LUGAZI RURAL FINANCE DEVELOPMENT TRUST

The Project Report

Project Title

Improving The Use of Traditional Medicinal Plants In Uganda

Reporting Period

January – March 2024

Implementing Partners in Uganda

1. **LUGAZI RURAL FINANCE DEVELOPMENT TRUST [LRFDT]**
2. **KATOSI WOMEN DEVELOPMENT TRUST [KWDT]**
3. **MBARARA UNIVERSITY OF SCIENCE AND TECHNOLOGY**

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- **Saxon State Chancellery**
- **Leipzig University, Institute for Drug Development, Pharmaceutical Biology**
- **German Association for International Development**

INTRODUCTION

Traditional medicine (TM) occupies an important place in the health care systems of developing countries like Uganda. The World Health Organization (WHO) estimates that more than 80% of health care needs in these countries are met through traditional health care practices. The people in developing countries depend on TM, because it is cheaper and more accessible than orthodox medicine.

Traditional medicine is also more acceptable than western medicine because it mergers readily into the peoples' socio-cultural life. Traditional medicine is the total knowledge, skills and practices based on the theories, beliefs, and indigenous cultural experiences, whether explicable or not, used in the maintenance of health, diagnosing, preventing, or eliminating physical, mental or social diseases. Such knowledge may rely exclusively on past experience and observations handed down from generation to generation, verbally and little in writing.

For this quarter, January – March 2024, our focus has been mainly on the following activities

1.	**Preservation and development of suitable planting material in the existing shade net in Namagunga.**
2.	**Survey (developing questionnaire to carry out market surveys and establish market for medicinal plants).**
3.	**Support to the establishment of a pilot value chain based on traditional medicinal plants and the development of a financing and marketing concept (business plan) for the exemplary utilization and sustainable commercial use of medicinal plants.**
4.	**Support to the consulting and training of further local partners in the cultivation and use/processing of traditional medicinal plants**

1. PRESERVATION AND DEVELOPMENT OF SUITABLE PLANTING MATERIAL.

The consumption of herbal medicine in Uganda is increasing steadily, posing an extinction risk to medicinal plants. Uganda is counted among the countries with a high threat of herbal medicine extinction, and Traditional Medicinal Knowledge erosion. This might be attributed to the inadequate documentation, plus many more unclear hindrances.

To ensure sustainability of herbal medicine use, efforts to conserve medicinal plants by community people range from domestication to communal restrictions of not encroaching on some spiritually protected forests and compliance with government laws and policies of not destroying natural forests and wetlands.

In this report, plant species preserved and new species discovered to be treating human diseases in Lugazi region in Mukono an Buikwe Districts in central Uganda and their associated illnesses are documented. The rationale is to support the preservation of useful medicinal plants and trees that are at the verge of extinction

Preservation Methods

Though conservation of medicinal plants is highly threatened by multiple factors such as habitat loss, population pressure and the increasing dependence on herbal medicine as a source of income, their conservation is promoted through cultural beliefs and norms. These included; gender-restricted harvesting, mouth harvesting, night and naked harvesting, and the gazetting of spiritually protected forests for each clan, from which harvesting is only authorized by the clan head. Further, there is a common belief that the responsibility to conserve medicinal plants and the associated knowledge is a divine duty entrusted by ancestral spirits.

Spiritual beliefs have been reported to play a major role in conservation of resources. In addition, the predominant use of leaves as a preferred organ, contributes to sustainable utilization of medicinal plants, since in most cases, it eliminates destructive harvesting.

All the conservation methods mentioned concentrated on the already existing medicinal plants reserves by nature. The community has not done much from their efforts to conserve medicinal plants. LRFDT from these findings has continued to train and educate the community the dangers ahead from relying on nature to conserve medicinal plants.

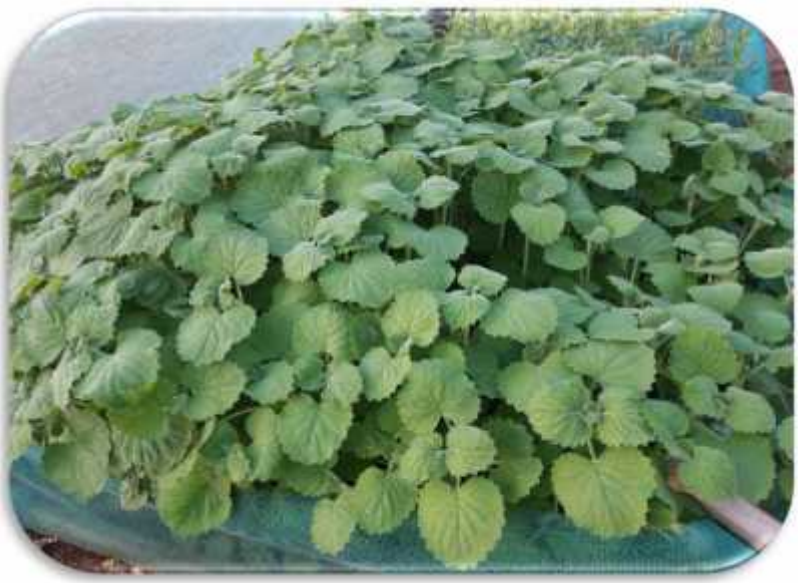
The community has been trained, sensitized and facilitated to conserve medicinal plants by domestication.


LRFDT SENSITIZES THE COMMUNITY ON MEDICINAL PLANTS DOMESTICATION


COMMUNITY DOMESTICATED MEDICINAL PLANTS GARDENS COURTESY OF LRFDT

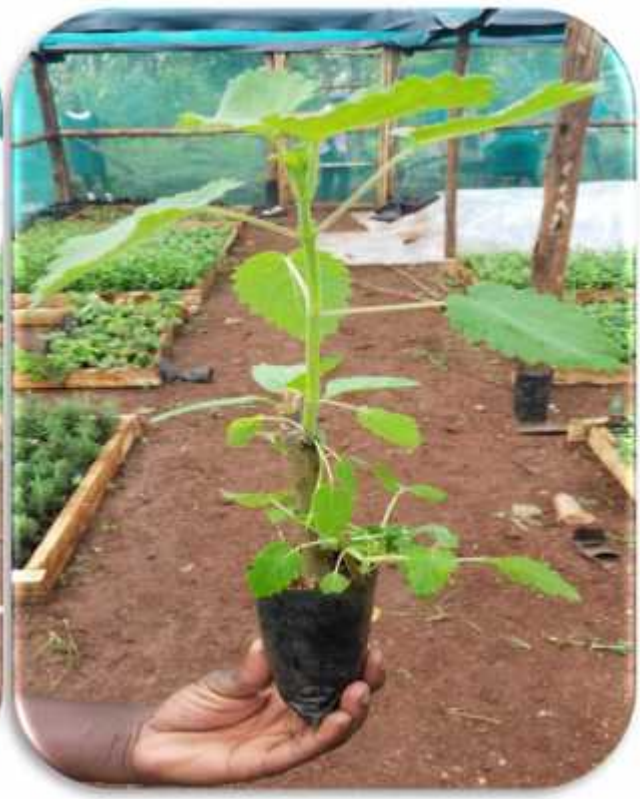
Domestication of medicinal plants is seen as the most sustainable conservation method and LRFDT has moved an extra mile to provide seedlings to community members to domesticate such plants. Only those medicinal plants which have proved to be of great importance and they are facing extinction. Some of the medicinal plants recommended included; Hoslundia ***opposite, Plectranthus barbartus, Tetradenia riparia and Justicia betonica below***;

HOSLUNDIA OPPOSITA



PLECTRANTHUS barbartus

Justicia betonica



Tetradenia riparia

2. DEVELOPING A QUESTIONNAIRE TO CARRY OUT MARKET SURVEYS AND ESTABLISH MARKET FOR MEDICINAL PLANTS

For this cause, a survey questionnaire was developed and research was made for medicinal plants which can be promoted purposely for wound healing. This survey was carried out in the Districts of Buikwe and Mukono. After the activity, a report was written and submitted. Below are some of the highlights from the report

DURING SURVEY QUESTIONNAIRE DEVELOPMENT

TRAINING OF RESPONDENTS BEFORE QUESTIONNAIRE ADMINISTRATION

For these three months, we conducted and completed an ethnobotanical survey of the medicinal plants used for wound healing. This ethnobotanical survey primarily aimed at marketing research for such traditional plants' species. The methods that were adopted included literature research, participatory investigation and group discussions.

Some of the findings revealed that, traditional medicine for wound healing in Uganda is part of the communities' culture and is widely used, but in general its effectiveness and safety have not been fully supported by the research. During questionnaire administration, respondents compared the use of traditional medicine for wound healing saying it is safer than modern medicine and has relatively smaller side effects than modern medicine. The price of traditional medicine is also cheaper when compared with pharmaceutical drugs.

People mostly from developing countries depend upon traditional medicine for wound treatment. The use of traditional medicine is determined by various factors such as availability, affordability, and its firm embedment in the beliefs of people.

Commonly Used Medicinal Plants for Wound treatment

1. ***Aloe vera***, commonly known as "ekigagi", used as an herbal medicine for found in communities. Aloe vera has short stem with shallow root system and large fleshy leaves.
2. ***Bidens pilosa*** commonly known as "**ssere**"is an easy-to-grow herb that is widely distributed. It is considered to be a rich source of medicine for humans and animals.
3. ***Hoslundia opposite*** commonly known as "**kamunye**" is a genus of flowering plant and it is widespread across communities.
4. ***Plectranthus barbatus*** commonly known as **"ekibwankulata"** is a tropical perennial plant.

3. ESTABLISHMENT OF A PILOT VALUE CHAIN BASED ON TRADITIONAL MEDICINAL PLANTS AND THE DEVELOPMENT OF A FINANCING AND MARKETING CONCEPT (BUSINESS PLAN) FOR THE EXEMPLARY UTILIZATION AND SUSTAINABLE COMMERCIAL USE OF MEDICINAL PLANTS.

Of recent there has been an increase in the use of herbal medicine for the treatment of various ailments. Traditional medicine has also been steadily gaining interest and acceptance even amongst the practitioners of modern medicine and this has been attributed to value addition. This enables creation of new markets and necessitates sustainable use of Traditional medicine and will not only contribute to rural industrial development and poverty alleviation but also to biodiversity to forest conservation.

The promotion and development of processing of medicinal plants have gained momentum recently in many developing countries. They need to build up technological and scientific capabilities to develop and improve the production of medicinal principles for use in their countries and to conduct Research and Development to develop value added products for export.

REPORT ON PROCESSING OF MEDICINAL PLANTS FOR DISTILLATES

On 11th January 2024, members of LRDT converged at the home of Mrs. Teopista Tumuheirwe at Kasozi, Bulijjo Parish, Kyampisi sub-county in Mukono District, to carry out processing of 3 medicinal plants for essential oils. The members who took part were:

1. Ms. Olivia Makumbi
2. Mrs. Grace Wandyaka
3. Mr. Robert Mbogga
4. Mr. Arthur Nsubuga
5. Mr. Moses Luyombya

We used leaves and twigs of Mint, Oregano and Rosemary medicinal plants.

Preparation

Oregano

Of the four medicinal plants selected earlier for multiplication at Namagunga, only the mentioned 3 were worked upon. The fourth one, Artemisia, was not distilled because we have not yet realized enough foliage from the samples planted.

Step 1 of the activity was to clean up and sort samples of the plants. Each type was weighed and the weight recorded.

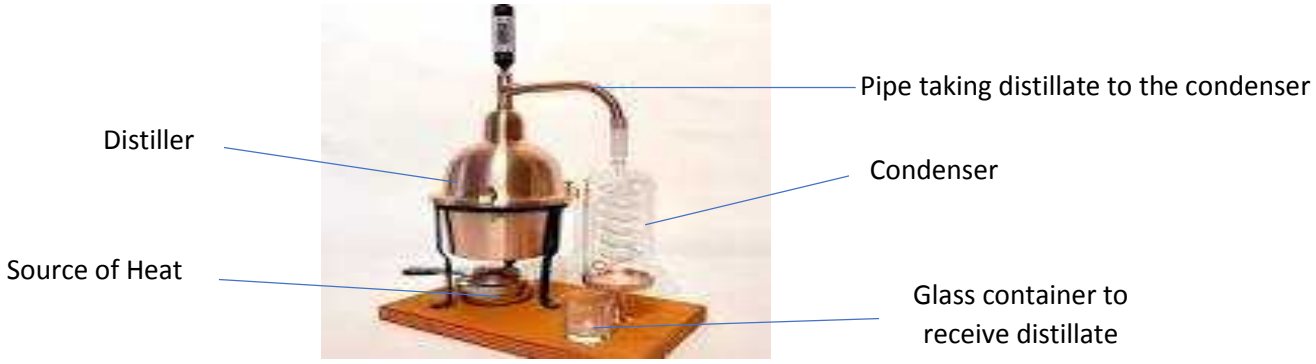
Mint was 2.7 kgs

Oregano was 9.3 kgs

Rosemary was 2.5 kgs.

Step 2: We started with Rosemary and the cleaned plant parts weighing 2.5 kgs, were packed into the distiller and 2 liters of water added. The distiller was placed over a lighted gas cooker which was in turn connected to a condenser via a metallic tube. Cold water was put into the condenser to enable the distillate to condense. A glass jug was placed at the end of the tube which was bringing out the distillate from the condense

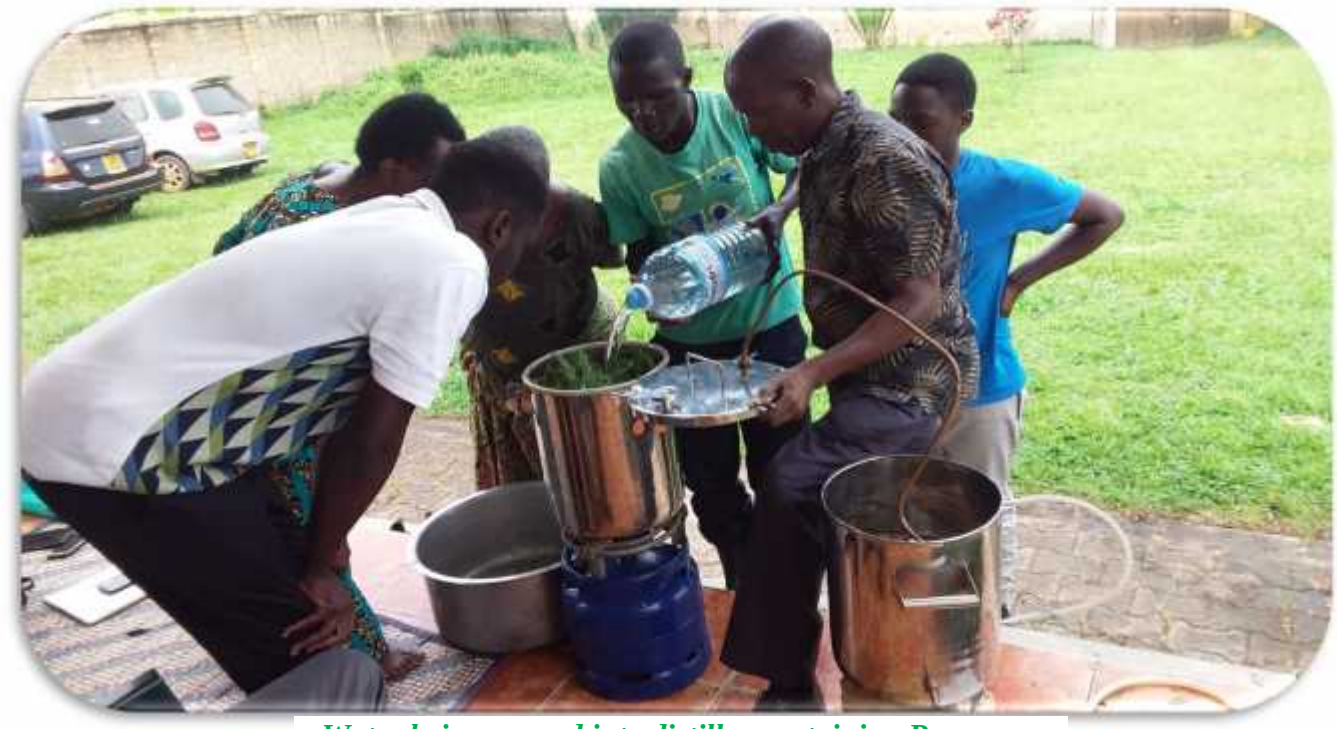
A simplified photo to show the connected parts



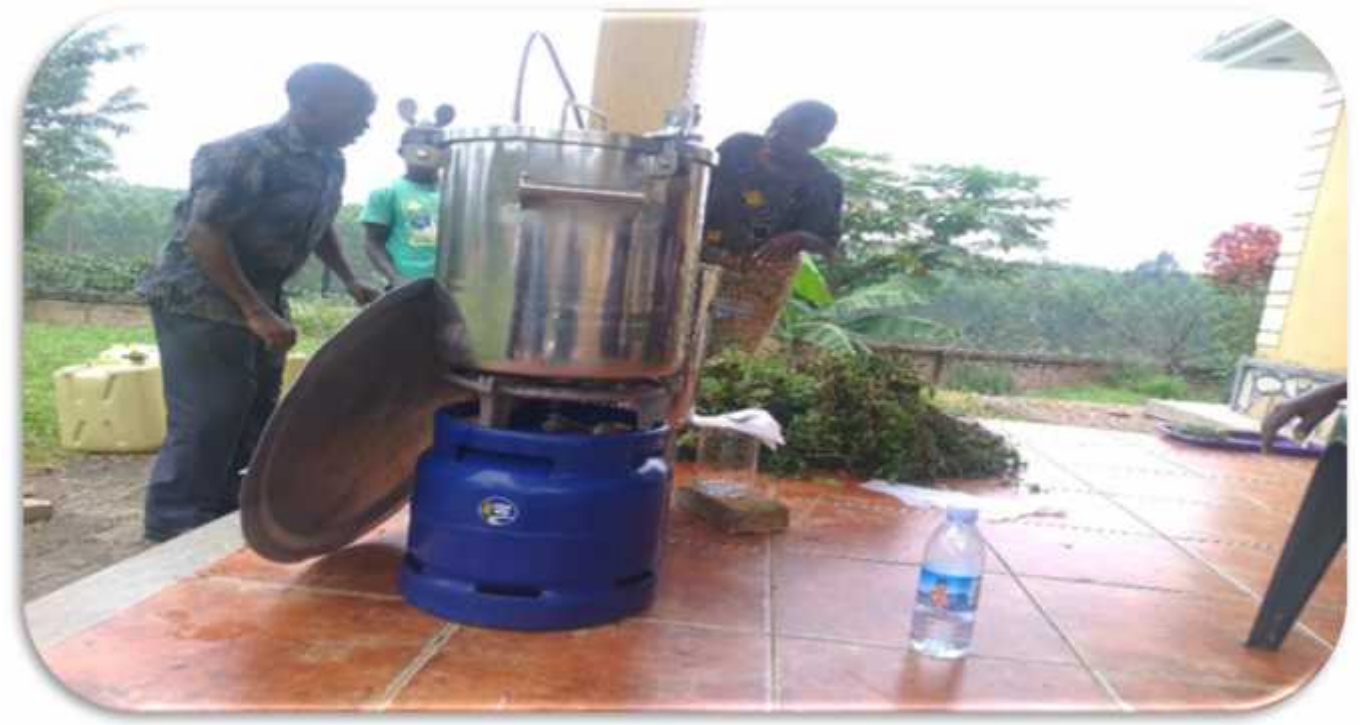
There was also a short tube connected to the condenser to enable siphoning out the water whenever it became hot (see photos below).

As soon as the temperature gauge on the distiller recorded 80^0C and above, the distillate started coming out of the condenser. This was collected in the glass jug. It took us about 3 hours to distil about 1 liter of the distillate. The very pure essential oil was presented as a thin layer on top of the distillate.

Setting up after placing Rosemary into the distiller



Water being poured into distiller containing Rosemary



Distillation in progress using gas cooker

The condenser being filled with cold water after removing the hot water

We, however, lacked the gadget to separate this layer from the rest of the distillate. The collected distillate was placed in a glass bottle which was labelled and taken back to the office in Kayanja for further observations. The activity was repeated with Oregano and Mint.

Observations and Results

1. It was only the distillate of Mint which tasted concentrated and pure. The distillate for Rosemary had a lot of unwanted water from the distiller. That of Oregano was rather stuffy and watery. All the samples were bottled and taken back to Kayanja office for further observations.
2. Value addition ensures the plant materials meet required quality standards.
3. Distillation promotes the commercial benefit and therapeutic efficacy of plant materials.
4. It ensures the raw materials meet appropriate identity and consumer/industry needs.
5. Semi-processing of the plant material facilitates value addition.
6. Without value addition, the raw materials may not meet required standards.

Business Plan

The business plan was developed and printed out for use, below is its cover page, but it is still under review and more information on marketing still needed.

4. Support to the consulting and training of further local partners in the cultivation and use/processing of traditional medicinal plants

Medicinal plants and related Traditional Knowledge of their healing properties are integral parts of the culture and heritage of many ethnic communities in Uganda. These cultural capitals however have come under serious threat of extinction and/or erosion owing to a number of reasons mainly due to various human caused factors. There has lately been a revival in the interest in medicinal and aromatic plants and associated indigenous practices.

This activity, shares the experiences and accomplishments of a community-based trainings that attempts to conserve medicinal plants and associated indigenous healing knowledge and practices in Lugazi Region. Such strategies include motivating people towards conservation by meetings and other collective measures, documenting herbal treatment knowledge by involving local herbal healers, establishing demonstration plots of medicinal plants, and reaching out to the wider stakeholders. This report therefore reckons the major accomplishments of the activity, and proffers some recommendations for further improvement.

In order to enhance conservation-related interest and awareness among the wider public, a number of initiatives have been taken with a view to motivate the wider public; these included

- community meetings
- focus group discussions
- one-to-one discussions with key local leaders and other stakeholders.

Daily workshops in different areas were organized with the participation of local communities, knowledgeable persons and local leaders.

LRFDT staff addressing household members about traditional medicinal plants after the distillation exercise

Community sensitization on cultivation of traditional medicinal plants

Cultivation of traditional Medicinal Plants in one of the community gardens in Buikwe

Reaching out to the young generation

it was observed that there is a significant number of school children involved in the conservation process. Therefore, trainings about the importance of conservation of medicinal plants and documentation of traditional knowledge need to be organised before medicinal seedlings are distributed to them. As LRFDT we shall use the approach of **"Teacher to pupils/students" and "Students to parents/household"**

In an over-populated country like Uganda and in particular Buikwe and Mukono Distircts, the pressure on natural forests is immense; thus, the cultivation of Medicinal Plants can significantly contribute towards improving the livelihood of poor people, reducing the pressure on natural forests and enhancing biological diversity. Notwithstanding the growing recognition of its importance and economic and ecological potential.

Conclusion

This project examines initiatives to conserve medicinal plants in Uganda as part of development interventions seeking to improve livelihoods and primary healthcare services in poor rural communities. Participatory field methods were adopted to gather data and information on the medicinal plants conservation components which combine both healthcare and livelihood objectives. We hope for success not only in conserving medicinal plant resources, but also their status, use and improving household economic status.

NAME: NALWANGA GRACE **ORGANIZATION SECRETARY**

SIGNATURE:  **DATE: 12.04.2024.**

NAME: OLIVIA HARRIET MAKUMBI **ORGANIZATION CHAIRPERSON**

SIGNATURE:  **DATE: 12.04.2024**