S. No.	Item	Detail
1.	Name of the technology	**Solar assisted dehumidifier based Heat Pump dryer**
2.	Specification and salient features	The solar assisted dehumidifier based heat pump dryer (20-25 kg/batch capacity) is suitable for drying fruits and medicinal crops. The drying chamber is attached with a dehumidifier which dehumidifies and re-circulate the hot air to the chamber. The drying performed at relatively lower temperature (40-45°C). It reduces the loss of vitamins and essential oils from the dried products. Capacity of the dehumidifier is 1.5 kW. Solar air heater (2 m^2 collector area) supplements the freely available solar heat to the dryer and save the electrical energy.
3.	Performance result	The drying time of the *Amla* in the dryer (from initial moisture content of 88.6% (wb) to about 7% (wb)) was 50 h at 35°C and 18 h at 50°C respectively as compared to 8-10 days in the open sun drying. Vitamin-C content was found up to 88% more in the dehumidifier based dryer as compared to open sun dried Amla. Microbial counts in the dried *Amla* in the dryer was five time lower than open sun dried *Amla*. The thermal efficiency of the dryer varied between 24-28%.
4.	Cost	Initial investment : Rs 150,000/- Operating cost : Rs 15-20/kg of dried product
5.	How the new technology will impact the income of the farmer and its benefit over conventional system	The dryer maintains better vitamin and essential oil content in the dried products. Lower electrical energy required in solar assisted dehumidifier based dryer as compared to conventional electrical dryers.
6.	Social/environmental benefits	Solar energy is pollution free. Saving of the electrical energy can be save emission the Carbon dioxide produced in the power plant.
7.	Status of commercialization/ IPR right etc.	-
8.	If commercialized, name and address of the firm	-
9.	Special facilities required	Nil
10.	Photograph	
11.	Contact person	Director, Central Instititute of Agricultural Engineering, Nabibagh, Berasia road, Bhopal-462038 (MP) Ph: 0755-2521133, email: directorciae@gmail.com
12.	Source of availability	-do-