CONSERVATION AND COMMERCIALIZATION OF THE MULTI-PURPOSE NEEM TREE

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KENYA GATSBY TRUST
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Introduction

Kenya Gatsby Trust was established back in 1991 with specific mandate of supporting the development of the Micro and Small Enterprise Sector in Kenya for poverty reduction and wealth creation.

Vision

To be a leading institution facilitating MSEs to grow and create wealth sustainably

Mission

To support Micro and Small Enterprises increase competitiveness through facilitation and provision of innovative Business Development Services and Micro Finance Products for access and sustainability of markets.
The Performance of the MSE Sector in Kenya

- Accounts for nearly 5 millions jobs
- Contributes about 17% of GDP
- The sector growing at approximately 14% per year.

Current Programme Focus for KGT

To facilitate access and sustainability of markets for Kenyan products through an approach based upon three linked programmatic areas:

- Business Development Services,
- Micro-finance Services, and
- Technology Development and Transfer
INTRODUCTION TO THE NEEM TREE

• Neem trees are available in two main species Azadirachta excelsa and Azadirachta indica. In Eastern Africa, the Azadirachta indica is commonly referred to as “Mwarubaini” which literally means forty bearing reference to its use as a cure for 40 diseases.

• The neem is a “cousin” of mahogany, hence the good quality of its wood that renders it useful commercial use for timber and wood curving.

• Neem trees originally were found in India and Burma. They were brought to Africa, back in the 19th century. The first African countries where the tree was planted include, Cameroon, Ghana, Kenya, Tanzania, and Ethiopia among others.

• Kenya currently has a population of between 2-5 million neem trees with the highest concentration in the coastal areas. This population is however quickly dwindling as the tree has been targeted by a varied number of users without much consideration to its conservation.
BOTANICAL FEATURES OF NEEM

• Neem is a tall, fast-growing, evergreen tree, which can reach a height of 25 meters and a girth of 2.5 meters.

• It has an attractive crown, which can reach 10 meters across, composed of deep-green leaves and masses of honey-scented flowers.

• The tree begins to fruit in 3-5 years and fruiting is seasonal, occurring in the long rainy seasons.

• The fruit is about 2 cm long and when ripe has a yellow fleshly pericarp, a white hard shell and a brown oil-rich kernel.
• A mature tree yields between 30 kgs to 100 kg of fruit, depending on soil type, rainfall and neem ecotype or genotype. 50 kgs of fresh fruit yields about 30 kg of seed. Based on seed size, 1 kg may have up to 3000 seeds. Seed viability generally ranges from 6 to 8 weeks, but thoroughly cleaned, properly dried and cooled seeds remain viable for 6 months.

• Propagation of neem is by seed; seed dispersal is mainly by frugivorous birds. Propagation by stumps and stem cuttings is also practiced.

• Neem is a hardy tree that is capable of thriving under adverse soil and drought conditions, hence its widespread existence in many parts of the world today.
USES OF THE NEEM TREE

Neem is claimed to have more than 40 uses. In Kenya it is used for:

- Carving
- Timber
- Health and personal care products
- Fuel
- Medicine
- Food
- Fodder
- Erosion control
- Shade or shelter
- Organic manure among other uses
CONCERN FOR THE NEEM TREE

- Due to its growing popularity at home and abroad, the neem tree is being destroyed thoughtlessly and with greed with very little efforts to its conservation.

- In 2002, KGT initiated a project to commercialize while conserving the neem tree. Initial focus has been groups, enterprises and individuals using the neem tree for carving and soap making to improve production and marketing processes and strategies.

- For the carving industry, KGT is working with three co-operatives that is:
  - Akamba Co-operative with membership of about 5,500
  - Malindi Co-operative with membership of about 500
  - Machakos District Co-operative Union with membership of 5,000

- For the soap making, KGT is working with 16 rural producer groups with total membership in excess of 300.

- Below are three case studies for the work in progress on this area by the Kenya Gatsby Trust.
Case Study 1

Markets for Neem in Europe

Introduction

A research study was commissioned to assess the markets for neem in Europe and especially the United Kingdom.

Summary of Lessons Learned so far from this Initiative

1. Most buyers think neem has the potential to become bigger in these personal care applications. However there is also a general feeling that this will only happen if someone takes the initiative, and mounts a promotional campaign to educate the European consumer, and build awareness of what neem-based products can do.

2. The market for neem-based personal care products is small but growing. The current UK market for neem oil, leaf and extracts is estimated at 20-30 tons per annum, with a value of around Euros 125,000. A typical order size would be between 25 and 100 kilos.

3. The development of neem as an ingredient for personal care products is also constrained by the strong [and, to some, unpleasant] smell of the product, and the need for a product license to advertise and promote its therapeutic benefits.
4. There is already plenty of neem being offered to the market, and this supply is dominated by Indian growers and exporters. There is however quite a lot of interest from buyers in alternative suppliers of oil, leaf and extract products, as long as these are price competitive and meet the required quality standards.

5. Kenya will have to prove itself to the market, but there are no preconceived notions which exclude Kenyan neem from consideration.

6. Fair Trade or ethical credentials would be distinctive advantage and helpful; organic certification would also be an advantage if it is practicable and affordable.
Way forward

Following these findings, KGT is now working with the enterprises:-

1. To explore channel to market options (finished goods Vs ingredient supply etc)

2. To identify and profile potential buyers of neem for each identified channel with details on requirements and expectations (eg packaging, price, quality etc)

3. Facilitate certification of neem products as good wood products

4. Facilitate market linkages

5. Replicate the success with other producer groups while enhancing conservation of the tree
Case Study 2:
KGT’s Experience and Challenges in Neem Soap Making

Introduction

- Women groups at the Kenyan coast have for many years used Neem oil, leaves and bark to make herbal soaps, neem candles (mosquito repellent), toothpaste, shampoo and other personal care products.

- Since 2002, KGT has been working with 16 women groups in the coastal region, that are involved in Neem Soap Making.

- However the groups experience high levels of wastages due to low output harvesting methods and poor utilization and processing skills.

- The quality of soap and packaging has remained low and unattractive thereby limiting market penetration especially within the commercial formal supply chains.
Case study 2 cont…….

The Objectives of this Initiative include:-

• Market research on the current supply of neem soap Vs the market requirements

• Technology transfer for the improvement in Handmade Neem Soap making process (including packaging) for Market Access.

• Assist producers to understand and embrace the requirements that would enable them to access formal markets.

• Improve market orientation of the producers.
The Key Activities include:

- Training on introduction to the supply chain for neem soap and its impact on environment, society and economy.

- Training on quality control including practical soap making techniques and with specific emphasis on the importance of following strict measurement of ingredients, use of appropriate equipment and safety measures. The participants were taken through two methods of Soap making techniques including the Cold process and the Semi-boiling process, both of which can be easily applied by the small enterprises.

- Neem oil extraction technique

- Working with the Kenya Bureau of Standards on issues relating to product standards for certification. This includes issues of Quality control, testing, Audit and surveillance and product sample testing.

- Product packaging and costing.
Learning Points:

- There needed to be a Certification standard specifically for Neem Soap Products. A meeting of stakeholders concluded that a standard based on herbal soaps would be developed by the Kenya Bureau of Standards to regulate and protect the interests of genuine neem soap makers as well as consumers.

- Hand made Neem Soap already has limited market due to issues of low quality, poor packaging and lack of standards that hamper further market development.

- Need to encourage local communities to understand the value and take control of the neem oil as it is an important raw material for the soap making.
Lack of neem oil processing technology within communities makes them vulnerable to exploitation by larger competitors, e.g. Saroneem Biopesticides, which is linked to ICIPE is able to purchase all the Neem oil produced and thus controls supply and price.

The uncontrolled harvesting of the neem with limited conservation strategies threaten its future survival.

KGT is now entering another phase to address the above challenges including future emerging ones.
Case Study 3:

KGT’s Experience and Challenges with Neem Carvings

Introduction

KGT is working with three producer cooperatives in a targeted fashion to enable the cooperatives and their members reach local regional and international market with neem carvings, which meet stringent quality standards, by adopting better business and carving practices.
Current Challenges Facing the Carvers

1. The major constraint limiting the more widespread use of neem is the difficulty in minimizing the occurrence of wood shrinkage, movement, checking and cracking. In addition, the high moisture content of finished wooden carvings encourages the growth of unsightly surface moulds. This, results in poor quality lower value products and trade and orders, especially in lucrative overseas markets, are often lost. In addition, the reputation, skills, and confidence of these carvers are undermined.

2. There is increasing demand by international buyers for ethically sourced carvings. This means that buyers of woodcarvings are becoming more and more aware of the negative impacts caused by over exploitation of forests through unsustainable harvesting of trees. To reverse the trend they are insisting on those carvings coming from well managed forest or certified ones.

3. Carving has over the years concentrated on traditional artifacts with limited market led product development. The market for carving products is dynamic and increasingly demanding functional items. Carvers have limited (if any) capacity to determine and access changing market requirements. This then reduces the market potential for the carvers impacting negatively on their incomes.

Case study 3 cont…….
KGT Intervention Strategy

In all these programmes KGT has put in place a strategy to address the above technical challenges along the production process and to:

1. Develop appropriate quality assurance system

2. Facilitate certification of carvings with clear tracing system to verify that any wood products being classified as certified are really from managed sources.

3. Facilitate the carvers in product development and design improvement by use of storyboards and digital imaging process.

4. Work with the Kenya Bureau of Standards (KBS) to establish quality standards for the neem products
5. Carry out organizational analysis of Community based Organizations (CBOs) with a view to identifying capacity building needs especially in line with product development, marketing skills, and organizational management development

6. Facilitate cultivation of neem commercially to reduce harvesting from wild and make the plant more attractive to overseas users who do not approve of putting natural resources at risk

7. Link with ICIPE and other research organizations to develop Gene banks and develop new varieties, through experiments, that are higher yielding and better for commercialization
IN CONCLUSION

The work of KGT on the commercialization and conservation of the neem, as highlighted in the above three case studies, is expected to:

- Increase awareness
- Increase the number of trees on farms
- Realize better standards of products
- Open up new product markets
- Significantly improve on the management of these organizations
- Improved social-economic well being of the communities where these activities are based.