

GREEN-I REPORT

The students of Choithram School had put their efforts to generate ONE GREEN THOUGHT which would create environmental awareness among people and transform the present society i.e would help in community welfare

A team of nine members was constituted, that as a unit started to search for the conditions in the nearby rural areas which was the most crucial task for working with the aim of sustainable development and creating environmental awareness amongst the people. The target site was village HARNYAKHEDI.

Firstly the team members had words with village sarpanch and other members of the village panchayat , regarding the current situation of the village and the problems faced by the villagers.

The three basic problems which they identified were low and costly production of crop, harmful and expensive fuel used in generators and high cost and low availability of electricity. Team members analysed their problems and came up with suitable solution.

1.Low and costly production of crops(soybean)

Students suggested methods of Organic farming which is a form of agriculture that relies on techniques such as crop rotation, green manure, compost, and biological pest control. Organic farming uses fertilizers and pesticides (which include herbicides, insecticides and fungicides) if they are considered natural, but it excludes or strictly limits the use of various methods including synthetic petrochemical fertilizers and pesticides. Compost is organic material made of decaying and decayed organic wastes and is spread on garden beds and organically farmed fields which includes wood chips, grass clippings and leaves Food waste Manures -- poultry, cow and horse .

Students explained that using compost can encourage beneficial bacteria and fungi to grow, helping to create nutrient-rich, moist soil while also eliminating or reducing the need for chemical fertilizers.

They also explained the method of preparation of biopesticides from neem seed powder extract and Annona leaf extract (Anoda) which were treasured by the villagers.

Students compared the costing of organic farming with conventional farming

Production practices (per acre)	Organic soyabean farming	Conventional soyabean farming
50 kg seeds	Rs 2250	Rs 2000
Planting	Rs 400	Rs 400
Pesticides and fertilizers	Rs 0	Rs 640
Irrigation	Rs 350	Rs 600
Soil preparation	Rs 350	Rs 350
Misc. expenses	Rs 150	Rs 500
Total	Rs 3500	Rs 4490
Amount saved	Rs 990	

2. Harmful and expensive fuel used in generators

As Harnyakhedi is a part of rural India , electricity shortage is a common problem there. So electrical and agricultural activities depend on generators which run on diesel. Common diesel is not only costly but also hazardous for the environment. In such situations using biodiesel is one of the best alternatives to run the generators.

Students encouraged villagers to grow Jatropha curcas which is a multipurpose plant, can be grown easily, intercropped with soybean and contains high amount of oil in its seeds which can be converted to biodiesel.

Students distributed Jatropa twig and explained process of machinery extraction of oil from jatropa seeds. They aware people about the utility of biodiesel in their village and its costing . Biodiesel is economically viable if grown on a large scale and is eco-friendly, hence ultimately it is beneficial for the village.

Production processes (for 100 hectares land)	Cost (in Rs)
Jatropha seeds	60,000
Soil preparation	10,600
Irrigation	3,000
Cost of machine	1,50,000
Extraction cost	20,000
Refining cost	6,000
Total	2,49,600

3. High cost and low availability of electricity

A sustainable solution to electricity ‘Solar bottle bulb’ drew maximum attention of villagers. SOLAR BOTTLE BULB is an initiative with the aim to provide an ecologically sustainable and free-of-cost source of interior light to rooms in simple dwellings with a thin roof. The device is simple: it is a transparent 1.5-2litre plastic bottle, as typically used for carbonated drinks, filled with water plus a little bleach to inhibit algal growth, fitted through the roof of a house. During daytime the water inside the bottle refracts sunlight, delivering about as much light as a 40- to 60-watt incandescent lamp to the interior. A properly installed solar bottle can last up to 5 years.

Students demonstrated the working of solar water bulb. They gave entire procedure of making the bulb as well as estimated the cost.

Electric bulb (50 W)

Solar bottle bulb

COST OF BULB- Rs. 40	COST OF PLASTIC BOTTLE AND SOLAR PANEL with circuit Rs. 130
COST OF ELECTRICITY USED For 20 hour for a month : Rs. 180	COST OF ELECTRICITY : Rs.0(NIL)
Installment cost- Rs. 10 (cost of bulb holder)	Installment cost- Rs. 20 (cost of POP and bleaching powder)
Total(Month) : Rs. 230 (approx.)	Total(One time investment)- Rs. 150 (approx.)

Solar Lamps

Through a discussion, it was known that electricity supply in the village was for merely two hours a day. This not only caused problems for the families, but also students, who faced difficulty in their studies. There are few pucca houses where solar bottle bulb cannot be installed. Students suggested to use Solar lamp in such houses. A solar lamp is a portable light comprising of a LED lamp, a photovoltaic solar panel, and a rechargeable battery.

With reference to market enquiries,

$$1 \text{ Solar Lamp} = \text{Rs. } 1000/-$$

We plan to distribute 2 solar lamps in 60 pucca houses (in which solar bottle bulbs cannot be installed), which would be a solution to the persistent lack of electricity supply.

$$\begin{aligned} \text{Total Cost} &= 120 \text{ Solar Lamps} \times \text{Rs. } 1000 \\ &= \text{Rs. } 1,20,000 \end{aligned}$$

Total cost estimation for transforming a village to green village was done by the team members.

Total cost estimation

Our ideas to transform the village	Cost (in rupees)
Biodiesel extraction from Jatropha	2,49,600
Organic farming of soybean (for 40 farmers each growing one acre of land)	$3500 * 40 = 1,40,000$
Solar bottle bulb (4 bulbs each for 400 kachha houses)	$150 * 4 * 400 = 2,40,000$
Solar lamp (2 lamp each for 60 pucca houses)	$1000 * 2 * 60 = 1,20,000$
Total	$7,49,600 = 7,50,000$ (approx.)

A total of 117 schools competed in the national level contest in the regional round where in Choithram School was one of the five schools all over the country selected for the final round that took place at the Hyderabad International Conventional Centre on September 3.

The teams presented their innovative ideas in front of a select national panel of judges .Students demonstrated how they would utilize the Green-i grant towards these initiatives to effect environmental change in their neighbourhood which was highly appreciated by the members of juries s.The students of Class IX,X and XI who were a part of this endeavor were: Mayur Matta,. Dhruvikaa Ahuja Saish Shrivastava ,Mahak Arora , Aastha Gupta, Abhyudaya Nilosey, Samyak Shah, Rishwajeet Singh, Anmol Muje ,.Siddhartha kekre , Sarthak Ajmera, and Sameer Tuteja

The students received trophy and certificates from K T Ramarao in Asia's largest Green Building Conference which was also held at International Conventional Centre. The team that came first was awarded Rs 7.5 lakh cash price for implementation of their ideas. Though Choithram School

didn't win cash price, the school will try to raise funds for starting implementation of their project.com

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