

Food processing through solar energy

*Mr. Ghanshyam Lukhi, Tapi Food Products, Block no. 124 Plot No. 17/A N.H. 8 P.O.
Pipodara, Taluk: Mangrol, Distt. Surat- 394110, Gujrat India*

1. Abstract:

2. Introduction:

Tapi Food Products established by Mr. Ghanshyam Lukhi for manufacture of Papaya Tutty Fruity on a home scale basis in 1999. On 2004 with the help from KVIC's Rural Employment Growth Programme of Central Govt., the present plant was established. Ours is a 2400 sq m plant area with a built up area of 1500 sq m and employee strength of around 45. Our product range includes Tutty Fruity, Jam, Jelly, Soft drink concentrate, Amla Murrabba (Indian Gooseberry in sugar syrup) and Ginger Candy. Our market is spread all over south and western India including Madhya Pradesh and Rajasthan. We also export to Gulf countries, California and US

We dream to become the most respected consumer brand in India through giving highest priority to customer satisfaction highest standards of quality, efficiency, reliability and safety. We also aspire to achieve the same in a eco friendly way by using non conventional. This year we have set a goal to become the largest Tutty Fruity Manufacturer in India by December 2009.

3. Background:

In 1999 through GEDA (Gujrat Energy Development Agency) reference we came in contact with Gadhia Solar. We carried trials at its premises to find out if our Tutty Fruity Product could be manufactured by Solar energy The results were very encouraging but at that time our infrastructure did not match the installation requirements. We did not loose hope and kept the idea in mind

4. Project:

In 2003 our new plant was established by keeping Solar Cooking System installation in mind . It required an open area in South East and western premises of the factory and ours fully satisfied the requirements. We then contacted Gadhia Solar. But at that time due to its high installation cost we postponed the installations.

Later on in 2006 when Govt announced subsidies on industrial Solar Steam cooking, our dream materialised to become India's first industrial solar food processing unit . The total installation cost of 10 Scheffler dishes was around 15 lakhs. But with the help of Rs. 11 lakhs from Govt. (7.5 Lakhs from State Govt and 3.5 lakhs from Central Govt.) our installation charges came down to only 4 lakhs approx and thus first Solar Steam Cooking System was installed at Tapi Food Products on May 2007. The system includes 10 Scheffler dishes of 10 sq mtr. ,this generates about 350kg/day steam at about 6kg/cm sq. pressure. For its installation we had to make several changes in our factory and machinery design.

At present we have 6 steam jacketed kettles and one of them works on solar generated steam. It has a capacity to produce 400kg/day. Last year with 300 working days we manufactured around 120 ton solar cooked Products. It saved 70 metric ton firewood fuel costing approx. Rs. 1,75,000. By its installation the labour required to handle the firewood

was saved. It saved around Rs. 60,000. So our total savings came around Rs. 2,35,000 upto Dec 2007.



5. Conclusion:

We at Tapi Food Products have successfully installed and have used Solar energy for our whole product range that includes Tutti Fruity, Jam , Jelly, Syrups etc. Approximately Rs. 2000/ton was saved as a result of solar steam cooking system. And besides this it saves firewood fuel and protects environment from air pollution.



With the success of solar food processing now dream is to set up a 100% non-conventional energy consuming food processing unit. And I hope I will fulfil my dream with the help of such revolutionary people like Mr n Dr. Mrs Gadhia and their company Gadhia Solar who have dedicated their whole life to save the environment and encourage young and rural Indians.