

An “Enterprising Hobby” Becomes a Main Source of Income



Mrs. Khemwattie Ramnaraine is a 56 year old shade house entrepreneur from Perseverance, along the Essequibo coast of Guyana. Khemwattie loved gardening and caring for plants and had always kept a kitchen garden for the needs of her family. In 2008 the family moved onto a larger lot giving her the space needed to begin producing vegetables on a larger scale in an open field. Khemwattie was able to sell her produce including lettuce, celery, sweet pepper, tomato and eschalot with some success to households in her community.

4 years ago, Khemwattie became a beneficiary of the **Partners of the Americas (PoA) Hydroponic Production in Guyana project**. The project was created, in response to major flooding along coastal and river communities in 2005. Hydroponic shade houses with elevated trays were considered resistant to most floods and a good

opportunity for individuals and families to grow food. The project aimed to provide small farmers in targeted communities with technical training and practical support for the implementation of hydroponic and natural/organic cultivation practices on small farms or home gardens. From the project, Khemwattie received training and inputs such as : shade house plastic; shade net; 100 celery and 100 pakchoi seedlings ; and fertilizer for the life of the 2 crops, to start a new enterprise. In Year 1, she was using water in a solution with fertilizers and styrofoam sheets as an anchor for the plants on 4 (4 x 8 ft.) tables under shade. 2 months later she started using sand and paddy hull medium and added in 2 (4 x 18 ft.) boxes on the ground.

“This new technology it is much easier than the traditional way of cultivating vegetables and I have been quite successful”.

After assessing the situation in 2014, the PROPEL team in Guyana saw the need to expose shade house farmers in Guyana to a higher level of technology and improved methods of Protected Agriculture.

Working with PoA, PROPEL selected and facilitated six (6) producers, involved in the Protected Agriculture “Shade House” vegetable production, to visit Jamaica for 1 week in August 2014.

Khemwattie was one of the producers selected to go to Jamaica to participate in a study tour to learn about the improved Protected Agriculture Systems being utilized there. The exercise was led by Mr. Alvin Murray, PROPEL’s Senior Agricultural Coordinator, a versed Agronomist. Khemwattie and the other participants visited shade houses, greenhouses, input suppliers and had an interactive session with representatives of the Rural Agriculture Development Agency (RADA) of Jamaica.



Khemwattie shows the PROPEL team she practices what she has learnt

Since her visit to Jamaica, Khemwattie has built 2 new 20 ft. x 100 ft. shade houses. Like many of the participants, she has applied what was learnt, modifying her systems to improve production. Khemwattie expressed, "I was intrigued and motivated by what I learnt. That trip was great, it was a real eye opener, I wanted to practice everything I saw there, I was so impressed. The thing is, the technology I saw requires a lot of money to invest and I don't have that kind of money, but in my own small way, I am using what I learnt, I am very happy with the results and I am making money".

In May, 2015 Mr. Murray visited Guyana to follow up on the study tour and engage with producers who were utilizing Protected Agriculture Systems to improve the development

and management of their facilities. The training program was designed to allow producers to visit and observe practices of existing Protected Agriculture Systems and to allow participants to question and gather technical knowledge based on their shared observations. The session was attended by 25 persons, including Khemwattie and the 5 others who visited Jamaica in 2014. PoA was instrumental in the selection of participants for both interventions and helped facilitate the additional training.

With the extension of her shade house system and modifications made to the design: Khemwattie increased the height of the houses; she added shade mesh to reduce the amount of heat that enters; and added a vent to its roof to allow hot air to escape, Khemwattie has significantly reduced the heat stress on the plants which was affecting her production. Hot shade houses are one of the most common shade house issues in Guyana and the Caribbean.

"Now my crops do not die due to the heat and most importantly grow faster, bigger and have a healthier appearance when compared to the plants grown in my earlier shade house designs. Growing vegetables hydroponically has increased the shelf life and taste of the vegetables, which has captivated and increased my clientele"

She added "with PROPEL's intervention I have new insights and I am better able to manage the issues of pests and diseases. PROPEL has also helped me to master the hydroponic system as a business. I pay more attention to business decision making, costs, revenue, profits, which crops offer the best profit potential and I understand how the decisions that I make, or do not make, affect my profitability. I now have a holistic understanding of agronomy and farm economics".

Today, Khemwattie reaps twice a week an average of 25 parcels of pakchoi; 100 ears of lettuce; and during the life of the tomato crop, she harvest's 600 lbs of tomato from 2 beds. She sells her prized vegetables to consolidators (middlemen) as well as at the local market. When asked about the profitability of her business she shared, "Let us put it this way, my husband had a stroke and could not work much before he passed away 2 months ago. From the proceeds of the garden, I paid all the bills in the house, I employed my grandson and I am able to invest in expansion of my hydroponic cultivation. I am very happy with what I earn. There is no turning back, this is profitable. I have the training and know how, and I am motivated to do this right. There is nothing from which I cannot bounce back. I only wish that my husband, who was very supportive of me going to Jamaica through PROPEL, could have been around to benefit more from this.



Hydroponic cultivation using nutrient solution



Khemwattie's vented shade house