

Grekkon Limited Solar Dryer



Why to choose this solution?

These ventilated but enclosed dryers use solar energy to dry fruits, vegetables, significantly faster than would be possible drying produce unprotected and subject to the weather in the open air. A batch, which might take seven days to dry in the open air, would dry cleanly in just two days with a dryer. The sun UV rays do not reach the drying food, so its color, taste, scent, and nutritional value are unaffected. For all of these reasons, solar-dried foods are better for the health of the family. These solar drying systems are an effective means of food preservation, a good value to preserve highly perishable, nutritious foods.

Savings per day or production:

(1) Loss of quantity of food during drying is greatly reduced due to the owner ability to control the process. (2) Nutrition delivered per unit of dried food produced is greater. (3) Likelihood of illness from eating spoiled or contaminated food that was dried in these solar dryers is very low compared with that associated with open-air drying. (4) They reduce the drying period. For instance, a solar dryer will take two days to dry a batch if drying in the open takes seven days. (5) By stacking the layers of food and by excluding many undesirable factors that must be monitored in open-air drying, these dryers reduce the attention, time, and footprint required for the task, enabling owners to apply the saved time and space to other uses.

Cost in money and in own time to construct:

The price varies according to the design of the dryer. The smallest dryer is 3.4 cubic m in size and is priced at KSh 48,000 (USD 480), while a two-ton per session fruit dryer costs KSh 1,500,000 (USD 15,000). No owner time is required for construction or installation. Brief instruction is provided in the use and maintenance of the installed dryer.

Lifetime:

To be added.

Maintenance needed:

Cleaning the shelves and, occasionally, the enclosures as necessary to ensure free air circulation and to keep them contaminant-free.

Resources needed in use:

Placement that receives full sunlight, and that provides sufficient, empty open space around the enclosure to allow good air circulation within the dryer. Utilizes sunshine to heat up air that dries enclosed food products

(including drying fruits, vegetables, meat, and cereals).

Problems and limits:

The dryers are expensive; hence, few farmers can afford them. 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?

Solar dryers by Grekkon Limited are available from stores in Nairobi, Eldoret, Kisumu and Nyeri. They also offer online shopping which is a convenient and fulfilling experience with easy and quick delivery.

Skills needed to produce, install, maintenance, use:

Construction and installation is done by skilled personnel from Grekkon Limited on site according to the food material and volume to be dried per drying session. Use and maintenance require only a short introduction.

How to use it:

To be added.

How to maintain it:

Not relevant.

Climate effect (if any):

They are environment-friendly, energy-conserving, and nearly four times as fast as open-air drying.

Where it is used and how many users are there?

Used all over Kenya by farmers.

Why is it successful?

Once installed, these solar dryers need only sunlight and space slightly greater than their own footprints to produce more dried foods that deliver greater nutrition with less risk of contamination, all much more quickly and with less oversight than can be achieved with open-air drying.

If you can make it, a short description, typical problems, materials needed:

The dryers are constructed from food-grade materials from their structural systems to their covers. This is achieved by the use of UV-resistant cover and floor material, with food-grade zinc or aluminum galvanized structures. Dryers designs vary according to crop and desired quality output.

How to make it (if possible):

To be added.

How is it delivered and by whom?

Solar dryers by Grekkon Limited are available from stores in Nairobi, Eldoret, Kisumu, and Nyeri. They also offer online shopping which is a convenient and fulfilling experience with easy and quick delivery. The technical and agronomy teams of Grekkon Limited will design the dryer according to the crop and desired quality output. They will also offer support and can advise farmers on crop value addition.

Successful financial model

To be added.

What policies and strategies helped the success?

To be added .

More info:

<https://grekkon.com/solar-dryers/>

Sources:

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