
A homegrown cure for malaria. Curing malaria using a special variety of the annual shrub, *Artemisia annua*

The World Health Organization (WHO) recently ranked Artemisinin-based drugs as the top defense against malaria, an illness that claims millions of lives each year. Although highly effective, these treatments remain too expensive for many who live in the tropics, where malaria is endemic.

Luckily, there is a powerful natural alternative. Published scientific studies show that the levels of artemisinin derivatives in the blood are high enough after drinking artemisia tea to treat malaria. Another recent study found that the plant's flavonoids enhance artemisinin activity, making the tea sometimes more effective than conventional drugs and decreasing the chances of drug resistance.

Ms Helen Meyer, a nurse operating nine mobile health clinics in rural Mozambique, is using the bitter tea made from the dried leaves of *Artemisia annua*. Even in treating drug resistant malaria, she has found the artemisia tea effective, "If you drink the tea, you feel better after the first day. Other medicines take a few days."

The World Agroforestry Centre (ICRAF), recognising potential problems with *Artemisia* monotherapies, is working to combine it with indigenous herbal remedies made from other anti-malarial trees to produce an herbal combination therapy (HCT).

Making medicine using vegetative propagation

Establishing cultivation of the highly coveted woody shrub on small-scale farms to satisfy home use and market needs is critical.

Two years ago, ICRAF began growing a special hybrid of *Artemisia*, A-3, with seed provided by the Pressure Group on Action for Natural Medicines (Anamed).

A-3 is adapted for warmer climes. Where, as wild varieties of *Artemisia* remain small in the tropics, A-3 can reach heights of 3m and contains 20 times more artemisinin.

ICRAF is facilitating the broad propagation of A-3 by teaching thousands of farmers how to cultivate *Artemisia* from stem cuttings. The programme has extended to four districts in Tete Province – Angonia, Moatise, Tsangano and Makanga – located in North Western Mozambique.

Dubbed vegetative propagation, this technique is favoured because of the difficulty in growing plants from the tiny seeds. Just one gram of seed contains an estimated 12,000 seeds, each seed weighing a scant 0.07mg.

Dozens of *Artemisia* plants can be propagated from a single stem cutting. This makes for a lot of cheap and effective medicine – according to Anamed trials, one plant can cure up to six malaria patients.

Saved income and fresh funds

In addition to curing malaria at home, *Artemisia* treatments create big savings at the pharmacy for cash-strapped farmers and generate much needed income from selling *Artemisia* home remedies.

Harvesting and air drying the leaves, as well as the production of medicines is a straight forward, non-labour intensive project. Even after three-years, dried leaves retain practically 100 percent of their artemisinin content, suggesting that under proper conditions *Artemisia* medicines can be stored for a long time.

For both the practitioners of traditional medicine and the pharmaceutical companies, access to the plants is the biggest barrier to using *Artemisia* to cure malaria. When asked about the scale of *Artemisia* farming in Mozambique, Dr Patrick Matakala, Director of the ICRAF Southern Africa Regional Programme, replies, "I wouldn't call it large scale production for profit yet."

But for the ambitious farmer, there will certainly be a market. WHO estimates that of the 40 countries – 20 in Africa – using Artemisinin-based drugs, five are expected to have shortages due to lack of raw plant extracts, including Mozambique.

In the meantime, this remarkable shrub is saving the lives of those most vulnerable to malaria and promises to provide income through the sale of medicines in local communities.

Further information

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