## World Academy of Science, Engineering and Technology International Journal of Mathematical and Computational Sciences Vol:14, No:12, 2020

## **Construction and Evaluation of Soybean Thresher**

Authors: Oladimeji Adetona Adeyeye, Emmanuel Rotimi Sadiku, Oluwaseun Olayinka Adeyeye

**Abstract :** In order to resuscitate soybean production and post-harvest processing especially, in term of threshing, there is need to develop an affordable threshing machine which will reduce drudgery associated with manual soybean threshing. Soybean thresher was fabricated and evaluated at Institute of Agricultural Research and Training IAR&T Apata Ibadan. The machine component includes; hopper, threshing unit, shaker, cleaning unit and the seed outlet, all working together to achieve the main objective of threshing and cleaning. TGX1835 - 10E variety was used for evaluation because of its high resistance to pests, rust and pustules. The final moisture content of the used sample was about 15%. The sample was weighed and introduced into the machine. The parameters evaluated includes moisture content, threshing efficiency, cleaning efficiency, machine capacity and speed. The threshing efficiency and capacity are 74% and 65.9kg/hr respectively. All materials used were sourced locally which makes the cost of production of the machine extremely cheaper than the imported soybean thresher.

Keywords: efficiency, machine capacity, speed, soybean, threshing

Conference Title: ICSRD 2020: International Conference on Scientific Research and Development

**Conference Location :** Chicago, United States **Conference Dates :** December 12-13, 2020