

## **Agricultural Journals**

Research in

# AGRICULTURAL ENGENEERING

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Res. Agr. Eng.

Ivanova T., Havrland B., Hutla P., Muntean A.:

# chips in the experimental biomass dryer with solar collector

Res. Agr. Eng., 58 (2012): 16-23

Drying significantly influences the process of a biomass conversion into the renewable energy source as well as quality of solid biofuels (briquettes, pellets). The research is focused on monitoring and evaluation of the drying process in the case of cherry tree chips drying in experimental biomass dryer with solar collector. The dryer has been conceived as a result of the project which was realized at the State Agrarian University of Moldova. Technological and construction specifics of the biomass dryer are described in the paper. The moisture content of the cherry tree chips was observed in dependence of the drying time and at different locations of the drying chamber. The drying process in the biomass layer was found as nonuniform. Further parameters such as

relative air humidity and the air temperature were measured and analysed, as well. It was concluded that the experimental biomass dryer with solar collector can work well in the conditions of the Central Moldova during the sunny period of the year.

### **Keywords:**

bioenergy; drying process; material moisture content; relative air humidity, renewable energy; Republic of Moldova

[fulltext]

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