

Type of thesis: Dissertation thesis
Thesis title: Design and performance of a solar dryer for processing of coffee beans in Colombia
Written by (author): Ing. Eduardo Duque Dussán
Department: Department of Sustainable Technologies (FTA)
Thesis supervisor: prof. Ing. Jan Banout, Ph.D.

The doctoral thesis entitled "Design and performance of a solar dryer for processing of coffee beans in Colombia". The thesis focuses on the development of a drying system in which the energy naturally supplied by the sun is used during the day, and hot air is supplied through the combustion of waste from coffee plantations during the night. This approach not only involves the theoretical aspects since the thermodynamic phenomenon, until the design of the plenum chamber for the development of the mixed drying system called "hybrid". Also can be used quickly by coffee growers, with the advantages of reducing drying time, as well as avoiding the absorption of water in the grains when high relative humidity occurs at night, with the aforementioned economic and quality losses. Today, the approach to coffee drying goes beyond energy efficiency and operational management of the different options. Therefore, avoiding grain deterioration is fundamental in developing coffee drying technologies.

From the theoretical approach addressed in the document to the practical and application part, the requirements for a doctoral thesis were carried out, in which the candidate published scientific articles in high-quality journals, which were evaluated by qualified academic peers for this purpose.

After reviewing the document again and in accordance with the recommendations initially made in the evaluation, it is observed that the suggestions were made and supported. The document is found suitable to continue to the next phase of evaluation.



Aida Esther Peñuela Martínez. PhD.

Postharvest Discipline

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