

“Establishment of an Herbal Garden to generate awareness about the medicinal and commercial uses of herbal plants, subsequently leading to a secondary source of income for the local population”

“*AROGAYA VATIKA*”



Prepared by:

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In Association with DOCC, S P Jain Institute of
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Executive Summary

The demand for medicinal plants is rising interest in Ayurveda and natural treatments, generating a need for organized cultivation of herbal plants. Keeping this in mind, we propose to build an Herbal Garden which will help in creating awareness for use and conservation of medicinal plants in the local community. Development of the Herbal Garden holds the following objectives:

- *To spread awareness about the medicinal value of local herbs easily available to them, which can be used to cure diseases and ameliorate the general health of the community*
- *To enable a secondary source of income for the local population by providing them with information on the commercial benefits of these local medicinal herbs which they can cultivate and sell*
- *To prevent exploitation of natural resources leading to endangerment of valuable plants, by providing proper training for organized cultivation techniques*

In order to achieve these objectives, the herbal garden will serve as a storehouse of medicinal plants, imparting knowledge about the specific medicinal benefits of the plants found in the local areas growing to local population, students and tourists. It will also serve as a centre for holding workshops to teach the local people cultivation and harvesting techniques of the medicinal herbs. This will enable a secondary source of income for the local community by allowing them the opportunity to grow these plants in their land and eventually sell them to identified markets.

This project is planned over a period of 3 years, with a total cost of Approx 16 Lakhs. The initial financial requirement for the first year will be approximately Rs.9,00,000, with recurring costs of Rs.3,54,000 and a non-recurring cost of Rs.5,45,000. Recurring Yearly cost for next two years will be 3,54,000. Subsequent recurring costs after third year will be covered partly from revenue generated from the Herbal Garden and partly through the NGO resources and donors.

Title

Establishment of an Herbal Garden “AROGAYA VATIKA” to generate awareness about the medicinal and commercial uses of herbal plants found in the area, subsequently leading to a secondary source of income for the local population

Name of the Organization (with full address, contact numbers, email address)

J&K Sai Star Society

Sainik Colony, Nagrota Gujroo, Kathua (district), Jammu and Kashmir

Pin: 184205

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About NGO

Background

This NGO was established by Brigadier Amarjit Singh Randwal, a Senior Retired Officer of J&K Rifles Regiment, in 2004 and it works for the development of rural areas of Udhampur and Kathua district- Jammu. The mission of the NGO is all inclusive development by working at grass root level and employing sustainable technologies and information with regard to healthcare, education and agriculture. Efficient use of natural resources and environment with special emphasis on empowerment of women, children and welfare of ex-servicemen and widows. Its vision is to improve the quality of rural population by sustainable development at grass root level and the values that it leverages on is honesty, integrity, innovation, sincerity and hard work.

Registration number

4680/S, under J&K Government, Act VI of 1998 (1941 AD)

The NGO is also registered with NITI Aayog.

Details of the Management Committee

1. Brig. Amarjit Singh Randwal (Retd.) – President
2. Smt. Vimala Thakur – General Secretary

3. Sub. Major (Retd) Dina Nath Randwal – Secretary
4. Shri Kaka Ram – Treasurer
5. Smt. Santosh Kumari – Executive Member

Introduction and justification of the project

About the geographical area

Udhampur and Kathua districts occupies an area of 7201 square kilometres and collectively have a population 11.71 lakhs (as per 2011). This region consists of a large number and variety of herbs and plants, however most of this hasn't been commercially utilised. Some of the herbal/medicinal plants found in this area is mentioned in the table below -

Sl no.	Plant Name	Uses
1	Sadabahar	Helpful in cancer, diabetes, high blood pressure and stroke. Used in treatment of leukemia and Hodgkin's lymphoma
2	Tulsi	Germicidal, fungicidal, anti-bacterial and anti-biotic properties. Cures fever, malaria, cold and cough
3	Amla	It enhances food absorption, balances stomach acid. It fortifies the liver and nourishes the brain. It acts as a body coolant, flushes out toxins and increases vitality.
4	Asavgandha	It is used in treatment of arthritis, anxiety and insomnia. It is used in treatment of tumors, tuberculosis and asthma.
5	Night Jasmine	It is used for dyeing silk and cotton. It is used in treating chronic fever, arthritis, joint pain and rheumatism.
6	Sugar plant	Stevia herb plants are very low in calories and its dry leaves possess roughly 40 times more sweetness than sugar. It's a near zero calorie food ingredient.

7	Vasaka Plant	It is used in treating cold and cough, bronchitis and asthma.
8	Aloe Vera	It is used in the treatment of skin and hair disorders, inflammation, osteoarthritis and stomach ulcers. It is used in the treatment of diabetes.
9	Bach	It rejuvenates the brain and the nervous system. The root of the plant is internally used to treat bronchitis and sinusitis.
10	Amrita	It is used in the treatment of jaundice. It is anti-diabetic and anti-allergic.
11	Kachnar	It is used in treatment for hemorrhoids, regulating the blood flow during menstruation, purification of blood, treatment of cough.
12	Anar	It is used in treatment of cough, sore throats, urinary infection, digestive disorders, jaundice and diarrhea
13	Bael	It is used in treatment of asthma, anaemia, fractures, wounds, swollen joints, high blood pressure.
14	Laung	It helps in improving memory, treatment of insomnia, indigestion and nausea.
15	Ilaychi	It is carminative in nature and helps speed up digestion, reduces inflammation of the stomach lining, fights heartburn and nausea. It improves appetite and reduces acidity.
16	Khas	It is used for perfumery, flavoring drinks, reducing inflammation in nervous and circular system. It is an effective antiseptic herb and its oil has sedative properties
17	Ajwain	It helps in controlling blood pressure. It is used for treatment of cough, heart diseases, hypertension and asthma.
18	Pipali	It helps in reducing excess body weight, clears the skin, smoothens wrinkles and slows down aging of the skin. It freshens the lungs as it improves the flow of oxygen.
19	Safed musli	It is a very popular aphrodisiac agent. It is also used in treatment of asthma, natal and post-natal problems. It also proves as a nutritive tonic for both the mother and the foetus.
20	Satwar Patta	It is used in treating anorexia, hyperactive children and people who are under weight. It is used as an anodyne and aphrodisiac.

Apart from the plants mentioned above, there are numerous other medicinal plants in this region which can be accommodated to the garden in the subsequent years.

Problem Description

The demand for medicinal plants is rising in the industrialized world, with people increasingly resorting to natural health remedies. According to the WHO, the global market for herbal products is estimated to be around US \$ 5 trillion by 2050.

Due to increasing population and increased interest in Ayurveda, Homoeopathy and Allopathy, forest resources are not able to meet the requirement of medicinal plants and herbs adequately. 90% of these plant species being used for medicinal use are collected from natural resources, with only a few being cultivated commercially. Hence, there is a need for organized cultivation of these herbal plants.

Secondly, due to unskilled people collecting these plant parts like roots, barks, stems etc. in unscrupulous ways, there is endangerment to the existence of valuable plants. Exploitation of natural resources can only be reduced by proper training and awareness of commercial cultivation being provided to the localities.

Moreover, there is lack of awareness by the population in this area of how medicinal plants available to them easily can be used to cure diseases and ameliorate their health.

Lastly, there are few employment opportunities in this region and family income is quite low. Moreover, the women are generally unemployed and have a lot of spare time which can be utilized to provide secondary source of income for the families.

Concept and objectives

Udhampur and Kathua districts consist largely of rural people, where the prevalent occupation of majority of the people is farming. The primary source of income of the local people is through selling the cultivated vegetables. However, there is an issue of employment in the area and family income is low. Considering the rising demand for medicinal plants in the industrialized world, and the fact that this region is a home to many medicinal plants, establishing an herbal garden will help in creating awareness for use and conservation of medicinal plants in the local community.

The herbal garden would serve as a storehouse of medicinal plants, where demonstrations and workshops will be organized for the local people to come and learn growing, harvesting and value addition techniques of medicinal plants. They will be taught the commercial value of the medicinal plants, after which they could grow these plants in their land and eventually sell them, thereby providing them with a secondary source of income.

Objectives:

The main objectives of the project are as follows:

- To create awareness amongst local people about the use and benefits of medicinal plants
- To help in identification of the medicinal plants that grow in the region
- To provide training to the interested locals on cultivation and harvesting techniques
- To explain the commercial use of the medicinal plants which can be home grown and sold to provide them with a secondary source of income
- To find suitable markets available for selling the medicinal plants

Business Model

The garden will be open every day for a limited timing during which demonstrations will be given about the plants and their medicinal benefits. For the people interested in cultivating and selling the plants there will be detailed workshops help once a week, every Sunday. The people can attend these workshops to understand the cultivating, harvesting and semi-processing techniques required for each plant. Post the workshops, people can register to become suppliers of these herbs.

There are two models of revenue generation which can be looked at to sustain the recurring costs of the Herbal Garden. The first will be to directly sell certain products like plant saplings, seeds, rose water, lemon grass water etc. to the local people, students visiting from colleges and schools, and the tourists/passers-byes who come to visit Herbal Garden. In addition, we will also employ a certain part of the land for horticulture, wherein different varieties of flowers can be grown for the purpose of selling. From this we aim to generate some revenue which will help cover (20-25)% of the recurring costs. The approximate calculation of the expected revenue is given below

Avg. Price per sapling	Saplings sold in a year (approx.)	Revenue Generated
Rs. 50	1500	Rs. 75,000

The second model is where the NGO will serve as an intermediary between these registered suppliers and the customers to whom medicinal products will be sold. The NGO will identify potential customers, both individuals and businesses (like Patanjali, Ayurvedic medicine manufacturers) who are likely to utilize these herbs, and market the products to them through below the line and online advertising. Certain collectors will be chosen from each village who will collect the semi-processed and packaged herbs and bring it to the NGO centre. From here the products will be arranged and categorised, and then transported to the customer. The aim is to generate revenue which will help cover (25-30)% of the recurring costs. We expect each packaged product to be sold for Rs. 100 and the registered suppliers would be able to supply 20,000 packages annually (100 registered suppliers*200 packages). Thus, as an intermediary the Herbal Garden expects to charge a commission of 5% on the total sale made, thereby it will be

able to recover (25-30)% of the recurring cost and also generate an annual income of around Rs 20,000 per registered supplier.

Price per package	Number of registered suppliers	Total no. of packages expected to be sold annually	Exp. Annual Revenue	Revenue for the herbal garden (commission*sales)
Rs.100	100	20000	20,00,000	1,00,000

In order to attract a large number of visitors to the Herbal Garden, marketing needs to be done through putting billboards outside the garden, pamphlets, advertising through social media like Facebook/Instagram etc. In the future we can also look to open a small café outside the garden, offering various Herbal Teas from the garden itself. This will attract a larger footfall of visitors, becoming a must visit spot for the travellers along the Jammu-Punjab highway, and can also generate a secondary source of income to help cover recurring costs.

Activities to be undertaken

1. For generating awareness- to develop an herbal garden for demonstration purpose and to cultivate medicinal plant species for local usage
 - i. Survey of existing forest medicinal plant resources and identifying medicinal plants to be grown with their appropriate periods of harvesting, with the help of a professional
 - ii. Hiring a gardener and labourers
 - iii. Land preparation – including levelling, fencing, creating footpaths and sourcing irrigation facilities
 - iv. Setting up of two Greenhouse rooms and a storage room
 - v. Organic manuring of the land
 - vi. Buying and plantation of seeds
 - vii. Weeding
 - viii. Continuous irrigation
 - ix. Harvesting
 - x. Procurement of the medicinal parts that can be sold
 - xi. Advertising to get people from nearby villages and schools to visit the herbal garden, through below the line marketing such as billboards, pamphlets, word of mouth and loudspeakers on vehicles.
 - xii. Demonstrating cultivation of the plants, procurement of the medicinal parts and giving information about the medicinal uses.

2. For generating secondary source of income and alternative sources of employment
 - i. Providing detailed training and workshops for the people interested in cultivating
 - ii. Providing seeds and saplings for them to start cultivating the plants

- iii. Generating a system for collection of procured medicinal plants by having one collector per village
 - iv. Preserving and packaging of the plants as required
 - v. Identifying markets for selling of the products – Ayurvedic doctors, individuals etc.
 - vi. Identifying distribution channels – retailers, doctors, online website etc.
 - vii. Advertising and marketing about the products
 - viii. Documentation of practices for cultivation of medicinal plants using organic farming techniques, their processing and preservation, quality control packaging and marketing
 - ix. Pricing the products after analysis of the competitor's pricing
 - x. Identification of how to provide remuneration / profit sharing for the collector and people cultivating the plants
3. For generating revenue which will help cover certain percentage of recurring costs
- i. Production of sapling, products like rose water, flowers etc. to be sold.
 - ii. Packaging and pricing of these products
 - iii. Advertising and publicity of the herbal garden through pamphlets/ announcements to ensure larger population of visitors to the garden who will eventually buy the products.
 - iv. Spreading awareness in schools through pamphlets and organizing school visits to ensure greater awareness and footfall.
 - v. Creating of billboards and pamphlets to be distributed to increase awareness.
 - vi. Selling of the sapling, products etc. to the visitors and surrounding public.
 - vii. Identifying markets to sell bulk orders to, identifying marketing and distribution techniques to sell the products

Benefits from the Project/ Impact on society

The project will benefit a population of 11.71 lakhs residing in Udhampur and Kathua districts. Due to added source of income they will benefit economically, and the medical awareness will improve the general health status of the community. Conservation of the natural resources in the wild will also be an outcome of the project, and the cultivation of medical herbs with proper techniques will help make this sector a little more organized. Provision and selling of a larger number of medicinal herbs will provide easier access to the nearby Ayurveda/Homeopathy clinics.

In addition, the Herbal Garden will attract a large footfall of visitors to the area which will generate increased revenue for the local shops and restaurants nearby.

Financial outlays:

The initial funding requirement for the first year is Rs.8,99,000. The recurring and non-recurring costs for the project of duration 3 years will be Rs. 16,07,000. Details are as follows:

1st year: Rs.3,54,000 (Recurring part) + Rs.5,45,000 (Non-recurring part). Total Rs.8.99,000.

2nd year: Rs.3,54,000

3rd year: Rs.3,54,000

Further break-up of the recurring and non-recurring cost is provided in the table below.

- Recurring component

SI No.	Expenses	Budget (Rs.)			
		Year 1	Year 2	Year 3	Total
1	Garden Assistant , Rs. 15,000 pm	1,80,000	1,80,000	1,80,000	5,40,000
2	Watchman, Rs. 3000 pm	36,000	36,000	36,000	1,08,000
3	Gardener (2 in no.), Rs 5,000 pm each	1,20,000	1,20,000	1,20,000	3,60,000
4	Electricity, Rs 500 pm	6,000	6,000	6,000	18,000
5	Manure and pesticides, Rs. 1000 pm	12,000	12,000	12,000	36,000
Total (Rs.)					10,62,000

- Non Recurring Component (Financial assistance for Herbal Garden)

Land Area: 1 hectares

SI No.	Activities	Budget (Rs.)			
		Year 1	Year 2	Year 3	Total
1	Seeds & saplings (Rs.50,000 per hectare)	40,000	5,000	5,000	50,000
2	Barb Wire Fencing (Rs.75,000 per hectare)	75,000			75,000
3	Irrigation Facilities (piping + check dam+ pump) (Rs.1,00,000 per hectare)	1,00,000			1,00,000
4	Greenhouse (2 in no.) Rs 30,000 each	60,000			60,000
5	Leveling land (Rs.1,20,000 per hectare)	1,20,000			1,20,000
6	Store house and Watchman room	80,000			80,000
7	Footpath along the plantation site	30,000			30,000

	(Rs.30,000 per hectare)				
8	Main Gate + Hoarding	30,000			30,000
Total (Rs.)					5,45,000

Period of the project – work plan and scheduled targets

The period of the project will be 3 years; we estimate this to be the time taken for the first batch of medicinal herbs to be sold by the localities. Post this the Herbal Garden will continue to serve as a nursery garden for the years to come, and continue to provide any help required to the people for cultivation and selling.

Activities	Year 1		Year 2		Year 3	
	Jan-Jun	Jun-Dec	Jan-Jun	Jun-Dec	Jan-Jun	Jun-Dec
Consultation with expert	✓					
Hiring labour and watchman	✓					
Collection of seeds and saplings	✓					
Land preparation & levelling	✓					
Preparation of irrigation facility	✓					
Soil and moisture conservation		✓		✓		✓
Fencing	✓					
Construction of watchman hut and footpath		✓				
Planting of the herbs		✓		✓		✓
Display of potted plants			✓			
Awareness workshops			✓	✓	✓	✓
Registration of cultivators			✓	✓	✓	✓
Identifying markets and marketing			✓	✓	✓	✓
Collection of packaged herbs			✓	✓	✓	✓
Selling saplings/flowers/products			✓	✓	✓	✓

Further scope

The production of medicinal herbs can be made more organized by opening a factory in the village where process of cultivation, harvesting and packaging of the herbs can be done more efficiently and on a larger scale. This will ensure employment to a larger base of people, increased incomes and building a brand name.

Opening of a Café which will serve to the visitors and attract a larger crowd to the area is also something which can be implemented after the Herbal Garden has been established completely.

Conclusion

The Herbal Garden “*AROGAYA VATIKA*” will help in spreading awareness among the local people about the medicinal value of the herbs found in the region. It will also enable a secondary source of income for the local population, as when they learn about the commercial value of these herbal plants, they can cultivate and sell. The project is planned over a period of 3 years, with recurring costs of Rs.3,54,000 per year and a non-recurring cost of Rs.5,45,000 during first year. ***The total initial financial requirement for the first year will be approximately Rs.9,00,000***, whereas the subsequent recurring costs will be covered partly from revenue generated from the Herbal Garden and partly through the NGO resources and donors .

Appendix:

Photos of the land where the Herbal Garden is to be established:



Photo



os of the Herbal Garden that we visited in Pathankot

