



SDI FINAL EVALUATION FORM 1.1

PART 1:

Journal Name:	<u>British Journal of Applied Science & Technology</u>
Manuscript Number:	Ms_BJAST_24682
Title of the Manuscript:	AN EXPERIMENTATION INVESTIGATION OF SOLAR ENERGY UTILIZATION FOR DRY AGRICULTURAL PRODUCTS.
Type of Article:	ORIGINAL RESEARCH PAPER



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PART 2:

FINAL EVALUATOR'S comments on revised paper (if any)	Authors' response to final evaluator's comments
*line 23. Can you justify how "development" is a key words? What kind of development? Economic? Model..? Rep:Yes; development in term of economic Frankly, in your paper, I didn't see where Eco development is studied. If a person search for paper which deal with eco dev and be directed to your', he will be disappointed that eco dev is not studied. Even the consequence of your study lead to eco dev, it can not be a keyword. But, there is others keywords as: Solar concentrator, solar dryer, open sun drying, drying curves... (important suggestion) *lines125, and table2, can you explain how (the formula) you calculate the moisture content? Rep:Yes; Detained in 2.2: data analysis (....Moisture contents of both the wet and dried products were determined from weights of samples before and after drying by an oven at temperature of 800C. Moisture content was calculated as kg/kg dry solids....) Sincerely, do you think that these lines can help other searchers to calculate moisture content? If we obtain the weights of samples before and after drying, how to do? kg/kg is just unit and not formula. It is better to provide a formula as $X = m_{\text{water}} / m_{\text{drysolid}} = (m(t) - m_{\text{drysolid}}) / m_{\text{drysolid}}$ (a suggestion) *table2; how can you explain that all the samples have the same initial moisture content? (7.33 or 0.53)? that is infrequent with agricultural products Rep: Yes; Detained in 2.1 ; Experimental procedure and samples preparation As advice, if you let all the different sample having the same	Yes, corrected (see keywords) development replaced by solar concentrator Yes; (see , 2.3: Data analysis) Samples were kept in a convective electrical oven, maintained at $80 \pm 1^{\circ}\text{C}$ for 5 hours. Initial (w) and final mass (d) at time (t) of samples were recorded using electronic balance and repeated every one hour interval till end of drying. Sample moisture content is expressed as: $M_w (\text{wet basis}) = (w - d) / w$ -----(1) $M_d (\text{dry basis}) = w - d / d$ -----(2) w = wet weight d = dry weight M = Moisture content on a kg/kg basis Yes; Maize and plantain were conditioned to moisture content levels ranging from 36 to 56 (kg/kg) and 73 to 80 (kg/kg) wet basis respectively.



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initial water content, initial mass, it can entertain doubts about the achievement of your experiment. In literature, searchers showed that it is almost impossible for 2 different products to have the same value! Can you check that and give slight diff? ex 7.33, 7.35; 7.28, 7.45....

*line 216, it is strange that all your samples have identical initial weight (3.28 and 2.05)? is it so for all maize for example?

Rep: Yes; Ditto

ditto

*Line 232-233 (fig2).

-The only one fig of results. It better to fit the diff curves (solar concentrator and direct one) to compare the result

Rep: Two products only

The better was to have, for each single product 2 curves. One from experiment with solar dryer and the 2nd from direct sun exposure experiment (=open air drying). With that fit, we can obviously see the importance of your dryer. If it is possible to add these curves, your paper will be more attractive. But if there is lack of data on direct-sun (open air) no problem.

Each sample was dried to the pre-determined moisture content level by placing on the drying tray. Trays with samples were placed in an oven set at 80°C. Moisture content of each sample was controlled by the initial weight, initial moisture content and pre-determined moisture content. Samples were mixed thoroughly and sealed in the plastic container after cooling to room temperature. Samples were stored in the cooler at 2°C for four weeks to ensure moisture homogeneity of the two samples. Before determining the moisture, containers of samples were taken out, kept in laboratory for 24 hours to bring the samples temperature to room temperature. Moisture contents of both the wet and dried products were determined from weights of samples before and after drying by an oven at temperature of 80°C. Moisture content was calculated as kg/kg dry solids. The loss in product moisture during drying was assumed to be equivalent to the product weight loss. Drying was done for a total 9 hours and four tests were performed for each product.

Corrected