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[Dataset on performance of solar dryer for scotch bonnet pepper drying](#)

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The use of solar drying systems to preserve agricultural products has been proven to be cheap, reliable, and environmentally friendly. Solar dryers offer advantages of shorter periods of drying, reduced loss of raw materials and larger scale of production. This paper presents method followed in evaluating the performance of three different solar dryers with different materials used for solar collectors in order to determine the best among the three. The evaluation was performed twice, and each evaluation was done for three weeks. The parameters recorded in these experiments are drying chamber temperature and humidity, solar collector temperature, ambient temperature and humidity and the weight loss of the pepper. It was observed that the temperature of all drying chambers was higher than ambient temperature during most hours of the day. While three different metals were used as solar collectors in dryers and attained significant different temperature through radiation from the sun, the energy transmitted through natural convection to the drying chambers of the dryers was not significantly different (at $p \leq 0.05$) from one dryer to the other. The efficiency of the dryers was an average of 29.7%, 29.1% and 30.3% for stainless steel, mild steel and galvanized steel solar collectors respectively.

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