

Title Postharvest research, education and extension: AVRDC - The World Vegetable Center's experience

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Abstract

AVRDC - The World Vegetable Center, in cooperation with its regional partners and with financial support from the Asian Development Bank, implemented two postharvest research and development initiatives for leafy and fruit vegetables in Cambodia, Laos, and Vietnam from 2005-2010. These initiatives aimed to strengthen local capacity in vegetable breeding, postharvest technologies, and planning and conducting training programs for National Agricultural and Research Extension System (NARES) collaborators. Expertise and resources were mobilized from the public and private sector and included development partners outside the target countries, specifically Thailand, Myanmar, China (Yunnan Province), and the Philippines. Based on the assessed needs and constraints of smallholder vegetable growers and supply chain partners, simple and low-cost technologies were developed for priority vegetables including tomato (*Solanum lycopersicum*), chili pepper (*Capsicum* spp.), head cabbage (*Brassica oleracea* var. *capitata*), Chinese kale (*B. oleracea* var. *alboglabra*), Chinese mustard (*B. juncea*) and water convolvulus (*Ipomea reptans*). Economic analysis indicated most of these technologies were potentially highly profitable. These technologies and other best practices in fresh produce handling and processing were documented in local languages and disseminated to various stakeholders through training-of-trainers and training-of-end-users programs. The impact of the first initiative conducted from 2005 to 2007 was evaluated two years after completion to gather feedback from technology adopters and non-adopters, and to refine training programs for the second initiative. Technology adoption was highest in Vietnam (60%) and lowest in Cambodia (27%). The initiative had high impact on the rural economy in all three countries as vegetable growers and other adopters experienced substantial increases in sales and income of 25-30% and saw losses reduced ten-fold, from an initial 20-30% to only 2-3%. Income sources became more diversified and employment opportunities increased. To help increase the technology adoption rate market intermediaries and credit providers should be included in future training courses; market intermediaries have a strong influence on technology dissemination and credit providers can assist farmers in the acquisition of capital-intensive technologies. Where feasible, successful trainees should be invited as resource speakers to expand experiential learning and increase the credibility and value of the training program.