

Interactive comment on “Performance Characteristics of a Small Hammer Head Pump” by Krishpersad Manohar et al.

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The topic of affordable technology for farmers, that deliver certain services or benefits to them, is of interest. As such, new designs are more than welcome, as long as they are able to show why they are worth being pursued. I am sorry to say that this aspect is missing from the current paper.

Experience with hydro-powered pumps is rather extensive already, and as such one can certainly argue that any new design needs to clarify why its newness brings added value - which could be financial, because it is cheap, or functional, because it delivers water in a specific way, or relate to maintenance, as the pump is easy to repair. None of these aspects are discussed.

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The design, the analysis and the numerical statements that are presented remain rather difficult to value when we do not find any information about user prospects, robustness in daily practices, etcetera. I do not want to suggest that the authors need to engage in full-scale field tests first before they can present their own designs. However, just dropping a design with some numbers without explaining why this particular design would be of interest for any target group, is not really appropriate.

Are the different test settings in any way realistic, when we would consider farming practices? Is the discharge in any way useful? What type of use do the authors assume? What additional equipment would a farmer need to make the pump a viable asset on a farm? As long as these questions are not at least considered, the information in the paper remains obscure.

A final comment may relate to the number of references. In general, one cannot easily decide what six references mean, but in this case - given the rather high number of documents available on hydro-powered pumps - one would expect a few more references.

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