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Design of waste fired-natural draft dryer

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■ **ABSTRACT** : India's contribution in the world production of fruits and vegetables during 2013-14 was 13.6 % and 14% , respectively (Anonymous, Indian Horticulture Database 2014). India wastes fruits and vegetables worth Rs. 13,300 crore every year. The excess moisture in the food is also contributes to its reduced storage life. To develop the dryer the design was prepared on the basis of volume of wet material to be handled. Weight of arecanut considered per batch was 15 kg. The drying efficiency of the dryer depends on different factors like, drying air temperature, relative humidity of the air and the airflow rate through the drying chamber. A dryer has different components like, drying chamber, heating unit and a chimney. While designing the dryer these components were taken in to consideration. On the basis of the above assumptions the different components of the dryer were designed.

■ **KEY WORDS** : Dryer, Arecanut

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