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DRYING OF BLACK PEPPER

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~~C~~RYING OF BLACKPEPPER

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by

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ABSTRACT

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A study was conducted at the Department of Engineering and Agro-Industrial Technology to determine the drying rate and drying time of blackpepper using the natural convection solar dryer and direct sun drying.

Three densities were used in the study. The densities were 12 kg/m^2 (0.5 cm thickness of layer), 24 kg/m^2 (1.0cm thickness of layer) and 36 kg/m^2 (1.5 cm thickness of layer).

A highly significant result was obtained in the drying rate and drying time of blackpepper. The 12 kg/m^2 density has the greatest drying rate with the shortest drying time. This had a value of 13.86%/hr and 10.32%/hr for solar drying and direct sun drying, respectively. This was followed by 24 kg/m^2 (9.36%/hr and 7.12%/hr) and 36 kg/m^2 (8.04%/hr and 5.90%/hr) densities for both method of drying. The drying time of 13.33 hour and 18 hour (12 kg/m^2) and 23.33 hour and 31.33 hour (36 kg/m^2) were noted for solar drying and direct sun drying respectively.

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INTRODUCTION

Importance of the Study

The full exploitation of natural energy and development of indigenous energy resources have been a major concern worldwide. The energy problem worsened in recent years. In the Philippines, the government evolved policies and formulated strategies aimed at taking advantage of renewable sources of energy to complete the developmental efforts in oil exploration. Direct efforts at tapping solar based, non-conventional and renewable energy sources are exerted since the country is rich in natural energy sources and has a favorable climate. The country which is along the solar belt, makes the solar radiation a good energy source. For many centuries, the