

The value of Medicinal Plants as alternative agriculture.

Executive Summary

In December 1999, Iracambi established the Iracambi Medicinal Plants Project (IMP) to develop a method of cultivating medicinal plants indigenous to the Atlantic Rainforest (*Mata Atlântica*) in a way that is both environmentally sustainable and economically viable. As a holistic conservation project, IMP hopes to challenge the causes of deforestation rather than rely on ineffective legislation to prevent its clearance. The project aims to develop alternative income generating sources for the local community and stimulate new attitudes towards the forest, viewing the forest as a potential source of revenue instead of a barrier to farm growth. In its first two years, IMP has conducted ethnobotanical and pharmacological research and has developed methods for plant reproduction. The project is now ready to start harvesting trials and is working on market research for potential products. The overarching goal of IMP is to establish a cooperative of researchers, producers and phytotherapists to market rainforest medicinal plants on a national scale.

Methodology

The first stage is to select plants for product development. Using the indigenous communities in the Iracambi area, ethno botanical studies are conducted to find medicinal species and their uses, specimens from these are then scientifically identified and named, using Vicosa University's library. These plants are then added to the Iracambi Medicinal Plants Database. Internet searches, literature reviews, market surveys, and industry contacts illustrate species that are economically interesting. Ecological surveys of existing populations of these species, horticultural research in the Iracambi Reforestation nurseries accentuate those species we can adequately grow and replant in their natural environments. Sustainable harvesting methods are also researched from existing populations.

The Medicinal Plant Database now contains information on over 100 medicinal species; 20 were selected for further research, conducted in 2001/2. These plants have been placed into 4 categories:

1. **Selected:Harvested.** Species for which there is a market; that we can propagate and replant; and that are sufficiently abundant for trial harvesting and processing.

Scientific Name	Brasilian Name	Tree type	Medicinal use
<i>Passiflora alata</i>	Maracuja	Climber	Sedative
<i>Casearia sylvetris</i>	Guacatonga	Small tree	Bites and stings and burns
<i>Cecropia glaziovi</i>	Embauba Vermelha	Pioneer tree	Coughs and diuretic
<i>Echinodorus macrophyllus</i>	Chapeu de couro	Swamp plant	Diuretic
<i>Croton urucurana</i>	Adrago	Small tree for humid areas	Cicatrizant

2. **Selected: Growing More:** Species for which there is a market; that can be propagated and regrown; but are not currently abundant enough to harvest.

Scientific Name	Brasilian Name	Tree type	Medicinal use
<i>Carpotroche brasiliensis</i>	Sapucainha, Fruta-de-lepra	Small, under canopy tree	Cures skin diseases and leprosy
<i>Hymenaea courbaril</i>	Jatobá	Tall canopy tree	Antibacterial, cicatrizant, antiviral
<i>Tabebuia avellanedae</i>	Ipe-Roxo	Tall canopy tree	Cancer, anti-oxidant
<i>Copaifera langsdorffii</i>	Copaiba	Tall canopy tree	Cicatrizant
<i>Vanillosmopsis erythropappa</i>	Candeia	Small tree on forest edge and scrub	Inflamations

3. **No Market:** Species for which there is enough information and are existent, but the market is saturated in Brasil or there is not a sufficient demand for their products. At any point these can be brought into category no.1.

Scientific Name	Brasilian Name	Tree type	Medicinal use
<i>Solanum paniculatum</i>	Jurubeba	Shrub	Appetite stimulant
<i>Baccharis trimera</i>	Carqueja	Shrub	Hair rinse and for diabetes
<i>Pothomorphe umbellata</i>	Capeeba	Shrub	Urinary and menstruation problems

4. **Under Investigation:** Species whose medicinal properties are interesting, but for which there is a lack of certain information, whether that be Ethno botanical, Horticultural, Ecological or Marketing. Once this information is obtained, the species' category can be changed.

Scientific Name	Brasilian Name	Tree type	Medicinal use
<i>Stachytarpheta jamaicensis</i>	Gervão	Small shrub	Liver diseases
<i>Pyrostegia venusta</i>	Cipo São João	Climber	Tonic and anti-diuretic
<i>Davilla rugosa</i>	Cipó Caboclo	Climber	Astringent and Anti-inflammatory

More information can be found on all of this in the Iracambi Medicinal Plants folder.

Marketing Potential

These species are all commercially used already, but not necessarily widely available, or it is felt that the market is not saturated; therefore they are economically viable products. Dried plant products can be sold directly to wholesalers within Brazil, or can be processed to receive Value added. An unprocessed product will fetch very little income (profit), therefore it has been decided to process our dried products into alcohol extracts (tinctures), which can be sold directly under the name of Iracambi Rainforest Medicines, or processed further into pills, creams or cosmetics. In the initial years of the enterprise it is suggested that tinctures are sold directly, keeping a narrow line of products.

Conclusions

From the vast wealth of Brazilian rainforest medicinal plants, Iracambi has, in 2002, selected 4 species and developed them into marketable products, and has others under investigation; being developed. Once a buyer is realised for these species, the value of the forests around Iracambi, can be calculated per hectare. This can be demonstrated to other landowners to attract them into the project using their existing forest, and to reforest certain areas for future harvesting.

This is not seen as an absolute alternative to current agriculture, but to combat deforestation and to offer an alternative for the most degraded areas, which cannot be sustainably farmed under current crop production. It also aims to produce an income from those land types, which cannot be used for existing agricultural production, such as Areas of Permanent Protection, and Conservation Areas.

Further Research and Project Development

For the project to develop into a business, Iracambi now needs to acquire the relevant licenses to harvest process and sell forest products. Further research is also needed to develop selected species into products, and find more information from the indigenous communities on new plant species, at the same time preserving this dwindling knowledge of medicinal plants.