JEEP Solar Dryer



Why to choose this solution?
In comparison to the traditional ways of drying outside on open field, solar dryers prevent contamination and loss of produce from air pollution, rain, and dew, as well as from dust, molds, bacteria, insects, rodents, birds, and other pests, thereby ensuring quality. They allow small-scale farmers to overcome some post harvest losses by transforming their produce into storable and tradeable goods, which they can sell off-season at higher prices.

Savings per day or production:
The dryer can dry up to 500 kgs when built for home use, which is about 1000 shillings per kg, varying on the material in the dryer.

Cost in money and in own time to construct:
It costs about USh 200,000 (approximately USD 55) to construct for home and even less depending on the materials used. It can be constructed within 24 hours.

Lifetime:
It can stay to up to 5 years depending on the materials used during construction.

Maintenance needed:
Regular cleaning of glass material or polyethylene film; fixing polyethylene if torn.

Resources needed in use:
Drying trays.

Problems and limits:
It can be eaten by termites if not treated thoroughly during manufacturing. Cloudy or rainy days may slow the process somewhat due to reduced input of sunlight.

Where and how can you get it or make it?
The solar dryers are sold at JEEP offices in Kyanja and online shopping platforms.

Skills needed to produce, install. maintenance, use:
Installation requires trained technical personnel. There are no specific skills required to maintain or use the solar dryer. All you need is to be careful while handling it and always keep it clean.

How to use it:
Not relevant.

How to maintain it:
Not relevant.

Climate effect (if any):
This solution uses sunlight as a source of heat generation, reducing the use of biomass as a source of heat generation. The greenhouse-gas emissions of the food-drying process are cut by 90%. Solar food dryers also reduce the loss of trees to firewood as well as time spent harvesting it.

Where it is used and how many users are there?
This solution is used in rural and urban areas of Uganda. it is also used on many farms to dry and preserve farm produce by over 1500 users.

Why is it successful?
JEEP promotes use of renewable energy solutions for cooking. It has promoted this solution and has marketed it all over the country. JEEP conducts training programs. It also encourages youth to be creative and to start producing these boxes as a green enterprise, with a goal of and making the solution cheaper and available to people in all kinds of financial situations. Support from development partners has also contributed to the success of the solution, along with government policies encouraging solar use.

If you can make it, a short description, typical problems, materials needed:
Installation requires trained technical personnel. Materials needed include wood, nails, a board, and paint, as well as either a glass pane or transparent polyethylene sheet.

How to make it (if possible):
Not relevant.

How is it delivered and by whom?

Successful financial model
JEEP sells the solar dryer at a fair price plus it trains people on how to make them locally.

What policies and strategies helped the success?
The government offers tax exemptions on solar installations.

More info:
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Sources:
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