



RESEARCH PAPER

Fabrication of continuous solar dryer for fruits and vegetables slices

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Abstract : The world population is more than 8 billion and about 20-25 per cent people does not have enough food to eat. It has been estimated that world as a whole more than 30-50 per cent vegetables, fruits etc. are lost before it reaches to the consumers. To overcoming spoiling problems of vegetables and fruit; various preserving methods are used and renewable sources are best for this purpose by which we can save energy for preservation and keeping the product in their natural flavor by drying it. Drying is one of the oldest methods of preserving food. The solar drying system utilizes solar energy to heat air and to dry any food substance. It brings about a substantial reduction in weight, volume, minimizing packing, storage, and transportation costs, and enables storability of the product under ambient temperatures. This paper present the Construction of Continuous solar dryer which can be used for drying various fruits and vegetables products in rural areas under hygienic conditions. The Continues solar dryer was constructed consisting of a solar collector cum drying chamber. The overall dimension of the continues solar dryer is 1830×300×620mm and the drying chamber was painted black to absorb maximum solar radiations. The glass was covered it permits the solar radiation into the system but resists flow of heat energy out of system and product were moving continually from inlet to outlet through chain conveyors. This chain conveyors was connected to the rollers and the roller was connected to belt pully to reduction motor and VFD to control the chain conveyor from inlet to outlet to dry the product at required moisture content

Key Words : Fabrication of continuous, Solar dryer, Fruits, Vegetables slices

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