

# SUN Rice

**Aryaman Kumar**



*Final model with cooked rice*



**I**F there were one word to describe the vibe of the last decade it'd be "Save the Environment". Ok, that's three, but you get the point. And an important component of the struggle to save the environment is renewable energy. Large organisations have harnessed the benefits of these resources by carrying out projects, which in turn have yielded promising results.

However, despite their promising potential, renewable resources are quite far fetched for individuals. People have willingness and knowledge. However, there is always one sneaky issue like cost, lack of resources and even space that comes to spoil the party.

I spent my quarantine days constructing a basic model of a solar cooker under the guidance of my dad's friend Mr Ravi Karnad. The best part is that it uses solar energy, which comes directly to your doorstep, like an online delivery package. Due to the absence of photovoltaic cells and the need for space, it wouldn't shed weight off your wallet. And it's perfect for rice lovers!

So, I took some planks of wood and cut them into neat-looking rectangles. Getting my hands dirty I attached hinges on the edges and crafted out a solid box.

Voila! It was good to go.

My first shot, with rice, was a success. After this initial thrill, my enthusiasm slipped. Peanuts which generally take a dozen minutes to roast at home took two days to attain the same level. Taro root (Kachalu) tasted bland after a day under the hot sun.

So, to bolster its efficiency I put Aluminium foils around the inner edges, including the bottom to reflect all incident light to the cooking vessel. By blackening the walls of the container and the lid, I increased the amount of absorbed heat.

And then the first experiment. I filled the container with water and added some cut vegetables in the hope of a soup. On opening the cooker, I expected some wonderful aroma to blow by my face, but all I could sniff was steam. The vegetables were far from cooked and I began to doubt the apparatus's efficiency.

In search of some light, I tried rice once again only to see it take much longer than the first day. I began to develop a strong feeling that the first trial was some sort of fluke. It was only when Ravi Uncle asked, "Was the aluminium foil in contact with the cooker?", I realised where I had goofed up.

Aluminium being a good conductor pulled much of the heat away from the bottom of the cooker. This was fixed by simply adding a plank of wood between its bottom and the foil. Sure enough, it began to work brilliantly.

This was great. I kept it from 10.00 am to about 1.30 pm on most days, and pretty much covered a single meal. Imagine that, with just a couple of minutes every day, you could give up gas for 365 meals in a year.

Keeping a standard of half cup of rice soaked in a cup of water, I experimented by altering the structure of the cooker.

| Date          | 15 APR    | 21 APR  | 23 APR                    |
|---------------|-----------|---------|---------------------------|
| Time Taken    | 3h 30 min | 4h      | 2h 45 min                 |
| Add ons       | None      | AL foil | AL foil + separating base |
| Amount cooked | 100%      | 60%     | 100%                      |

So as you see, this is not a daunting task. I encourage you to try it out yourself, by building upon my learnings.

Of course, this wouldn't have been possible without Ravi uncle who guided me at every step and my dad who was always by my side.

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