Tips For Use

Many fruits solar dry beautifully, and the acidity of fruits preserves their vitamins. Soft fruits, such as apricots, figs and tomatoes, work especially well. Try making fruit paste – cook fruit with a little or no added water (depending on how moist the raw fruit is) and crush to make a thick compote. Spread a half inch thick layer in a baking dish and put to dry. This will dry into a fruit paste, which can be cut into squares and stored.

Some vegetables can also be dried, although many lose more of their flavour than do fruits. Drying also depletes more of the vitamin content in vegetables. Vegetables that can be dried include sweet peppers, onions and mushrooms.

You can also dry herbs and various plants for infusions and other uses – mint, marigold flowers, rose petals, nettles, etc – a handful of dried nettles added to a soup or stew adds iron and amino acids.

We also use our solar dryer to make bouillon stock powder, drying leftover vegetables (celery leaves, cauliflower stalks, tomato skins, etc – solids are grated, leaves and skins, etc, are fine as they are). When dried, the ingredients are mixed together and crushed, and have fresh yeast and olive oil added (as required to taste and texture the stock). The whole mixture is then dried again, for a couple more days, and is then ready to be put in jars and used.

Further Information

Sunseed Desert Technology aims to develop, demonstrate and communicate accessible, low-tech methods of living sustainably in a semi-arid environment. Sunseed Desert Technology is the Spanish project of the Sunseed Trust Ltd (UK reg. charity 1098353) and a registered Spanish Association (no. 162660). We also practice organic gardening and are a field trial site for low-tech research into tree nurseries and soil regeneration. Hundreds of people work with us as paying volunteers every year.

Further information, including volunteering opportunities at Sunseed, can be obtained from the following addresses:

Sunseed Desert Technology (SDT)
Apdo. 9, 04270 Sorbas, Almería, Spain

Sunseed Web-Site:
www.sunseed.org.uk

email: sunseedspain@arrakis.es

tel. (00 34) 950 525 770

As a registered charity, donations are always appreciated, especially if requesting further information.

Thank you for your interest.

SDT.MP.04(E): September 2003

Sunseed Desert Technology

www.sunseed.org.uk

SOLAR DRYING

Drying food with the energy of the sun

Introduction

Drying is the most ancient food preservation method, enabling food to be kept while conserving its nutritional value. Drying food using only the energy of the sun is obvious in hot, dry climates, but using solar dryers enables food to be dried in cooler, damper climates as well.

You really don't have to be in a fantastically sunny climate to exploit the huge potential of solar drying – drying times will just be a bit longer in weaker sunlight.

Sunseed Solar Drying

The solar dryer we use at Sunseed Desert Technology, based on an original design by the ULOG group in Sweden, uses convection currents to move solar heated air past the food to carry moisture away.

The dryer consists of a sun collector and a drying chamber (see diagram). Air vents at the top and bottom allow air to pass through. These can be adjusted to allow for more or less air circulation in hotter or cooler climates, and to regulate the temperature inside the drying chamber. All the vents must be closed off with metal or plastic gauze to prevent insects from entering. It's a very simple design, which makes for a better quality product than drying in direct sunlight – the drying period is quicker, and foods are protected from dust, insects and ultraviolet rays which can partially destroy valuable nutrients.

The Sun Collector

The sun collector should face towards the equator, with a tilt corresponding to the latitude where you live, so as to face the sun at midday. Inside the collector, a piece of metal painted black absorbs energy from the sun and warms up. When this heat passes to the surrounding air, convection currents start. A heavy sheet of corrugated iron, or similar, stores a lot of heat and will ensure that the air keeps moving even when the sun goes behind a cloud. The absorber must be secured in the middle of the collector to allow free air flows above and below.

The transparent cover of the collector on our dryer is made of Perspex, though other clear materials such as glass are fine too.

The Drying Chamber

The basic structure of the drying chamber is a timber frame and walls of plywood, with drying trays inside suspended like drawers. The trays are wooden frames lined with metal or plastic gauze. The floor of the dryer has a drip tray, and a door opens at the height of the trays.