

Off-Grid Cashew Roaster

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Abstract: Our senior design project consists of developing a complete design for a cashew roaster to be used in the secondary processing of cashew nuts. This roaster must be completely off-grid, able to be used without requiring a consistent supply of electric power. This roaster is intended to be used in third world countries to enable the secondary processing of the cashew nuts to occur in the same location where the nuts are grown and where the primary processing takes place. The goal in doing this project is to bring the profit associated with secondary processing and packaging of the cashews to the farmers themselves rather than a middleman or large corporation.

The main challenge of the project is to design the roaster in combination with an alternative fuel power source. The power source must be operable anywhere and should be sufficient to provide power to the roaster's heating and electrical systems as well as any additional devices requiring power in the secondary processing plant, (packaging device, lights, etc.). The finished design package will include complete engineering design specifications, ready for fabrication. If there is time, a prototype or initial model could be built. We are also seeking to patent and license the roaster since it will be implemented in a real business upon completion.

Keywords: roaster, humanitarian, alternative fuel, cashew

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