

## **Two Days Training Program on “Fabrication of Solar Dryer” to Carpenters /rural Artisans organized by Appropriate Technology Centre, at Govt. Polytechnic, Sundernagar on 01- 02 June, 2016.**

Appropriate Technology Centre, State Council for Science Technology & Environment, H.P, Govt. Polytechnic, Sundernagar organized a two days training to Carpenters/ rural Artisans of the Development Blocks namely; Rampur, Anni, Banjar, Karsog, Sundernagar of the State on “Fabrication of Solar Dryer” on 01- 02 June, 2016 at Appropriate Technology Centre, Sundernagar.

The participants were registered at the venue of the training programme i.e. Govt. Polytechnic, Sundernagar by Mrs. Neena Sharma, DEO, ATC, Sundernagar on 01-06-2016 from 10 am to 11 am. The two days training was organized as per the technical schedule prepared for organization of the training by the ATC. The participants were distributed the material.



At the outset of the training programme the participants were welcomed by Sh. Kalit Bhardwaj, STA, ATC, Sundernagar on behalf of the State Council Science, Technology & Environment, H.P and briefed the Carpenters/ rural artisans about the purpose of the two days training programme. He elaborated about the uses and benefits of the Solar Dryer.

Solar drying is in practice since the time in-memorable for preservation of food and agriculture crops. This was done particularly by open sun drying under open the sky. This process has several disadvantages like spoilage of product due to adverse climatic condition like rain, wind, moist, and dust, loss of material due to birds and animals, deterioration of the material by decomposition, insects and fungus growth. Also the process is highly labor intensive, time consuming and requires large area. With cultural and industrial development artificial mechanical drying came in to practice. This process is

highly energy intensive and expensive which ultimately increases product cost. Thus solar drying is the best alternative as a solution of all the drawbacks of natural drying and artificial mechanical drying. Solar dryers are devices that use solar energy to dry substances, especially food. There are two general types of solar dryers: Direct and indirect.

Direct solar dryers expose the substance to be dehydrated to direct sunlight. They have a black absorbing surface which collects the light and converts it to heat; the substance to be dried is placed directly on this surface. These driers may have enclosures, glass covers and/or vents to in order to increase efficiency.

In indirect solar dryers, the black surface heats incoming air, rather than directly heating the substance to be dried. This heated air is then passed over the substance and exits through a chimney, taking moisture from the substance with it.



Solar dryers used in agriculture for food and crop drying, dryers can be proved to be most useful device from energy conservation point of view. It not only save energy but also save lot of time, occupying less area, improves quality of the product, make the process more efficient and protects environment also. Solar dryers circumvent some of the major disadvantages of classical drying. Solar drying can be used for the entire drying process or for supplementing artificial drying systems, thus reducing the total amount of fuel energy required.

**Solar dryer is a very useful device for**

- Agriculture crop drying
- Food processing industries for dehydration of fruits, potatoes, onions and other vegetables,
- Dairy industries for production of milk powder, casein etc.
- Seasoning of wood and timber.
- Textile industries for drying of textile materials.

**01.06.2016 Technical Session-I**

The practical session started under the Guidance of Experts Sh. Muni Lal, Carpenter and Sh. Tajender Kumar, Master Trainer, State Council for Science Technology and Environment, H.P.



**CARPENTERS FABRICATING THE SOLAR DRYER**





A visit of the participants was made at the Demonstration Centre where various technologies namely Thermosyphonic Air Heating Pannel, Trombe Wall, Solar Water Heater, Hand maize Sheller, Greenhouse etc. were shown and demonstrated to the participants by Sh. Kalit Bhardwaj, STA, Appropriate Technology Centre.

A feedback session was conducted and Performa was distributed among the participants. Closing ceremony was organized at the end of the training on 02.06.2016 By Arch. Meena Guleria, Head of Multi Education Govt. Polytechnic, Sundernagar, District Mandi, H.P was the Chief Guest at the occasion. While addressing the participants she stressed about the use of different Solar Technologies and Solar Dryers. Arch. Guleria Head of Multi Education distributed the Certificates to the participating Carpenters/ rural artisans and thanks to attend the Training.



**REGISTRATION OF PARTICIPANTS OF TWO DAYS TRAINING PROGRAMME ON “FABRICATION OF SOLAR DRYER ” AT ATC, SUNDERNAGAR ON 01-02 JUNE, 2016.**

<b>S. No.</b>	<b>Name of the Participant</b>	<b>Father Name</b>	<b>Address</b>
1.	Sh. Yashwant Singh	Sh. Dile Ram	Vill. Tunna P.O. Jachh Panchayat Tunna Block Gohar Tehsil Gohar Distt. Mandi
2.	Sh. Bhupendar	Sh.Badamu ram	Vill. Dari P.O. Shala Panchayat Tunna Block & Tehsil Gohar Distt. Mandi
3.	Sh. Tula Nand	Sh. Shyam Lal	Vill Tunna P.O. Jachh Panchayat Tunna Block & Tehsil Gohar Distt. Mandi
4.	Sh. Bhup Singh	Sh. Nand Lal	Vill. Kunsoth P.O. Jachh Panchayat Tunna Block & Tehsil Gohar Distt. Mandi
5.	Sh. Bhavdev	Sh. Gujar Singh	Vill Tunna P.O. Jachh Panchayat Tunna Block & Tehsil Gohar Distt. Mandi
6.	Sh. Tula Ram	Sh. Tisu Ram	VPO & Panchayat Darkali (Sharnal) Block & Tehsil Rampur Distt. Shimla
7.	Sh. Nand Lal	Sh.Jyori Ram	Vill. Marla P.O. & Panchayat Darkali (Sharnal) Block & Tehsil Rampur Distt. Shimla
8.	Sh. Shiv Singh	Sh. Gyan Chand	Vill. Branda P.O. & Panchayat Jaghori Block Rampur Distt. Shimla
9.	Sh. Shishi Ram	Sh. Nain Singh	Vill. Branda P.O. & Panchayat Jaghori Block Rampur Distt. Shimla
10.	Sh. Bhau Ram	Sh. Janki Dass	Vill. Chandi P.O. & Panchayat Jaghori Block Rampur Distt. Shimla
11.	Sh. Muni lal	Sh. Balak Ram	Vill. Dhar P.O. & Panchayat Jaidevi Tehsil Sundernagar Distt. Mandi
12.	Sh. Tulsi Ram	Sh. Kahan Chand	Vill. Kufaridhar P.O. & Panchayat Bakhrou Block Karsog Distt. Mandi
13.	Sh.Bhudhi Singh	Sh. Bhadaru	Vill. Kufaridhar P.O. & Panchayat Bakhrou Block Karsog Distt. Mandi
14.	Sh. Budhi Singh	Sh. Shibu	Vill. Snagi -2 P.O. Bhanthal Panchayat Sanarli Block Karsog Distt. Mandi.
15.	Sh. Jinu Ram	Sh. Chuhdu Ram	Vill.Harnala P.O. Bhanthal Panchayat Khadkan Block & The. Karsog Distt. Mandi
16.	Sh. Resh Kumar	Sh. Dhani Ram	Vill. Khamanu P.O. Bhanthal Panchayat Sanarli Block Karsog Distt. Mandi.
17.	Sh. Sher Singh	Sh. Damodar Dass	Vill. Majhothi P.O. Devdhar Panchayat Majhothi Devdhar Block Gohar Tehsil Chachiot Distt. Mandi.
18.	Sh. Ganu Ram	Sh. Nagnu Ram	Vill. Majhothi P.O. Devdhar Panchayat Majhothi Devdhar Block Gohar Tehsil Chachiot Distt. Mandi
19.	Sh.Man Singh	Sh.Shyam Singh	Vill. Arkhali P.O.& Panchayat Chakurtha Block & Tehsil Banjar Distt. Kullu
20.	Sh. Dave Ram	Sh. Paras Ram	Vill. Kerad P.O. Banjar Panchayat Chehani Block & Tehsil Banjar Distt. Kullu
21.	Sh. Jivan Singh	Sh. Roop Singh	Vill. Arkhali P.O. & Panchayat Chakurtha Block & Tehsil Banjar Distt. Kullu
22.	Sh. Balbir Singh	Sh. Budhi Singh	Vill. Chhachigarh P.O. & Panchayat Chakurtha Block & Tehsil Banjar Distt. Kullu.