

## CHAPTER 4

### CONVERSATIONS WITH FARMERS IN SRI LANKA

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**Abstract.** Sri Lanka, teardrop of India, besides being the largest exporter of tea (*Camellia sinensis*), in the world, has varied tropical terrain where many medicinal plants are collected from the wild and are cultivated. In a short-term, recently completed, focused training program, farmers' societies met with field officers and professionals to share information and learn more about how to grow, harvest and market medicinal plants.

**Keywords:** farmer training; micro-credit; post-harvest handling; market creation

#### PARTNERSHIPS

In November 2004 Winrock International offered a collaborative program for volunteers to provide farmer training in Sri Lanka. This was a USAID-funded, Winrock Farmer-to-Farmer (FTF) program implemented in a number of countries around the world. Through the FTF program, US field experts volunteer for short-term technical-assistance projects in a wide range of activities related to agriculture.

To develop a successful in-country program, Winrock FTF program partners with successful non-government organizations. The in-country non-government organization that hosted the program in Sri Lanka was Sarvodaya. Sarvodaya is a Sri Lankan organization developed around a set of coherent philosophical tenets drawn from Buddhism and Gandhian thought. It has been operational for almost 50 years. Today Sarvodaya is Sri Lanka's largest and most broadly embedded people's organization, with a network covering 15,000 villages, 34 district offices, over 100,000 youth, and the country's largest micro-credit organization with a cumulative loan portfolio of over LKR one billion ([www.sarvodaya.org](http://www.sarvodaya.org)). Sarvodaya is a diverse organization with multiple interrelated departments. One subsidiary, the Sarvodaya Economic Enterprise Development Services (SEEDS) Medicinal Plant Project, which directed, staffed and hosted the volunteers program is described in this article.

SEEDS is a microlending group that has been most successful, and one area is in providing funds for small farmers to initiate medicinal plant projects. Through their stakeholders, SEEDS has initiated expansion of farmers' crops to include medicinal plants. Volunteers, provided through Winrock, conduct training sessions first on

horticulture and then post-harvest handling and marketing. This article will focus on the post-harvest handling and marketing training provided to the farmer groups of Sarvodaya.

### HISTORICAL BACKGROUND

People from the ancient Sri Lankan periods believed that each and every plant contains some medicinal value and that it is very important for people. The golden era of Sri Lanka's rich traditional heritage of indigenous medical systems flourished during the 'Ravana' Period. Evidence of the Sri Lankan traditional medical educational system and methods flourishing during the Anuradhapura, Polonnaruwa and Dambadeni eras has been recorded.

With the invasion of western medicinal systems into the country, most people moved away from the traditional medical systems. This has become a danger to the lives of the people in Sri Lanka as there have been several cases of deaths caused by over-intake and inaccurate intake of allopathic medicines. Moreover, it has been reported that some cases of cancers, paralysis, etc., which had been abandoned by western medical professionals, have been cured by traditional medicinal systems. Traditional medicine is used to cure some ailments such as bone fractures and snake poisoning, asthma, etc. Therefore, the people have identified the importance of the traditional medicine and started to migrate towards it. This offers an opportunity to those willing to develop a commercial operation as an additional enterprise for the farming or rural community, or for farmers without a large acreage.

As a result, a large number of rural women are engaging in the cultivation and production of medicinal and herbal plants as an income-generating activity at household level. Presently Ayurvedic markets and some Ayurvedic hotels are being supplied by small-scale producers who have established their own market linkages. However, the cultivators and the processors in Sri Lanka have limited knowledge about the industry, on current processing techniques and the commercial marketplace. The export market is mainly concerned with the quality of commodities; therefore, knowledge of processing and quality maintenance is very important when trying to capture the export market. Certification of goods provides buyers with some assurance of quality, however, the products coming from the rural farmers are not under any certification and vehicles for certification on the ground level are non-existent. There is a lack of vital information like dates of manufacturing, ingredients, etc., and this acts as a barrier for the export market.

Sarvodaya Economic Enterprise Development Services (SEEDS) is the economic arm of Sarvodaya Shramadana Movement in Sri Lanka. Its mission is to eradicate poverty by promoting economic empowerment for a sustainable livelihood. SEEDS believes that economic empowerment is not only increasing income by provision of credit or grants, but also increasing people's economic discipline and awareness as well as building knowledge and abilities and the potential for livelihood improvement. SEEDS' vision is to alleviate poverty in the country, particularly in rural areas, by empowering the village-based community organizations, the Sarvodaya Shramadana Societies (SSS). SEEDS commenced its

programs in 1987 initially among 250 SSS in 5 districts and has expanded to over 3200 SSS in 21 of the administrative districts at present. The target group of this program is the multitude of rural and urban poor who are members of the SSS. Recently SEEDS opened up its services to non-members as well.

SEEDS is looking to expand this technology among a large number of farmers and to improve the ongoing cultivation and processing methods and thereby increase the quality as well as productivity, which will improve the farmers' life standards. The market is the main area on this aspect and for this, SEEDS expects to promote one major producer among others as a buyer for products within the cluster, so that the market is assured. SEEDS expects the Farmer-to-Farmer program to contribute towards providing the needed technology, information on potential and demand in the export markets, introduce acceptable packaging methods and address the problems faced by the farmers.

Through strengthening of village-based institutions, financial systems and enterprises, and capacity building among SSS office bearers and members, SEEDS attempts to uplift the economic status of the target groups. SEEDS promotes environment-friendly economic development activities through developing micro-, small and medium enterprises and encourages the conservation of the prevailing life styles and values. Development of agriculture and agro-based industries is a key priority area of SEEDS.

SEEDS is structured into three divisions – Banking, Training and Enterprise Services, working together to a credit plus micro-finance package. Given below is the profile of the Enterprise Services Division.

#### *The Enterprise Services Division (ESD)*

This is the Business Development Services wing of SEEDS, established as a partnership project between SEEDS and ITDG-South Asia; it is engaged in Business Development Service (BDS) provision to more than 30,000 clients annually through a network of Enterprise Promotion Officers based in 20 administrative districts in Sri Lanka and supported by specialized Units (Information, Marketing, Technology Development and Technical Skills Development) at the Head Office. Development of agriculture and agro-based industries is a key priority area of the Enterprise Services Division.

With the launching of its BDS component (ESD) SEEDS commenced providing a range of credit plus services to loan borrowers to help them continue their businesses as a measure to increase loan recovery rate. This was achieved by introducing a number of programs and systems such as conducting business appraisals, loan recommendations, provision of new technologies, techniques and technical training to improve the viability of their business and farming activities, establishing linkages with input supply and market, and relevant information dissemination. Presently SEEDS maintains its loan recovery rate at 94%.

Based on the experience gained over the years under the Project on 'Support for Small Enterprise Development' co-funded by several donors, the ESD revised its approach from supply-driven (Sarvodaya member-centred) approach to demand-

driven (open-market) approach to provide services to a wider audience. This is done through the formation of a development-oriented professional model for 'Marketing Business Development Services' to its clientele in the micro- and small-enterprise sector. During this process ESD provides its services through district-based Enterprise Promotion Centres focusing on sustainability of activities and the Centres. In this regard, ESD concentrated on the poor segments of the rural and urban population and supported more established small enterprises having the potential for creating employment opportunities for the poor. ESD has felt the necessity for changing its role from 'supply-driven' to 'demand-driven' as a measure to be cost-effective and sustainable, considering the following:

- Increase in SEEDS clientele accessing BDS offered by ESD.
- The need for encouraging SEEDS clients to approach ESD for its services.
- The opportunities for marketing BDS to non-poor as a measure to cross-subsidize services offered to the poor.
- The opportunities for developing partnerships with organizations providing services complementary to SEEDS.

With the stated large overlaying goals there was an additional short-term goal of the FTF program. Goals determined by SEEDS' BDS and ESD were basic:

- To help farmers to start and improve processing practices of medicinal and herbal plants as an enterprise to cater to the local market and to go for potential export markets.
- To help farmers to adopt best practices in going for higher production as well as in quality improvement as per the market requirement.
- To introduce new markets for existing products and new products for potential markets.
- To train farmers as well as SEEDS staff on the market and technological inventions on medicinal and herbal plant cultivation.
- To train cultivators to go for organic production by introducing the market potential to them.

The explicit goals of the training were:

- To promote farming communities.
- To bring in new income generating activity.
- To expand medicinal plant production.
- To introduce new markets for existing products and new products for potential markets.

Indirectly these goals were also to be met:

- To create awareness on the potential both in local and foreign markets.
- To introduce new products to farmers as well as processors, in addition to those manufactured presently, for better market acceptance.
- To evaluate the present techniques used for processing and manufacturing and suggest better packaging types and methods mainly focusing towards eco-friendly materials.
- To facilitate the development of production plans based on their own field planting requirements and other farmers' demand.

- To develop a method for SEEDS to increase the efficiency, effectiveness and productivity of extension services and technology dissemination.

As a result of the training it was assumed that many people would benefit:

- female beneficiaries: 40
- male beneficiaries: 20
- indirect female beneficiaries: 400
- indirect male beneficiaries: 500.

### ON SITE

Today many of the international aid programs are focusing on volunteers programs due to the type of funds available. International development programs receive funding for programs, but funding for staffing and overhead is minimal. Winrock has found a hybrid system that works well to support in-country projects with partners and attract volunteers who can assist in training. By inviting expert volunteers to provide training, the training provided to the stakeholders allows the in-country organization to meet their goals.

The program began by familiarizing the volunteer staff with the current market place, the culture and products provided in the Sunday market. Gathering background data may be an important first step prior to expanding the current markets. Some of the data to gather are: the numbers of farmers, capacity of the farmers (intellectual, economic, environmental), goals of the farmers, which products are wild-harvested versus cultivated, products being sold, the quantity and quality of the medicinal plant products in the market, the profile of the market stakeholders, pricing, domestic versus international markets (Figure 1; see colour pages elsewhere in this book).

### TRAINING SESSIONS

#### *Presentations with Sarvodaya Farmer Society Members*

Sessions were held in homes and local offices in the towns of Colombo, Anuradhapura, Kebithegollewa, Paravidya and Dumbulla. In attendance were Sarvodaya staff: 4 field officers, promotional officers as well as their headquarters manager, in addition to the 36 farmers and their family members, several buyers and a few traditional doctors. The groups were 66% female, 34% male, of ages ranging from high school to elderly.

Through translators topics presented were: creating a list of the top 12 plant names for cultivation and market, post-harvest handling methods and tracking systems, markets (what exists, how to create them), guidelines for international markets, and contacts. Below are the details of these discussions. The basic horticulture and farming techniques were covered by previous volunteers, so the presentation began with post-harvest handling.

### POST-HARVEST HANDLING

When growing food crops, quantity and flavour are the main criteria for a successful crop. However, growing medicinal plants requires different controls. Much of these data are still unknown due to the lack of biological studies of these lesser-known and under-utilized plants. For the volunteer, it is helpful to be made aware of the priority plant list prior to visiting. International volunteers can then gather what is known about production and use of the plants prior to visiting.

The basic steps in any agricultural commodity used as a medicinal is to stabilize the materials for production. To accomplish this, the crops must be clean, pure in species, dry with low yeast, mold and bacterial counts, packaged for a long shelf life, and stored in a manner to prevent migration of volatiles between other stored commodities and infestations.

### FARM RECORDS

From the moment the plant materials are initiated and planted, it is necessary to begin a tracking system. For example, the first recording would be the source of the propagation or germination material. This can include, but is not limited to, the source of the materials seed or propagation stock, soil type, soil treatments prior to planting, day and time. The record continues during the growth period listing amendments, weather, watering and then at harvest time the date, time, weather, drying method, etc. until it is packaged. To document the identity of the plant you must take a representative sample of a flowering plant and dry and press it as a voucher. This becomes your archival reference specimen as it is mounted on archival paper and labelled with the collection information, plant description and date of harvest. A voucher number assigned to this reference is a unique number and can be used as a tracking number throughout your system; from the farm to the shelf, 'soil to soul'. This is validated by a local botanical expert and kept on file in case of any legal action in the future.

The finished package must be labelled on the exterior of the package with the scientific name of the plant, the voucher number, the date, location and weight. At this point it will probably be warehoused until it is shipped to the processor. Storage of the dried goods must be free of insects and mammals and other materials that may have volatile oils that can migrate and contaminate the crop.

### SUSTAINABILITY

To establish a long-term successful business, one must be sustainable in their practices. Sustainability is defined by biological, economic and cultural parameters. All three are required to establish a successful business. During the discussion with farmer members, it was determined that many of the plants were not cultivated, but still being harvested from the forests. Due to this information, a mini-course on plant monitoring to determine ecological sustainability was offered.

*Ecological sustainability, harvesting from the wild, plant monitoring*

Plots are sized corresponding to your needs, square or rectangular; the average size is 20x20 m or larger and there are usually 20 or more per site. There are a minimum of 3 replicates sites per species, triplicating the original site. The plots are measured from a 100-m transect line and then offset or random depending on the location of your plant of choice. Within each biased plot the plants of interest are measured; height, width, all criteria that are consistent and measurable in the species. Other qualities noted are: percent cover class so we know what plants are surrounding and may be damaged during harvest, any evidence of infestation, life stage of plant, number of inflorescence present or not, infructescence present or not, etc. Once the plants have been counted and measured, then randomly chosen mature plants are harvested. The amount harvested is determined by randomly assigning a treatment type. The treatment types presented in this case were 0%, 33%, 66% of the total mature plants counted per plot. Data are recorded for 3-5 years until trends are seen and the data are consistent.

*Economic and cultural sustainability*

Besides a plentiful supply, a business must provide a profit to sustain itself. So a short discussion on economic sustainability was given. Farmers no longer just grow the raw materials, but now a farmer is a businessperson and must be accountable for all expenses and projections, and needs awareness of markets and cutting-edge crops and techniques. Your goals must have financial gains. The discussion also included the need to know who you are, and what non-standard business criteria you may want to include in your business to preserve who you are. This is your cultural sustainability. What must you do to be sure this is not lost in the western-paradigm business model? So a business person here may step outside their business mode and look at their personal goals and community goals as well.

*Creating your market*

The next section was a group activity of how to stimulate buyers for new ingredients. Here are a list of activities we suggested:

- Farm visitation days
- School programs
- Demonstration gardens
- Doctor presentations
- Tours
- Hospitals
- Research facilities
- Product use demonstrations
- Consumer panels
- Bumper stickers
- Brochures, ads.

The end result was to stimulate the market, but also to offer opportunities for the farmers to find partners within their research community.

### DOCUMENTATION

When the discussion began, tracking all your actions was emphasized. This culminates in documents used to sell, provided to regulating agencies and of course for international sales.

Below are listed the minimum documents that would accompany a product:

- Certificate of analysis with plant name; this is supported by a:
- Voucher specimen; a voucher specimen is an archival record of the plant referred to in the certificate mentioning:
  - plant part
  - whole or milled material
  - moisture content
  - yeast and mold content
  - pesticides present
  - aflatoxins or other mycotoxins
  - *E.coli* and *Salmonella*, which must both be 0.00 or an analytical detection limit
- Commercial invoice
- Phytosanitary certificate if exporting.

### WHAT'S NEXT?

Short-term and long-term activities:

- Calculate yield of plants currently grown or wild-harvested.
- Gather prices per kilo of the plants in your farmer's list.
- Identify buyers.
- Identify manufacturers.
- Meet with Sarvodaya.
- Identify Sir Lankan academic or private-sector collaborators.
- List imported plants.
- Compare prices, domestic versus international.
- Attend regional trade shows.
- Participate in trade shows.

### DISCUSSION

#### *International volunteer programs*

To slip into a culture for 2 weeks and pretend that a presentation will have an effect is somewhat unrealistic. There are many concepts that the stakeholders in the hosting culture have not experienced and a one-day seminar will offer some help,

but the majority will not absorb all the information. The best hope is that the staff will learn from the visiting volunteer experts and then repeat some of the information when the stakeholders are ready. A return visit of the same volunteer after 6 months or during harvest or some milestone would be advantageous to both the volunteer and the stakeholders.

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