

SCIENCE AND SOCIETY PROGRAMME
PROJECT COMPLETION REPORT

Rural Women Technology Park in Kovvada Village (Bhimavaram Block)
Shri Vishnu Engineering College for Women :: Bhimavaram

A.SUMMARY SHEET

1. Title of the Project : Rural Women Technology Park in Kovvada Village
(Bhimavaram Block)
2. PI & Organisation : Dr G Srinivasa Rao,
Principal, Shri Vishnu Engineering College for Women
Vishnupur, Bhimavaram, 534202
West Godavari Dist., Andhra Pradesh
3. Date of Start : 01.05.2015
4. Total Cost of the Project : Rs 83,58,506.00
5. Staff Sanctioned : 04
6. Total Expenditure : 74,98,597.00
7. Equipment Acquired if any : **Virgin Coconut Oil Machinery**
- Electric grating Machine
 - Hydraulic Hand Press
 - Milk Clarifier Centrifuge
 - Specially Designed agitated Tank with Tabular Bowl
 - Micro filter
- Crochet Lace Products**
- Jacquard Looms(120 Hooks) 2 Nos
 - Jacquard Looms (200 Hooks) 1 No
 - Single Needle Chain Stitch Sewing Machine 1 No
 - Computerized Embroidery Machine 1 No
 - Sewing Machines 2 Nos
 - Manual Embroidery Machine 2 Nos
- Waste paper Recycling Unit**
- Biomass Dryers**

8. Summary of the Progress made :

All interventions are carried out under Rural Women Technology Park (RWTP) are relevant to the rural communities, and the policy objectives of RWTP achievements underline the importance of participatory planning and implementation, involving grassroots of institution to bring about changes in the lives of rural people and to gain their confidence.

Here, several relevant and user-friendly technologies like extraction of coconut Oil, Soap manufacturing, Recycling of waste paper bags, invitation cards, notepads, embroidery designs on garments, pattern making, bakery items, etc., are showcased which are useful for improving rural livelihoods.

Training is given on tailoring and CAD to interested budding entrepreneurs for their skill up-gradation. After training, they are also assisted, so that they can start their micro business.

Names of beneficiaries are as follows:

1. Ms. Ch. Mavullu
2. Ms. Ramana Priyanka
3. Ms. N Bhavani
4. Ms. B Anjali Devi
5. Ms. B Venkata Padmavathi

The Institute has adopted following

1. Kovvada
2. Annavaram
3. Durgapuram
4. Gollakoderu
5. Kumudavalli

These are the 5 villages across the Bhimavaram block where innovative ideas are implemented.

We invite farmers, rural youth, women self-help groups and NGOs across the Bhimavaram block to come and visit our technology park so that they can get a better idea as to how it can help them.

Yet there is still major scope for improvement of economic bondage between the government and the SHGs to enhance the skills of women beneficiaries. The magic of the success of micro-credit through the SHGs is the goodwill of the members. In the matter of borrowing the funds from government, utilization of funds and repayment, all members help one another in running their economic ventures successfully.

B. DETAILED REPORT

1. INTRODUCTION

The goal of the Project is to empower Women in Kovvada village and the endeavour is to develop individual and group entrepreneurship and facilitate income generation. Government policies and awareness programs have reached rural women of Bhimavaram block covering five villages through Rural Women Technology Park in Kovvada Village (RWTP) Bhimavaram Block.

RWTP being set up by the Department of Science and Technology(DST), Science for Equity Empowerment and Development Division(SEED), New Delhi. The DST sponsored to this project to upliftment of rural women by providing them job-oriented training programmes. The college management has constructed a 4,000 sft building where the training programmes are being conducted. While the duration of the programmes varies from one week to 6 weeks was also being offered.

Interested women are identified and are invited to the RWTP to expose them to latest technology and entrepreneurial ideas related to their skills and interests. The women are then given training on making several products such as: virgin coconut oil, natural & herbal bathing soap, handloom products, designing & sewing garments, bakery products, recycling of waste paper and manufacturing of bags, notepads, invitation cards etc.

Our objective is to empower women in this region and make them financially self-sustainable with holistic and integrated development of rural technologies in a mission mode *“To hone their skills and earn a steady income”*.

2. OBJECTIVES (As Approved in the Project)

- a) Live demonstration of cost-effective, local resource based and environment friendly technologies of different sectors of rural development.
- b) Providing functional exposure to replicable models to meet location specific and social contextual needs.
- c) Promoting participative-cum-partnership collaboration between frontline.
- d) Facilitate transfer of technologies to users and help improving the operational skills to produce to high quality products.
- e) Inspiring young entrepreneurs learn modern techniques with a view to adopting them for improvement of their end result.
- f) Developing leadership and entrepreneurial quality among all cross section of youth through technical training program envisaged in this program, so that youth can act as focal point of dissemination of knowledge in their own area of activity.
- g) RWTP is a place, where a variety of models of rural technologies are showcased with practical demonstration, in other words Training cum Production Centre. The guiding principles of RWTP include use of local resources, cost-effectiveness, eco-friendly and blending tradition with modern technologies.

3. **PROJECT AREA (Village, Block, Total Area covered)**

RWTP covered five villages in and around Bhimavaram namely:

- a. Kovvada, Bhimavaram block, 6km area
- b. Annavaram, Bhimavaram block, 4km area
- c. Durgapuram, Bhimavaram block, 3km area
- d. Gollakoderu, Palakoderu block, 4km area
- e. Kumudavalli, Palakoderu block, 6km area

4. **COMMUNITY BACKGROUND**

The above villages are basically agriculture and related occupation. It is observed that women population is higher to that of men in these villages and 50% of them are illiterate and for them life is just routine. In these villages the women are Lack of awareness of the energy efficient technologies, poor linkages with technical institutions and government.

5. **METHODOLOGY FOLLOWED:**

We conducted local meetings in every village to encourage SHGs and to engage in their own development process and effect change on multiple levels: social, financial, environment. We emphasize the importance of a sense of unity, responsibility and leadership, and equal representation of women.

RWTP has addressed some of the most basic needs of the people of this region. Emphasized the purpose of education is to inculcate virtues and character in every individual. RWTP aimed to synchronize the work done by women all over Bhimavaram block and give them a new direction for the future. RWTP aimed towards improving the overall health and quality of life of the rural women. Training and basic infrastructure are provided in virgin coconut oil, sewing & handlooms, and food processing, entrepreneurship, assistance in value addition and marketing.

The project has been driven primarily with health camps and introduce about other interventions like health benefits over and beyond basic nutrients. The discussions with women revealed that they are also interested in learning some skill to supplement their household income. They showed interest in learning stitching and tailoring. Foundation opened six training centres on experimental basis. In a very short duration of six months most of the women have become proficient in basic cutting and stitching. After successful completion of the course, they will be encouraged to get bank loans to start their own business. RWTP has given sewing machines to 10 women from its own resources to start small tailoring unit

Mobilization: Reach out to the potential beneficiaries through mobilization and outreach initiatives

- Encouraging women and girls enhance their skills by enrolling for stitching, embroidery course

Training preferences: Three months training course of stitching for the beneficiaries as per their interest and feasibility

Exposure Trips: Skill enhancing exposure trips for the beneficiaries to improve their selling & negotiation skills

COME AND JOIN IN RWTP-FOR FIELD EXPOSURE:

During the last three years the RWTP has organised workshops and programmes for the orientation on various interventions for women development. The participants will register themselves at the venue of the programme at nine clock morning. Women are assisted by the staff of RWTP. Arrangements made for the participants on transport, lunch, etc.

The concept of training followed its method and techniques, learning through action and participants will help each other and focus their respective outputs.

The overall approach of the course is to seek a balance between theory and practice training has followed its content in the selection of methods, tools and techniques.

6. TECHNICAL BACK-UP SUPPORT AND LINKAGES ESTABLISHED WITH S&T INSTITUTIONS :

List of Experts who imparted training with Contact Details

S No	Name of the Expert	Contact Details
1.	Dr. P. Jhansi	Expert, Vishnu Dental college
2.	Dr. M. Venkata lakshmi	General health Expert, Vishnu Dental college
3.	Mrs M. Vijayalakshmi	Nutritional expert
4.	Dr. M. Rama Raju	General health, PHC Durgapuram
5.	Dr. Debora Messiana	Nutritionist, KVK Undi
6.	Mr. G Narasanna	Member of Bhimavaram Weavers society
7.	Mr T Bhanu Prasad	Bhageswaram, Narasapur Weavers society
8.	Dr. Arun Kumar	Nutritionist, Bhimavaram

7. SCIENCE & TECHNOLOGY COMPONENT:

Component 1: Soap making: Using virgin coconut oil soap is m by soupomification of a triglyceride. In the process the triglyceride is reacted with a strong base such as sodium or potassium hydroxide to produce glycerol and fatty acids salts. Coconut power is used for scrubbing and turmeric powder is used for colour.

Component 2: Cross flow of heat waves in dryer: There were significant heat losses from existing system due to uneven heat distribution in the dryer. In the present system trays will be designed to force the air to follow a longer zigzag route which increases the air contact time and efficiency. This system also reduces back pressure.

Component 3: Training on sewing and stitching:

Pattern making: Training on computer aided designs for different products by using relevant software.

Product making: Training on stitching for different size variations for all kinds of body structures.

Embroidery designs: Highlighting hemlines, specific designs and logo.

Component 4: Create environmental awareness-Demystify technological processes - Conserve resources by promoting the concept of recycling-Promote use of recycled paper.

Component 5: The dryer consist of a cabinet containing tray which is connected to a source of air heated by rice husk, coconut husk & dry wastage of trees. The dryer is capable of producing hot air continuously with temperature ranging between 50 to 70C. Performance analysis showed that the moisture reduction from 9% to 4% was achieved within 7 hours in biomass drying and it had taken 15 hours in open sun drying. The main feature of dryer is to maintain uniform temperature across the tray by using chimney effect.

8. PEOPLE'S PARTICIPATION FROM PLANNING TO IMPLEMENTATION STAGE

Following the identification of rural women for the selected invention, the Project have prepared and delivered comprehensive training programmes. The course have covered different interventions such as business management, production techniques and modern technologies, marketing and strengthening linkages, and interest group formation and strengthening.

Description of Activities

S. No	Indicative Activities	No. of trainings completed	No. of beneficiaries	No. of SHG involved
1.	Training on extraction of virgin coconut oil	64	325	12
2.	Training on handlooms	25	60	22
3.	Training on sewing and Embroidery	80	334	22
4.	Outreach program on women health & nutrition	30	510	25
5.	Training on biomass dryers & Food Processing	30	107	10
6.	Training on waste paper recycling	40	85	10
	Total		1421	

9. IMPACT ANALYSIS WITH INDICATORS (Qualitative and Quantitative Details; Techno Economic Viability; Improvement in productivity: Quality and quantity/Income Generation/Living Standard/Skill Up gradation & Managerial Capability/ Environmental Conditions/personal trained as the case may be)

9 a) Please give the Techno Feasibility report, Business model indicating above parameters, Profit Potential, Raw Material Requirement, Land and Other resources requirements, Marketing Strategy

We encourage villagers to engage in development work by setting up “development committees.” These committees identify their assets and use these strengths, capabilities and talents to initiate projects that will address community issues. Experiencing the beneficial results of their work, these women become increasingly confident in their ability to effect change; with time, they are able to solve problems independently of any help.

The self employment program for women ends a new session of training and distributes sewing machines to all the women involved. The beneficiaries after following the advanced formation in dressmaking and fashion stitching are ready to start their own income generating activity at home and to give economic self independency to their families.

Regular training and updates for all staff will remind employees that safety and quality are part of the job. Bakeries with quality controls can improve product quality. Product specifications and standard operating procedures (SOPs) should be implemented and understood by women. One aspect of this is Total Productive Maintenance– carefully interlocking production and maintenance through constant monitoring of the production line. With the help of data transparency, processes can be constantly optimised to reduce costs, quality assurance can be increased and greater time efficiencies can be achieved

COMPONENT 1: Rural women have got familiar with the VCO product which can be used in both medicinal and food applications. Due to the limitations in the production process of VCO, to minimize the processing conditions, the study was designed by taking the parameters in the narrow range. Coconut powder produced in the process as a by-product with low fat, high fibre which may be successfully used in foods and as confectionery ingredient. Shells of coconut waste can be used in the production of bio extract and charcoal.

COMPONENT 2: As breads and biscuits are fast-moving consumer snacks they are consumed on a daily basis by the consumers which increase the sales of these products in every institution. Increasing preference for bread, cakes and pastries, cookies, is expected to augment demand over the forecast period. The increasing presence of convenience stores, supermarkets, retailers and food service providers will aid demand over the forecast period. Growing demand for various products including donuts, bread, cakes, pastries, and pies is expected to drive market growth. Apart from this, busy lifestyle, changing eating habits and western influence has reflected in a strong demand for bakery products in local markets. All food handlers shall be instructed & trained in food hygiene & food safety aspects along with

personal hygiene requirements commensurate with their work activities, the nature of food, its handling, processing, packaging, storage, service & distribution.

COMPONENT 3: Embroidery is a fashion work on outerwears for attracting people to buy the fabrics. Now-a-days, almost all the outerwear's used by the youngsters are coming in the market with some embroidery work. Embroidery is a work on the plain fabric, which create new designs and new look of the fabrics. The customers are sending their material for embroidery work on Job basis also. Embroidery on pillow covers, cushions, tablemats, ladies suits and a children wear has become a fashion; there is no market problem on job work basis. The product is a fashion item and there is no such specification for this item, however, quality of the embroidery depends upon the quality of the ground fabric, the intricacy of the design and the closeness of the stitches.

COMPONENT 4: Processed and value added products are gaining importance in the worldwide markets. Onion is mainly exported in the form of dehydrated onion, canned onion and onion pickle. Free water is removed from the vegetables during the drying process so that microorganisms do not survive and reproduce. Simultaneously, the solids such as sugar and organic acids are concentrated thereby exerting osmotic pressure to further inhibit the microorganisms. Drying process involves the application of heat to vaporize water and removal of moist air from the dryer. An appropriate technology to preserve horticultural produce is to dry it after it is harvested. This can reduce wastage due to spoilage, increase shelf life and enable cheaper and easier transportation thus increasing income to farmers.

COMPONENT 5: The course has been designed to train up so as to provide extensive coverage on all aspects relating to manufacturing and finishing of garments and to create awareness about the technique and trends to meet the present day needs. Small scale business started at home or a small rental premise. Profitable are like tailoring and bakery items are with small investment. These are best home based ideas for income generating activities. Raw materials are easily available in local market.

9 b) BUSINESS MODEL EVOLVED (YES/NO)

The Alteration Shop of tailoring target markets are those individuals who are seeking for alteration services and have no time to go to other places for repair of their clothes. To penetrate the market, the shop will be introduced as the perfect fit for alteration needs. The strategy will be two pronged: first is to introduce the services to potential customers and the second is keeping current customers to visit the shop frequently. The marketing mix of product, price, place and promotion are geared towards this strategy.

10. **SPECIAL FEATURES:**

COMPONENT 1: The virgin coconut oil obtained from integrated wet process give much more benefits especially in saving the processing time and cost (due to the shorter time) as well as improving the quality of virgin coconut oil. Furthermore, the

use of a virgin coconut oil nowadays is becoming increasingly important in the developed countries due to health benefit and it's nutritionally wholesome.

COMPONENT 2: All types of food can be baked, but some require special care and protection from direct heat. Various techniques have been developed to provide this protection. Baking techniques are used in ingredients such as spices, chocolate, fillings, toppings and pulses to be added on biscuits and cakes to taste better and richer. Training on how to analyze on daily consumption and then optimally manage the control of quantity of baking goods.

COMPONENT 3: With the advancement of computer technology, machine embroidery is improving very fast in its look and quality. There are many machine made embroideries in market which the sellers claim that they are hand embroidered. The only stage of the process that may consume time is in creating and editing the design file. But once that is done, the process picks up speed as the machine churns out piece after piece. The high production rate will help you finish your orders quickly and charge less to attract more customers.

COMPONENT 4: Removal of moisture from biological materials, popularly called *drying*, has numerous benefits, including ease of handling due to reduction in bulk, resulting in reduced handling costs. Moreover, drying prevents microbial growth and spoilage. Onions, garlic, tomatoes etc.,.

COMPONENT5: Eco-friendly packaging is usually made from recycled materials, reducing the waste of natural resources in production. Additionally, the manufacturing process itself tends to be more efficient. In addition to minimizing the environmental impact when creating the product, eco-friendly packaging also tends to be better for the environment after it has served its purpose as it will be recyclable or compostable. Carton boxes, bags, notepads etc.,.

11. APPLYING FOR PATENT, IF ANY: NO

12. CONSTRAINTS & SUGGESTIONS: NIL

13. CONCLUSION

RWTP is a place which helps in developing the abilities of starting a small micro business for rural women. Entrepreneurship amongst women has been a recent concern. Women have become aware of their existence their rights and their work situation. However, women of the middle class are not too eager to alter their role in fear of social backlash. The progress is more visible among upper class families in urban cities. Some have taken entrepreneurship roles where some have opted for employment.

At completion the overall implementation performance has been satisfactory taking into account the targets in the project's Logical Framework and the overall achievement. Notwithstanding various setbacks the project has over the years implemented all the components in all project villages. Organisation of women into SHGs and a strong emphasis on participatory planning and implementation through SHGs has enhanced the self-confidence and reduced the sense of isolation of the rural households.

Photos



Training on stitching & weaving





Outreach program on women health & nutrition



Training on VCO





Training on Paper Making

