



Afghanistan's Minister of Agriculture, Irrigation and Livestock inspecting off-season production of mint in a greenhouse.

Mint-ing Money

From concept to action - a comprehensive program is transforming a kitchen garden herb into a major income source.

Javed Rizvi, Muzaffar Athar, Khalid Wadan and Wazir Gul Rasouli

Afghanistan is gradually rebuilding; and the key will be improving the livelihoods of the rural poor, who form the majority of the population.

The approach? Crops that are adapted to local conditions and can be grown on small areas using family labor, with minimal investment. Ideally, the crop must be marketable, and easy to process into value-added products. And given the lack of infrastructure and security, growers must target domestic markets rather than exports.

That sounds like a tall order – but ICARDA and its partners are showing how mint can fit the bill. A DfID-funded project has designed and delivered a comprehensive package for mint production, processing and sale that is changing the lives of hundreds of families in three provinces in Afghanistan.

Markets for mint

Mint is a genus of aromatic herbs (*Mentha*), found almost worldwide, and used in a range of products: foods, chewing gum, cosmetics, medicines and many

others. It is widely grown in Afghanistan, on small plots for household use. It is used (and traded) mainly to add flavour to tea, vegetables and meat. But there is an even larger potential market – herbal medicines.

Mint is commonly used in many countries to treat a range of problems – indigestion, stomach cramps, flatulence, diarrhea, vomiting, joint pains, colic. Many of these problems are common in Afghanistan, partly because of a lack of safe drinking water. Hospitals and pharmacies are limited, so both rural and urban populations rely heavily on alternative therapies – creating a huge opportunity for mint growers.

Most R&D projects begin with a research study. The mint project began, instead, with markets. Potential markets for mint were first identified. In subsequent stages, the project introduced appropriate technologies for production and value addition; promoted these technologies through demonstrations and awareness campaigns; and provided training, equipment and technical support to enable mint producers to use the technologies effectively and profitably.



Adding value

Mint is traditionally sold as fresh leaves. The profits are good – but could be better, if producers could deliver value-added products. The simplest of these is dried mint – fresh leaves are shade-dried, packed, and sold in urban markets, typically for a 250% profit.

Alternatively, fresh mint leaves are distilled to produce mint water (distillate) or mint oil (see box).

Farmers working with the project produce all three products. They are also targeting seasonal markets. In winter, with fields covered in snow, the price of mint rises *ten-fold*. At these prices, it becomes profitable to invest in greenhouses. The project helped set up greenhouses in three provinces. They are used for mint production in winter, and cucumbers in summer.

Production cooperatives

Groups are usually more effective than individuals: a producer cooperative can deliver larger and more reliable supplies, bargain for better prices, and cut transport and marketing costs. The project has helped establish eight Mint Producers Associations (MPAs) in

Helmand, Kabul, Kunduz and Nangarhar provinces, and provided each association with equipment for producing and packaging mint distillate. Every MPA member was provided cuttings of high-yielding mint varieties and training in crop management and processing. Just two seasons after the project began, farmers are harvesting 6 to 8 cuttings of mint per year, and earning net profits of \$7000 to 8500 per hectare.

Market promotion

The project has helped create a strong market for mint distillate, where none existed. BBC, CNN and other media agencies have highlighted the project's work. A series of radio programs in two languages (Dari and Pashto), broadcast by private, government, and international stations, have created awareness of the medicinal benefits. Television documentaries on the project, produced by Afghan national TV and by development agencies, have also helped boost the sale of mint products in Afghanistan. Project staff have organized hundreds of 'women's meets' in rural areas, providing information on the medicinal uses of mint distillate and where to buy it.

The distiller's delight

Mint leaves are boiled with water in a large bell-shaped 'pressure cooker' made of copper. The mint-infused steam rises, flows through pipes, and condenses in a container placed in a cooling tank (cooled with water in summer, and snow in winter). No electricity is needed. Once cooked, the mint leaves are not wasted. They are dried in the sun, and become fuel for the cooker.

The entire apparatus costs about \$3,500. Each run processes 35 kg of fresh mint, producing about 70 liters of distillate and 150-200 ml of mint oil. The net profit per run, after all expenses, is \$60 from the distillate and \$20 from mint oil. A small-scale operation, with three or four staff, typically does 10-15 production runs per month; the rest of the time is used for packaging and sales visits to shopkeepers.



Packing of dry mint (left) and mint water (right) by members of Mint Producers' Association.

The project also works with MPAs and women's groups to produce colorful packaging labels, as well as pamphlets and posters – and recently, a television commercial produced (on a token fee) by a well known advertising agency.

Empowering women

Empowerment of women is a key project objective. Traditionally, mint production and use was the woman's preserve. The aim now is to transform mint from a kitchen-garden herb to a valuable commercial product. Over 5000 women have been trained on how to produce mint water and dried mint at home; the next step will be to organize these producers into cooperatives. The project has helped establish an all-women cooperative in Kabul. The members pooled their savings to rent a shed, where the project installed distillation equipment. The group has become a viable, profitable business, and even provides training to women in different provinces. A similar cooperative has been recently established in Kunduz, by women who are already selling dried mint produced at home.

Scaling up

The Afghan Ministry of Health has approved the production of mint water using the technology introduced by the project. The four producers' associations have sold over 50,000 bottles of mint water in the country, and are now targeting export markets as well. In June, the Nangarhar association won an export order for 500 bottles of distillate to Peshawar, Pakistan.



As part of awareness campaign housewives are being trained in producing mint water for domestic use.

Two development and training centers for mint and mint products have been established: at the Badambagh Research Station of the Ministry of Agriculture (in March 2006), and at Kabul University (June 2007). These centers were, respectively, inaugurated by the Minister and Deputy Minister of Agriculture. The Badambagh unit will not only be an R&D and training center, but also a platform for interaction between producers, development agencies, government departments and NGOs. The Kabul University unit will train final-year students, aiming to promote mint-based enterprises that will create jobs. The program is also being linked to government banks and development agencies, for loans and other support to facilitate enterprise creation.

The next step will be to scale up production of mint oil – which, for international markets, is *the* mint product. The project has upgraded four sets of equipment to improve extraction rates of mint oil during mint-water distillation. Mint oil has a very wide market – medicines, chewing gum, toothpaste, soap, creams, shampoo, chocolates, tea, cookies, even cigarettes. The project is helping to link Afghan producers with buyers in Dubai, France, Iran, India and Pakistan;

and at least one Iranian firm is finalizing export arrangements.

H.E. Hilary Benn, UK's Cabinet Minister for International Development, recently displayed samples of dried mint and distillate produced by the cooperatives, as an example of successful development interventions. H.E. Mohammad Sharif, Deputy Minister of Agriculture, Irrigation and Livestock said in June, "The mint project is one of ICARDA's most successful activities in Afghanistan. It started by testing and introducing high-yielding varieties and associated agronomic practices, developed simple technologies for value addition, and enabled farmers to produce and market the first herbal medicine in the post-conflict period."

The project activities initially supported by external funding have become financially self-supporting, and producers and traders are confident that production – and profits – will continue to grow.

Javed Rizvi (j.rizvi@cgiar.org) is the Project Leader and Deputy Country Manager, ICARDA, Afghanistan; Muzaffar Athar is National Project Coordinator. Khalid Wadan and Wazir Gul Rasouli are ICARDA's provincial coordinators in Nangarhar and Helmand, respectively.