

## UBA ,RCI NIT WARANGAL PRGRESS REPORT

### Cancer awareness in Kannaram village:

Cancer awareness camp conducted RCI,NIT Warangal under Unnat Bharath Abhiyan with the collaboration of ST ANN'S CANCER HOSPITAL on world cancer day I.e 4<sup>th</sup> February in kannaram village.

Cancer, a complex and devastating disease, has emerged as a significant public health concern worldwide. Recognizing the importance of early detection, prevention, and education, numerous initiatives have been launched to raise cancer awareness in various communities. One such endeavor took place in Kannaram village, where a cancer awareness camp was organized with the aim of spreading knowledge and empowering the community to combat this formidable illness.



The cancer awareness camp sought to bridge this gap by providing essential information about cancer, its risk factors, early signs, and preventive measures to the villagers.

The camp was a with the collaboration of ST Ann's Hospital effort involving healthcare professionals, non-profit organizations, and local community leaders. The team of medical experts, including oncologists, nurses, and counselors, conducted interactive sessions to educate the villagers about different types of cancer, their causes, and the importance of regular screenings. They emphasized the significance of early detection in improving treatment outcomes and the overall prognosis for individuals diagnosed with cancer.

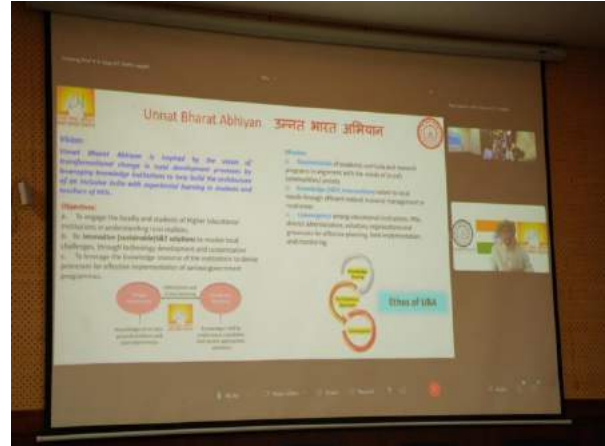


The cancer awareness camp in Kannaram village left a lasting impression on the community. It not only equipped the villagers with crucial knowledge about cancer prevention and early detection but also instilled a sense of empowerment and ownership of their own health. By fostering a culture of awareness and understanding, the camp contributed to breaking down barriers and reducing the stigma surrounding cancer, encouraging individuals to seek help and support when needed.

In conclusion, the cancer awareness camp in Kannaram village was an impactful event that aimed to educate and empower the community in the fight against cancer. By equipping villagers with knowledge, facilitating screenings, and fostering support networks, the camp played a pivotal role in enhancing cancer awareness, early detection, and access to care.

### **Three day orientation workshop conducted for PIs at NIT Warangal under the UBA:**

The Three-Day Orientation Workshop conducted for Participating Institutes i.e 4<sup>th</sup>, 5<sup>th</sup> and 6<sup>th</sup> May 2023 at NIT Warangal under Unnat Bharat Abhiyan (UBA). RCI NIT Warangal was organized with the objective of providing guidance and support to the participating institutions in effectively implementing the UBA program. The workshop aimed to familiarize the institutes with the UBA framework, foster collaboration, and equip them with the necessary tools and resources to contribute to rural development effectively.



Prof. Virendra Kumar Vijay National Coordinator: Unnat Bharat Abhiyan (UBA, MHRD, GOI), Scientific Utilisation through Research Augmentation (SUTRA, MoST, GOI) & Biogas Development & Training Centre (BDTC, MNRE).

Prof. Vijay's work on biogas technology, particularly biogas Upgradation is well recognized at global level. He is also the national coordinator of two major national programmes of the Govt. of India, Unnat Bharat Abhiyan (UBA), that aims to utilize knowledge institutions of the country to help villages in their development and Scientific Utilisation through Research Augmentation (SUTRA).

Unnat Bharath Abhiyan National coordinator, IIT Delhi Prof. Virendra Kumar Vijay has introduces the UBA Framework and Implementation Guidelines to participating institutes. The participants were acquainted with the UBA framework, guidelines, and procedures. Prof. Vijay give the guidelines to the selection process for adopted villages, project identification, and the role of the Participating Institutes (PIs) in implementing sustainable solutions.



Tuti sandhya head of for Head center for engineering Education and Development ,KG Reddy college of Engineering & Technology,EC Member-Institute of Electronics and Tele Communications (IETE), Hydrerabad Center and Chairperson Women Empowerment subcommittee IETE Hyderabad.

Tuti sandya madam shared the her experience about UBA and the finical structure of UBA how to utilize the funds for each adopted villages. The implementation of the sustainable goals in adoped villges for PIs.



The Three-Day Orientation Workshop for Participating Institutes under UBA proved to be an enriching and informative event. The workshop equipped the participating institutes with the knowledge, skills, and resources required for effective implementation of the UBA program. It fostered collaboration, encouraged community engagement, and inspired innovative solutions for rural development. Moving forward, it is expected that the participating institutes will effectively utilize their newfound knowledge to contribute to the sustainable development of adopted villages under the Unnat Bharat Abhiyan program.

### **Village visit:**

As part of the three-day orientation workshop for Participating Institutes under the Unnat Bharat Abhiyan (UBA), a village visit on 6<sup>th</sup> May 2023 I.e on 3<sup>rd</sup> day of the workshop to provide firsthand exposure to the rural realities and foster a deeper understanding of the challenges and opportunities present in rural communities. The village visit aimed to sensitize the participants to the context in which they would be implementing their UBA projects and encourage them to develop context-specific solutions for rural development.

Objectives:

- 1.To gain insight into the socio-economic conditions, challenges, and aspirations of the rural community.
- 2.To interact with villagers and understand their needs, expectations, and priorities.
- 3.To identify potential areas of intervention and collaboration between the Participating Institutes (PIs) and the adopted village.

Community Interaction: The participants engaged in meaningful interactions with the villagers to understand their daily lives, aspirations, and challenges. These conversations provided valuable insights into the social, economic, and cultural dynamics of the village. The participants actively listened to the villagers' stories and experiences, allowing them to develop a deeper empathy and connection with the community.

Village Walk and Observations: A guided village walk was conducted, allowing the participants to observe the physical infrastructure, living conditions, and local amenities available to the villagers. This exercise facilitated an understanding of the existing resources, infrastructure gaps, and potential areas for intervention.

Needs Assessment: The participants conducted a preliminary needs assessment by engaging in discussions with villagers and community leaders. They identified the key challenges and priorities expressed by the villagers, including issues related to healthcare, education, sanitation, agriculture, and livelihoods. The needs assessment aimed to inform the future projects and interventions planned by the participating institutes.





The village visit as part of the three-day orientation workshop was a valuable and enlightening experience for the participating institutes. It provided them with firsthand exposure to the rural context, enabling a better understanding of the challenges and opportunities present in the adopted village. The interactions with the villagers and the needs assessment conducted during the visit laid the foundation for context-specific interventions and collaborations between the participating institutes and the community. The village visit was an integral part of the orientation workshop, ensuring that the participating institutes were well-equipped to implement their UBA projects effectively and make a positive impact on the rural community.

Under the SEG (Renewable Energy system) Sanction Project proposal had completed in the THREE months and soft copy of this Project is also the submitted.

### **Solar powered fertilizer sprayer**

#### **1.Introduction:**

A sprayer is a mechanical device used to spray the liquid like herbicides, pesticides, fungicides and fertilizers to the crops in order to avoid any pest and control the unwanted plants species. Sprayer provides optimum utilization of pesticides or any liquid with minimum efforts. In Indian farms generally two types of spray pumps are used for spraying, they are hand operated spray pump and fuel operated spray pump, out of which hand operated spray pumps are most popular. To kill the pests and insects pesticides, fertilizers are sprayed either manually or by using sprayers. Earlier, the pesticides and fertilizers were sprinkled manually, but they will result in harmful effects on farmers. In order to overcome this problem, different spraying techniques have been developed. These sprayers consist of different mechanisms and the cost of equipment is generally high. A solar operated sprayer is easy to handle and maintenance free, hence is affordable to the farmers.

Therefore a solar operated sprayer is designed and fabricated. This system can be operated using solar energy or electrical energy. The solar energy is converted into electrical energy and is stored in a storage battery. The main advantages of this system are the running cost reduces to minimum and consume less time. Solar energy from the sun is harvested on the solar panel. The panel is made up of photovoltaic cells, which converts photon energy to electric energy. These cells are made up of silicon semiconductor. Solar panel is used to generate electric energy and charge the battery. The charged battery is used to operate a DC pump for spraying the pesticides.

### **Specifications of Equipment:**

The equipment and details are mentioned in this section and the equipment are shown below in fig 2 pesticide tank, DC motor, DC battery, nozzle type, solar panel.

Liquid Storage Tank

Tank capacity = 16 ltrs.

Material = PVC

### **DC Motor:**

DC motor is used to lift the pesticide from tank and delivers to spray gun. DC motor has following specifications.

Model name: KF-2203

Voltage = 12 volts DC

Maximum current = 1.8 A

Maximum Pressure = 0.45 MPa

Liquid discharge = 2.9 lit/min

Speed = 0-6,000 rpm

### **DC Battery:**

Model name: Sealed lead acid battery 6DFM8.

Weight = 2.5 kg

Capacity = 12 volts, 8 Ah

Charging current = 2.4 A (Max)

Standby use: 13.5 V - 13.8 V

Cyclic use: 14.5 V - 14.9 V

## Nozzle

Nozzle discharge rate is 2.9 lit/min.

Solar panel According to battery output power, solar panel is selected.

Power = 20 W

Dimensions: 500 mm x 22 mm x 340 mm

Weight =2.0 k



**Fig 2: Components of solar powered fertilizer sprayer**

From figure as shown:

1. Tank
2. Solar Panel
3. DC Battery
4. Charge controller
5. Bottom cap
6. DC Motor



- 7.Regulator
- 8.Switch
- 9.Plug socket
- 10.Voltmeter
- 11.Flower Nozzle
- 12.Adjustable stainless steel Lance
- 13.Trigger switch (Clutch)
- 14.Water sprayer pipe

Operating system of the solar panel : Charging can be done using a solar panel. Battery can be charged continuously by attaching the panel on the sprayers. Without panel on the sprayers, discharge can be done for rephrase minimum period of 4 to 5 hours. By charging the battery, discharge can be continued for further more hours. During Rainy Season charging can be done by electrical devices. The proposed system was tested with AC charging as well as solar charging. From the study it was found that the time required for charging the battery of 12V, 8Ah is 5 hours.

The fully charged battery approximately spray 5-6 acres of land. It was also found that, if the battery is fully charged in a day it can be used to spray 200 liters of fertilizer. The initial cost of the proposed system is little more but the running cost of the system is very less. The developed system used for spraying the fertilizer, pesticides, fungicides. The fabricated solar operated sprayer is shown in Fig.4. The solar panel is attached to spray pump in such a way that, it come exactly on the tank. Based on experiments, it is found that charged solar pump sprays can used during day time between 9 AM to 5 PM. All the tests are successfully carried out at the same time. Fully charged solar spray pump works for 7-8 hrs continuously and at the same time it will be charged. Hence this modern model is more effective and

eco-friendly than hand operated and fuel operated spray pump.



**Fig 3: Fabricated solar fertilizer sprayer**



**Fig 4: Use of Fabricated solar fertilizer sprayer**

### **CONCLUSIONS:**

The main findings of the designed and fabricated solar sprayer are:

1. The prepared solar operated sprayer is environment friendly and cost efficient.
2. The prepared solar operated sprayer can be used largely in agriculture field effectively.
3. The prepared solar pesticide sprayer is the best option to farmer who economically challenged and facing electrical problems like load shedding etc.
4. It does not create air pollution and noise.
5. It does not require fuel hence it is a zero fuel operated equipment.
6. It can use in municipality for killing insects and mosquitoes.
7. It is maintenance free device.
8. It is easy to operate and portable.

The solar operated sprayer will help the farmers of those remote areas of country where fuel is not available easily. They can perform their regular work as well as saves fuel up to large extent. At the same time they can do their pesticide spraying work with very less environment pollution.

From this financial year 2023-2024 we are taken the another FIVE more villages these under the Involve mandal.

**Lingamarrigudem village visit:**

