassava chip could be dried in 9 hours, in which 94.3% of initial moisture content becomes 9.4% of final moisture content. The thermal efficiency of dryer was 53.82% with the wood consumption rate of 28.5 kg/h.

Biography

Ana Nurhasanah is currently working at Indonesian Center for Agricultural Engineering Research and Development-IAARD, Indonesia . Her experience includes various programs, contributions and participation in different countries for diverse fields of study. Her research interests reflect in her wide range of publications in various national and international journals.

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