



 **Case Studies of Neem Processing Projects Assisted by GTZ in Kenya, Dominican Republic, Thailand and Nicaragua (GTZ, 2000, 152 p.)**

 **(introduction...)**

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by Peter Foerster

Summary

After more than 25 years of research and assistance in neem projects we can state the following findings:

- In many developing countries neem raw material is available in sufficient quantities.**

- **It is successfully proved that it is possible to establish collection systems and groups who produce good quality neem kernels in quantities which are sufficient for small-scale neem processing.**
- **The alcoholic batch (one-step) extraction technology is a comparatively simple technology which can be successfully established even by small companies in developing countries.**
- **Based on alcoholic extraction technology, the quality of neem pesticides is severely dependent on the quality of the raw material. The quality of the seeds can be improved through training of collectors and traders by companies and awareness organisations and must be maintained by building up a confident working relationship between sellers and buyers.**
- **Analytical training for local laboratories is required to enable permanent quality control of raw materials and products**
- **Registration of neem pesticides in developing countries is feasible and not as complicated as is often claimed. It is much less complicated and expensive than in the EU and developed countries, but still a factor to consider for small companies.**
- **Enforcement of quality control by designed national authorities is required (and usually missing in developing countries) to prevent low quality neem products from spoiling the reputation of all neem products.**
- **The largest constraints on the concept of establishing small neem-processing plants in developing countries are the distribution and**

marketing concepts and systems.

- **Integrated Pest Management/Integrated Crop Management concepts must also be elaborated and disseminated. These should consider the medium-term effects of neem application on farming systems. This needs assistance, research and upgrading by the governmental institutions.**
- **Small companies need assistance and back-stopping if they are to embark on the complicated and diverse venture of manufacturing of neem products. Due to some unforeseeable risks (mostly due to the climatic conditions) small entrepreneurs should be warned not to be too euphoric and not to start a neem business without organising the neem-processing chain and training of collector groups or assistance from a governmental organisation or professional back-stopping. Entrepreneurs should not expect high profits in a short time. Neem manufacturing requires at least around 5 years development for establishing a stable system (frequent supply of sufficient seeds of good quality, constant market demand).**
- **It is assumed that the total process can be streamlined and made more efficient, especially if larger quantities are processed.**
- **The price of neem products could decrease if larger quantities were manufactured and/or by exploiting by-products to a greater extent.**
- **Investment in processing units for larger quantities could be very profitable and is necessary if the price of neem products is to decrease.**
- **Currently the profit from neem pesticides is drawn from "niche markets"**

which, however, could reach a substantial volume, such as the export crops vegetables, ornamentals and fruits and organic produce.

Recommendations

The processing of neem into pesticides and other agricultural and pharmaceutical products has proved to be a profitable venture under certain frame conditions. Due to the many benefits and merits of neem for the people, local manufacturing and use should be promoted by the national governments on the one hand and donor and TC organisations on the other.

The risk in obtaining appropriate raw materials, and especially the market risks are, however, too high to be covered by small enterprises. Governmental organisations should assist the creation of proper frame conditions to make use of the new resource "neem" in the form of training, education, awareness-raising, and also research.

Further research should focus on three areas:

- **integration into ICM/IPM concepts**
- **development of proper marketing and distribution concepts**
- **development of pharmaceutical products/by-products**

Outlook

In many developing countries the designated national authorities have recently taken up their work and the legal framework for proper trading and handling of pesticides, and residue control laboratories have been set up according to the

FAO's "Code of Conduct". Enforcement activities will significantly increase the demand for effective, selective pesticides with low toxicity and low persistence, such as neem-based pesticides, which are suitable for organic farming and also for IPM concepts. In addition, industrialised countries such as the USA ("Consumer Act") and EU (harmonising pesticide regulations and residue levels) have passed and enforced regulations.

On the other hand, the rising number of pests resistant to broad-spectrum synthetic pesticides will even convince those farmers who do not care about the detrimental health and environmental effects of synthetic pesticides of neem's good pesticidal properties.

Therefore it can be expected that the market share for neem pesticides will significantly increase in the near future provided proper cropping, marketing and distribution concepts are worked out. Neem pesticides from small-scale entrepreneurs will have a substantial share of the market since home-made neem extracts are too laborious to prepare and enriched neem extracts too expensive.

The increasing number of registered neem products in both industrial and developing countries, is a convincing indication that neem pesticides have a (growing) market.

Acknowledgements

Our grateful thanks go to the entrepreneurs Mr Dorian Rocco, Kenya, Kun Chatri Jampa-Ngern, Thailand, Mrs Andrea Brechelt, Dominican Republic and Copinim, Nicaragua for their confidence and cooperation in the sensitive topic of analysing

the economics of neem processing and to the German Federal Ministry for Economic Cooperation and Development (BMZ) for financial assistance for this study.

