VARDHAMAN COLLEGE OF ENGINEERING, HYDERABAD
Autonomous Institute, Affiliated to JNTUH

RWTP –Kacharam (Shamshabad, Mandal –District: Rangareddy, TS) – A Success Story

Rural Women Technology Park – Kacharam, has been established in the year 2016 under financial support from Department of Science and Technology (SEED Division), Government of India. This rural women technology park is functional in the premises of Vardhaman College of Engineering, Hyderabad who has been assigned the task and is the link between the Government of India and the rural women of this region. During past three years, tenure of the project, more than 200 women farmers have been associated with the park, are trained and empowered financially as well as nutritionally.

The Journey:

Technological Interventions (change in cultivation pattern) and value added products (VAPs) have been leveraged as basic tool for empowerment of rural women at this WTP. Intervention commensurate to prevailing seasonal variations and weather conditions were identified at this park for introduction. Draught resistance high value crops were identified and introduced as additional revenue generator for the family. New technologies included cultivation of low volume high value (LVHV), drought and pest resistant crops like Quinoa and Chia.

The park officials and staff identified villages in the vicinity, interacted with Village heads and organized several meeting with the groups of women farmers. Series of such interactions and motivations helped the women farmers to enroll and agree to participate in training formal sessions. The park organized high standard instructions by experts (Agronomist) drawn from PJTSAU (Hyderabad), experienced farmers for beneficiaries in Telugu (local language).

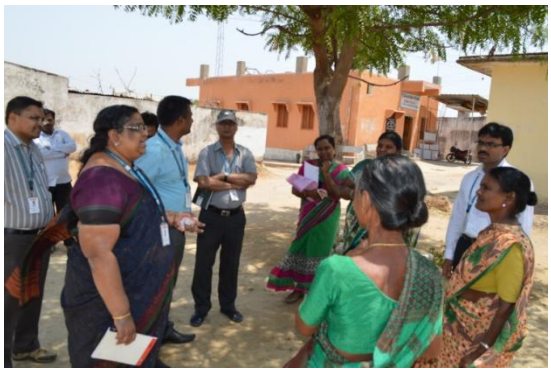


Figure 1 Awareness program at Village Kacharam

In order to facilitate and demonstrate various crop stages to participants, the WTP borrowed a small patch of land close to WTP (Vardhaman College premises) and arranged system and services for farming and for periodic irrigations etc. To ensure successful crops translocation technique was implemented instead of direct sowing. Germination and plant sapling for translocation have been arranged by WTP for most of the beneficiaries in the initial stages. Further to demonstrate and save water, drip irrigation techniques were also included for the training in the year 2018-19.

The park provided complete on-site support to the women farmers cultivating the new crop for the first time till harvest and post- harvest processing. The park extended support for packaging

of the crops for sale and also designed and implemented an exclusive marketing model for the beneficiaries.

Figure 2 On-site support to women -farmers at Sulthanpally Village

The farmers with crop in their respective stores explored trading the crop independently. They contacted available middle man/ agencies only to realise that these outfits are unwilling to trade, under the pretext of little/ no market demand for the product. The purchase prices offered were also unattractive. WTP officials intervened at this stage and extended requisite market support, creating a direct end user /customer base and fixing a minimum common support price of Rs. 200/- kg for Quinoa (Rs. 350/- kg for black Chia). This strategy and marketing support ensured maximizing value realization and direct transfer to the beneficiary.

Protocols/ procedures for Value added products (VAPs) from Quinoa and Chia were established, by the WTP, with a view to utilize the nutritious contents by the farmer's family and to generate in-house consumption of LVHV crops. The women farmers have been encouraged to prepare and consume such VAPs. On-site demonstrations were conducted at the villages to improve attendance and attention. Foods like; Pullihora, Chapathi, Upma, Dosa, Idli etc; Sweets and Confectionary like: Cake, Biscuits (with Chia toppings), Energy bar (Chikki) and Laddu, etc. were developed and demonstrated using LVHV as flour/ seasoning/ topping at RWTP-K. Specific protocols were documented and sensory evaluations conducted for each VAP.

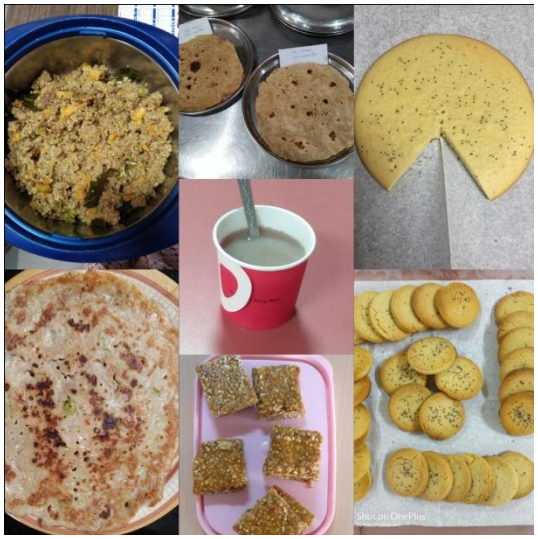


Figure 3 Spectrum of VAPs developed at WTP

In order to utilize village waste and to generate revenue for the rural women the WTP identified and utilized leftover greens at the farm, after harvesting vegetables, as the base (raw material) for animal fodder, VAP from village waste. For this initiative to be energy efficient, Solar thermal

energy has been utilized for drying of the greens and to convert it in storable dry nutritious mass. The dried mass so obtained has been blended and balanced with supplements like; oil seed cakes, rice husk, jaggery etc. and palletized in suitable size for storage and use as cattle feed. This VAP is a potential revenue generator, useful for the farmers during non-harvesting seasons and cattle feed shortage times. Affordable hybrid and standalone solar driers were designed at the park, as support to farmers.

Exposure of the WTP staff to elite faculty and the delivery contents helped improved content delivery /modifying the training mode in subsequent years. The training sessions were switched to and conducted at village, benefitting farmers who had difficulty in attending formal training sessions at the WTP. Qualification and expertise of the project staff thus not only supported better training, also improved financial efficiency of the project.

Present status of the beneficiaries:

It is observed that Quinoa Crop yield, in this region of Telangana State, of 2000kg / Acre is possible. Marginal and poor farmers, with patch of land admeasuring less than 100 Sq M, were able to grow around 50kgs of LVHV crop/ season. For a moderate support price, of Rs 200 /- per kg, seasonal improvements in farmer's house hold income was higher than Rs.10,000 /- (Rs. Ten thousands). Having understood cultivation of both Quinoa and Chia crops the beneficiary family is now able to modify their annual family earning up-to Rs. 25,000/-. The in-house consumption of these nutritious grains (especially Quinoa) has the potential to improve the hemoglobin levels and the physical health of these families.

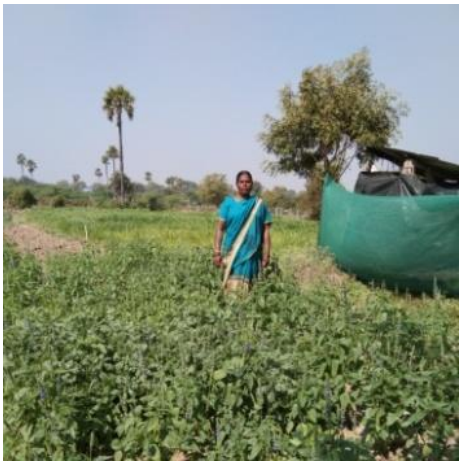
The beneficiary families are now experienced and encouraged, cultivating these crops year-on after-year. Severe draughts are still a challenge for these farmers.

Sustainability of the initiative

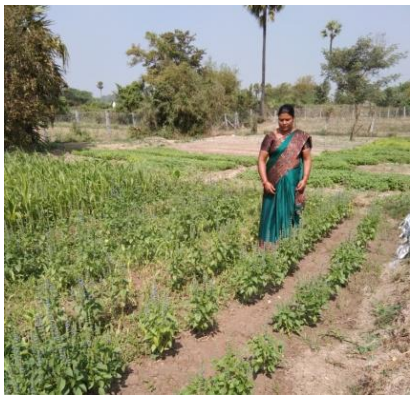
The interventions have demonstrated their effectiveness and direct impact, empowered the beneficiaries financially. The enthusiasm of the beneficiaries is captured through sample cases described here:

Mrs. Swaroopa a women beneficiary expressed her views on behalf of all the women who underwent training under RWTP-K said "I live in Sulthanpally village. We are cultivating Leafy vegetables, Chrysanthemum and Paddy in our own land. Though we had own land, we were left with only few savings or end up in losses. During summers, land was kept barren as there is hardly any water left for cultivation due to drought condition. During these times we earned nothing, as our source of income was only land. People from Vardhaman College came to

our village and conducted meetings on LVHV crops, which we had no idea about. First, we were not ready to risk our regular income by allotting our land to unknown crops which might lead us to non-repayable debits. They continued visiting us and convinced us that we could utilize very less portion of our land; also we could continue our regular crops along with these LVHV crops. Then we formed a group and started attending training classes conducted at our fields and Vardhaman College. I am very happy to attend training and grow Quinoa at our field. It helped in crop rotation. We have grown organically so cost of production was less and ended up in good amount of profit. This also fetched more price than regular crops. We will be benefitted if more trainings are given in various fields".



Mrs. Sobha from Malkaram mentioned "Our visit to Quinoa processing unit- Shameerpet, helped us in gaining first-hand information on processing of Quinoa. Also, lectures from field experts helped us in utilizing available farm resources in growing these LVHV crops, thus reducing Cost of production by about a quarter. Farm implements supplied through project, helped us in further reducing labour cost, bring down Cost of cultivation to about half.



Another women farmer Mrs. Sabitha from Kacharam stated "We started consuming Quinoa and Chia as part of regular diet, its nutritious and taste is relished even by toddlers. In addition, we started consuming Quinoa as green leafy vegetable, which is a good source of Iron. Implements given under this project are very much useful in daily field work, reducing dependence on labour for weeding and spraying thus again saving on Cost of cultivation. Thanks to DST and Vardhaman College"

Mrs. Ramanamma from Narkuda said "though I attended trainings on cultivation, we don't have either own or leased land, I and my husband were working as agriculture labour in the village. I also, attended training programs on VAPs helped us in knowing nutritional importance, so we prepared at home and relish consuming it; they are liked even by our grand children. As they are healthy snacks and food, to diabetic patients as well, all the members in our household consume it our regular diet. This gave me an idea to form a group of three women and prepare these

LVHV, VAPs in more quantity and sell in village and nearby villages, this helped me in establishing small scale business, adding income to household income.

In view of visible benefits and the promising results, it is pertinent that this initiative be extended and spread further to empower most rural women and the marginal farmer families of the state. More and more families when trained would not only be able to generate additional income, would relish better nutrition, immunity and health for the families. Both prosperity and longevity can be ensured as a result. In order to meet this objective it is important that dedicated man power is deployed till all such villages of such States are covered.

Figure 4 Training Session at WTP

Figure 5 Participants at processing Unit/Industry