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“Competition for Resources in a Changing World:
New Drive for Rural Development”

Germplasm Collection – Variety Tests – Seed Production – Marketing: Experiences with Local Vegetables in Lao PDR

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Abstract

Vegetables are rich sources of vitamins, micronutrients and fiber making them healthy food with high biological value. Many Lao farmers are using their own selections, adapted well to the specific environmental conditions in their local areas. Landraces are important resources for resistance to biotic and abiotic stresses. For this reason, local varieties are invaluable not only for the present but also for future generations.

Between 2002 and 2006, the research team of the Haddokkeo Horticulture Research Center (HHRC), belonging to the National Agriculture and Forestry Research Institute (NAFRI), conducted nine collection trips in cooperation with the German Development Service (DED). The aim was to collect local vegetable varieties in 76 districts of all the 18 provinces of Lao PDR. As a result of these efforts, 2,100 accessions of vegetable were assembled and stored in the vegetable gene bank at HHRC.

A part of the gene bank material was subjected to screenings under natural field conditions in order to identify landraces possessing desirable characters. Activities were concentrated on locally important vegetables, such as chili, tomato, lettuce, yard long bean, and cucumber. After five years, new varieties were identified and released for seed multiplication for distribution to Lao farmers. First varieties were such of tomato and lettuce for rainy and dry seasons.

At present, the research is focused on detailed description of eggplant biodiversity. Indochina was considered as a secondary area of origin and the crop possesses a very rich diversity. More than 150 accessions from the whole country are characterised by morphological and agronomical traits to provide information for future breeding programs.

At the same time, a vegetable seed production network has been established that involves farmers around Vientiane. At present, 23 farmers' families in 11 villages are under contract system. In the season 2006/2007, they produced about 880 kg seeds of 18 open-pollinated vegetable species. Most of the seeds were sold to various projects throughout the country, to special shop owners in Vientiane or directly to the farmers. Every seed-producing family was able to earn an additional average income of 2 Million LAK (about 200 USD) through seed production.

Keywords: Agrobiodiversity, eggplant, genebank, plant genetic resources, vegetable seed production, under-utilised crops

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