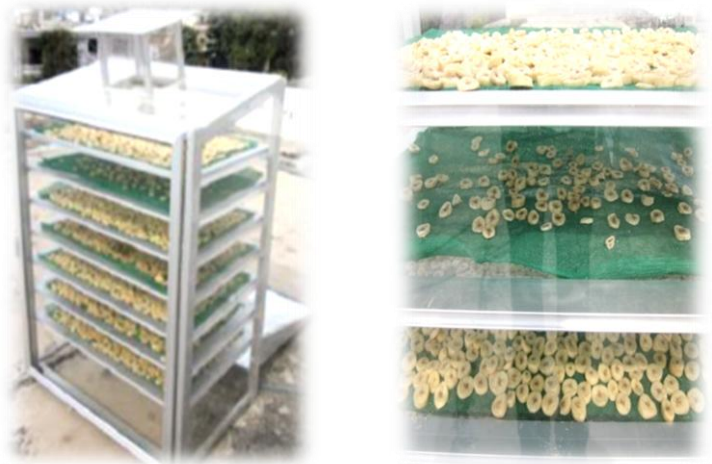


**What is a Solar Dryer?**

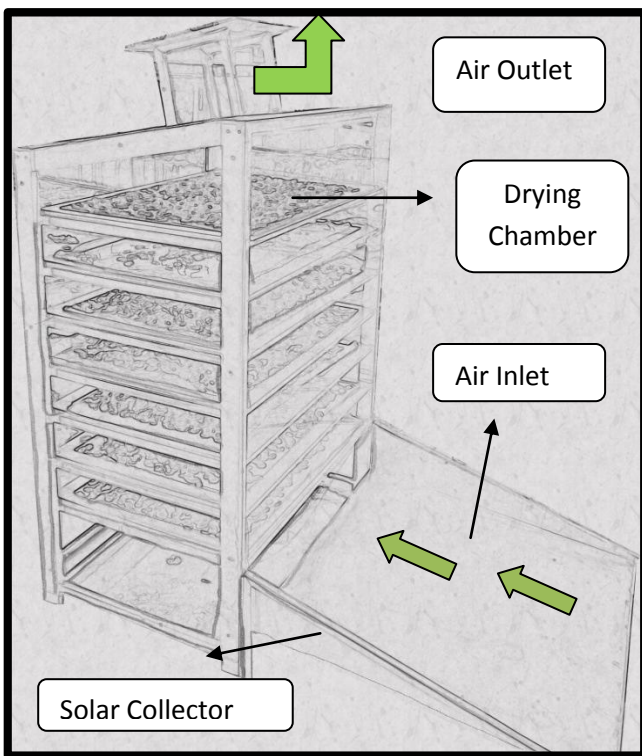
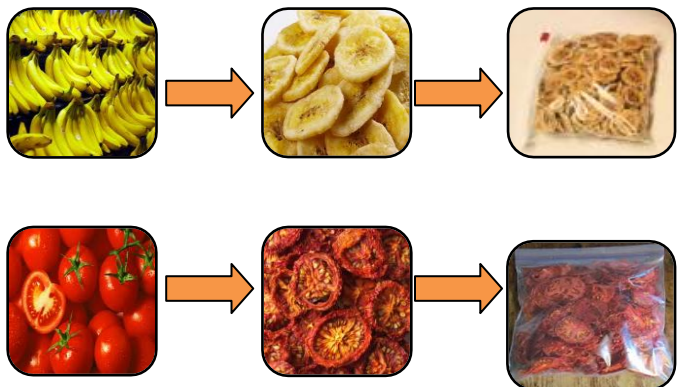
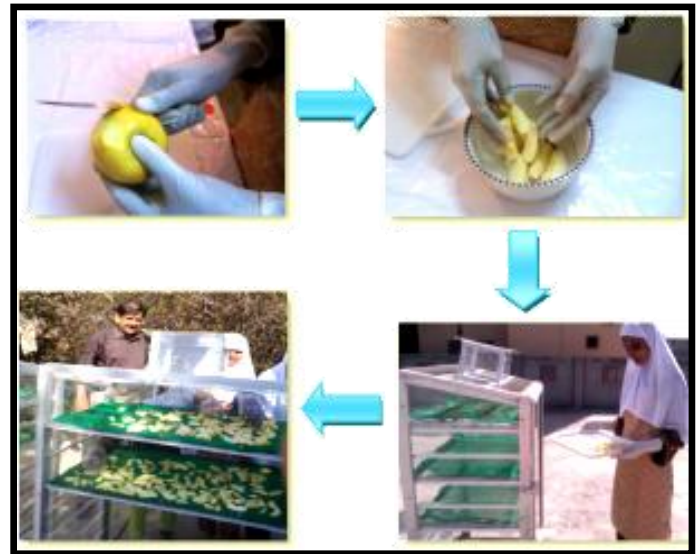
Due to cultural norms people in Pakistan directly place fruits and vegetables under the sun for drying. Therefore to avoid a range of hazards, the concept of collecting solar heat and using it for food drying has received increasing attention in the recent years. For this purpose, solar dryer units have been developed. JOBS through its expertise from previous projects has developed “**Indirect heating dryers**”, which dries the food with heated air collected by a “**Solar Collector**”- a plain metal surface used to absorb the heat from the sun and warm the surrounding air. The food is placed inside an insulated heating/drying chamber with proper air circulation.

**Benefits of using Solar Dryers**

- Light Weight
- Easy to Use
- Long-lasting
- Bacterial-free



**Sample Food Drying Process**



**Dimensions of Solar Dryers**

**Solar drying Unit Front**  
Height: 1m 36 cm  
Width: 91 cm  
Length: 62 cm

**Solar Collector**  
Height: 29 cm  
Length: 94 cm  
Width: 92 cm

The Solar dryer uses two basic concepts:

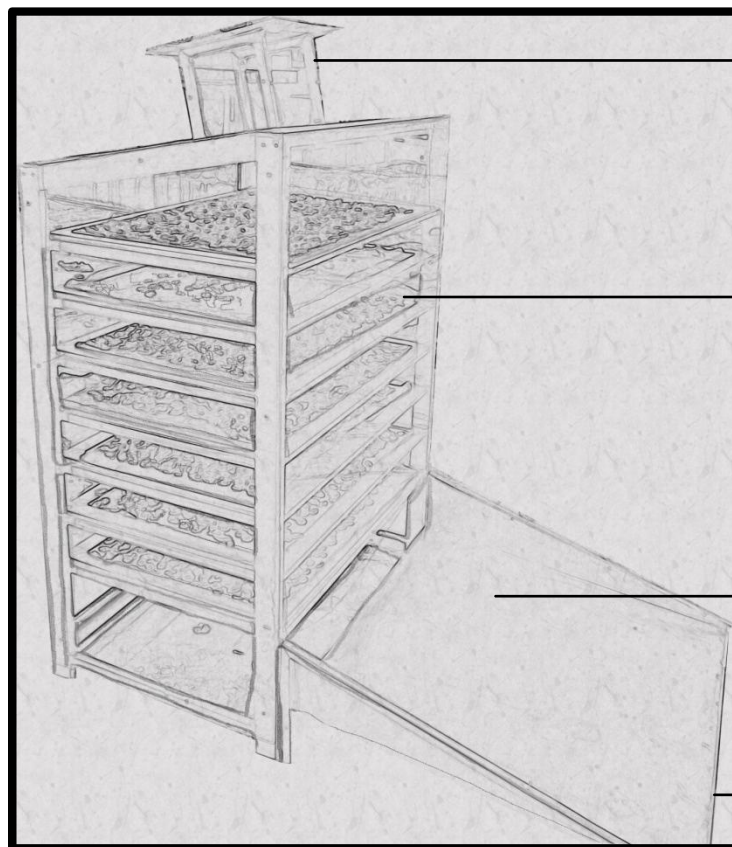
- a) Warm air rises.
- b) Food is better preserved when its moisture content is low and is dried.

The Solar dryer unit has two main sections:

- 1) Solar Collector
- 2) Drying Chamber

Air enters from the Air Inlet. It is heated by the sun in the solar collector and travels towards the drying chamber. Warm air passes through the drying chamber and dries the produce. As it dries the food, moisture is carried away with the hot air and exits through the Air Outlet at the top.

## How to clean the Solar Dryer?



### AIR OUTLET

Brush the air outlet and remove any dust to ensure efficient flow of air

### DRYING CHAMBER SURFACE

Clean the surface thoroughly to remove any dust and dirt using duster or dry cloth.

### SOLAR COLLECTOR SURFACE

Wipe the surface using a damp soft cloth (cotton)

### AIR INLET

Remove dirt & ensure the entrance of the solar chamber is not clogged

### How to clean the Solar Dryers?

Maintaining the cleanliness of the solar dryer and specifically the solar dryer trays is extremely important to protect food from being contaminated.

- 1 • Scrape off any old remains (of food) from the tray, using a brush
- 2 • Soak the green mesh/net in the water mixed with dish washing liquid/powder
- 3 • Dry the tray and green mesh/net before each use
- 4 • Before loading the trays, wipe the inside of the drying chamber with a clean cloth
- 5 • Close the door immediately after each tray has been loaded

### Where to Place the Solar Dryer?

To achieve the highest quality results and evenly dried fruits and vegetables, the solar dryer needs to be appropriately placed.

Dos	DON'Ts
Place on a flat and clean surface	Do not place on an uneven surface
Position the solar dryer collector facing South	Do not place near a wall, tree or covered dark area where sunlight is blocked
Place in a location with maximum sunlight throughout the day	Do not place near muddy or dusty area
Place in a location with good air circulation	Do not place near unhygienic area (near garbage, drainage etc.)
Place in a clean and garbage free location, away from animals and insects	Do not place near animals