Vegetable production training empowers farmers to achieve profitable growth in Babati district, Tanzania

Babati district is located in the Manyara Region of Tanzania. About 90% of this district’s population live in rural areas and depend on agriculture for their livelihood. Rainfed farming is common for most farmers, who rely on rainfall for watering their crops. There are many constraints for vegetable production in this area, including lack of quality seeds and fertilizers, lack of knowledge on vegetable production technologies and disease/pest control.

To address these vegetable production problems, AVRDC-East and South Africa has worked with Babati district specialists and Ward and Village extension agents to conduct vegetable production training in four selected villages, i.e., Bermi, Seloto, Matufa and Galapo. This training was for all farmers including vulnerable groups, rural poor and women in September 2013, funded by USAID Africa RISING East and Southern Africa project. A total of 71 farmers were trained...
Mrs. Ephraim Lukumay produces and extracts amaranth seeds near her tomato field for the next planting season on good agricultural practices for tomato, amaranth, African eggplant and sweet pepper. Nursery establishment of these four crops and farm business recordkeeping skills were strengthened through the training. At the end of the training, each participant received quality seeds of amaranth (Madiira 1 and Madiira 2), tomato (Tengeru 2010, Tengeru 97 and Tanya), African eggplant (DB3) and sweet pepper (PP004268) to get a good start on planting.

Three months after the training, a follow-up visit was arranged to evaluate the implementation of the participants’ work plans which they developed at the end of the training. The evaluation showed that farmers were very much involved in amaranth production for home consumption and income generation, and less involved with the other three crops.

Mrs. Ephraim Lukumay is one of the training participants from Bermi village of Babati district. She said more than 85% of the trained farmers, including herself, are now growing amaranth to feed their families and for sale. “Amaranth is a fast-growing vegetable and very palatable. Farmers do not use any pesticide. We are now aware of this nutritious crop, plant in our home gardens and sell to the markets or neighbors,” said Mrs. Lukumay.

‘Madiira 1’ grows well under local conditions and can be harvested for six months if well-managed. Mrs. Lukumay’s family of five consumes about 0.5 kg of amaranth every day and she sells more than 10 kg every week. “Most of my customers are pregnant mothers and families with children under five, and they like the good taste of ‘Madiira 1’, ” she said. Her 13-year-old daughter, Nembris, assists her in the vegetable garden after school and keeps a record of the sales. “We have earned TZS50,000 (USD30) in 2.5 months,” said Nembris.

Mrs. Lukumay is also producing and extracting seeds of amaranth for the next cropping season and she plans to sell the seeds to other farmers in the near future.

Source: Inviolate Mosha, Philipo Joseph and Victor Afari-Sefa, AVRDC-The World Vegetable Center, East and Southern Africa, Arusha, Tanzania
Photos: Inviolate Mosha
AVRDC’s mungbean germplasm shows resistance to mungbean yellow mosaic disease in Bangladesh

Mungbean is one of the most important pulses in Bangladesh. It is grown in three seasons per year and more than 70% of mungbean production is concentrated in three southern districts viz. Patuakhali, Barisal and Noakhali. However, its production is seriously affected by various diseases and the supply cannot even meet the domestic demand. Among 20 recorded diseases of mungbean in Bangladesh, mungbean yellow mosaic disease (MYMD) is the most important and damaging, and causes severe yield losses.

To screen and select the mungbean lines with MYMD resistance, short-growing duration and high yield productivity, 19 mungbean lines were introduced from AVRDC during June 2013 and planted in November along with two local check varieties—one susceptible and one resistant variety (BARImung-6) at Barisal Regional Agricultural Research Station (RARS) of Bangladesh Agricultural Research Institute (BARI).

Based on disease incidence, disease severity scale and yield productivity, five testing entries were selected as promising lines with MYMD resistance/tolerance. VI037478A-G, VI037482A-G and BARImung-6 showed high levels of resistance to the disease. Entries VI037478A-G and VI037480A-G showed high yielding potential in the presence of the disease.

Similar results were obtained in a field trial (February 2014) and a nethouse trial (March 2014). The resistant lines identified will be used as donor parents for MYMD resistance in the breeding program in Bangladesh.

Source: Md. Harunor Rashid and Md. Ershad Ali Mondol, RARS of BARI, Barisal, Bangladesh; Ram Nair, AVRDC-The World Vegetable Center, South Asia, Hyderabad, India
Photos: Md. Harunor Rashid

AVRDC mungbean accessions VI037478A-G (MMH-8) (left) and VI037480A-G (MMH-10) (right) showed high yield potential during a MYMD screening trial in Barisal, Bangladesh.
Cowslip creeper (Telosma cordata) is a fragrant and edible flower vine that commonly grows in Southeast Asia. It bears clusters of yellowish green flowers along the vining stems year-round. The flower buds can be cooked as sour/clear soup or stir-fried with eggs for a very aromatic and sweet taste. In Thailand, the peak flower yield is in May to July and production is lower in winter (November to December), which is a good time for pruning to induce new branches.

Mr. Hun was an asparagus farmer in Kamphang Saen district of Nakhon Pathom province in Central Thailand. After continuously planting the same crop in the same field for many years, many production problems emerged, eventually resulting in low yield. He looked for an alternative crop and chose cowslip creeper. He is the first farmer to grow cowslip creeper commercially in Kamphang Saen district. He cultivates 2000 plants in 3200 m² and the major production problem is thrips. He has managed it by sprinkler irrigation for 10-20 minutes every day depending on soil moisture. During peak season, he harvests 60-80 kg of flower clusters every day. Precooling treatment is carried out by soaking the flower clusters in water for 2-3 minutes after harvest, and grading is conducted by removing the flowers that have bloomed. Traders come to his farm to collect the produce every day, for the price of THB80/kg (USD 2.5). This is the main income source for his family now and he is very satisfied. Cowslip creeper has recently become one of the high potential crops in Thailand.

Source and photos: Somchit Pruangwitayakun, AVRDC-The World Vegetable Center, East and Southeast Asia, Thailand
Vegetable production becomes an important source of income and nutrition for farmers in the South Region of Cameroon

Due to lack of improved varieties, high disease and pest pressure, poor quality seeds and deficient crop management practices, vegetable production in the South Region of Cameroon is mostly for subsistence. However, through collaboration between AVRDC-The World Vegetable Center and the Center for Assistance to Sustainable Development (C ASD) on promoting sustainable vegetable production for increasing incomes and economic productivity of vegetable farmers in 2008-2012, vegetable production has now become an important source of income for vegetable farmers in the South Region.

In 2014, CASD, AVRDC and other partners started a project promoting production and consumption of Traditional African Vegetables (TAVs) to enhance income and nutrition among rural poor in West and Central Africa, funded by the West and Central African Council for Agricultural Research and Development (CORAF/WECARD). This is being achieved by availing improved production systems together with quality seeds of high yielding and nutrient dense cultivars, expanding knowledge in postharvest opportunities, and enhancing awareness of the nutritional benefits of fresh and processed products.

To increase income of resource-poor farmers, particularly women and children, in the South Region, CASD has embarked on training farmers on nursery techniques and farm management. Seeds of improved varieties, including nightshade (BG24, MW25, SS52 and Bafoussam 1), jute mallow (IP2 and Bafia), African eggplant (Oforiwa), okra (PI496946) and amaranth (AC-NL) were distributed to farmers. Farmers were taught to locate nurseries near a water source and avoid shaded areas. Plowing the soil about 20 cm deep with hoes and preparing 1 m wide raised beds with a height of 20-30 cm were also advised. Other aspects of the curriculum included: (1) Apply decomposed and disease-free chicken manure or compost at the rate of 5 kg/m² and incorporate them into the soil. (2) Pour very hot water to
Around 95% of vegetable farming is being carried out by women in the South Region. Women farmers are harvesting jute mallow to sell to the market (left); traditional African vegetables sold in one of the markets in Ebolowa, the capital of Cameroon’s South Region (right).

Vegetable production has greatly improved due to quality seeds of improved varieties and the nursery training in the South Region. Mr. Djina Balla Pierre Rodrigue is the president of Reseau Camerounais Des Orphelins (RESCO), which is one of the associations trained by CASD on vegetable production. RESCO members applied the nursery techniques they learned and planted nightshade, amaranth, jute mallow and African eggplant. Their customers appreciate the quality and flavor of the vegetables that RESCO produces. Therefore, Mr. Rodrigue declares that RESCO will make a strong effort to produce traditional African vegetables because they are profitable, have a short crop cycle and require minimum inputs. Members of RESCO can now produce TAVs, sell to the markets and generate income to pay for their children’s schooling and urgent family needs.

For the next step, CASD will multiply the seeds of improved varieties of TAVs, distribute to farmers and disseminate the most effective low-input production system that is highly adoptable and sustainable in the South Region of Cameroon. In addition, links between vegetable producers and traders to facilitate market information access will be established and strengthened. Farmers and communities will be empowered through education and capacity building. TAVs will be incorporated into daily diets to improve the health of local women and children. CASD’s medium- to long-term plan is to organize vegetable farmers in simple cooperatives for facilitating vegetable production and marketing in the South Region of Cameroon.

Source and photos:
Ashu Tambe, CASD Coordinator in Cameroon; Regine Kamga, AVRDC-The World Vegetable Center, West and Central Africa, Liaison Office in Cameroon.