

| S. No. | Item | Detail |
|--------|--|---|
| 1. | Name of the technology | Solar tunnel dryer |
| 2. | Specification and salient features | The solar type solar tunnel dryer is suitable for drying horticultural crops of about 100 kg/batch capacity. Width and length of the dryer is 2.0 m and 12.5 m respectively. The solar air heater is directly connected to drying tunnel to provide heat for drying wet products. The axial fans are provided to remove moist air. Components of the dryer have been designed using modular concept to facilitate easy transport and installation of the solar tunnel dryer and also for capacity reduction/enhancement. The dryer is covered with 200 micron ultra-violet stabilized polyethylene film for its durability. |
| 3. | Performance result | Unripe mango, gooseberry (Amla) and chilli drying time reduced by 50-60% as compared to open sun drying. Microbial counts of the dried products were up to about 10 times lower as compared to open sun dried products |
| 4. | Cost | Initial investment : Rs 100,000/- Operating cost for drying product: Rs 3-4/kg of the dried products |
| 5. | How the new technology will impact the income of the farmer and its benefit over conventional system | Use of solar dryer improved the quality of the dried product. The solar dryer can save electricity about 1.5-2.0 kWh/kg dried produce (worth Rs 10/kg) as compared to electrical dryer. |
| 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. | Ready for commercialization |
| 8. | If commercialized, name and address of the firm | - |
| 9. | Special facilities required | Nil |
| 10. | Photograph |  |
| 11. | Contact person | Director, Central Institute of Agricultural Engineering, Nabibagh, Berasia road, Bhopal-462038 (MP) Ph: 0755-2521133, email: directorciae@gmail.com |
| 12. | Source of availability | -do- |