501 improved vegetable cultivars developed from AVRDC germplasm have been released by partners around the world since the early 1970s.

AVRDC's Genetic Resources and Seed Unit screened five Solanum galapagense (a wild relative of tomato) accessions for their resistance to whitefly—and three recorded significantly lower whitefly infestation compared to the check. The finding will be confirmed in 2014, and could help breeders develop whitefly-resistant tomatoes.

An interactive GIS-based platform was established for data exchange and to better visualize urban and peri-urban vegetable production, consumption and marketing in greater Bangkok, Thailand. Developed with partners at the University of Freiburg and Kasetsart University, the tool helps researchers understand Bangkok’s complex food system, and will enable policymakers and the public to find information on factors that affect access to healthy, affordable food.

An estimated 100,000 farmers visited AVRDC’s home garden demonstration plots at Punjab Agricultural University during the annual Kisan Mela (Farmers’ Festival).

A “two-window” strategy for the management of diamondback moth (Plutella xylostella) on cabbage in lowland production systems was developed and tested in Taiwan in 2013. Two sets of treatments, each consisting of three different insecticides and a different subspecies of Bacillus thuringiensis, were scheduled to be used in spring and autumn production windows each year to prevent the moths from developing resistance. The strategy was highly effective in reducing the numbers of major lepidopteran pests and increasing cabbage yield.

9824 accessions of more than 20 vegetable crops (4858 breeding lines and 4966 genebank accessions) were distributed to stakeholders in 58 countries.

More than 500 people attended the “Day of the African Child” in Bangata village, Tanzania, an event hosted by AVRDC, the Horticulture Research and Training Institute-Tengeru and the Arusha District Council to promote children’s nutrition. Schoolchildren, teachers, farmers, parents, extension officers, and local officials sampled traditional vegetables such as amaranth, nightshade, and African eggplant. 200 Healthy Diet Garden seed kits with five types of traditional vegetable seeds were distributed.

In Punjab and Jharkhand, India, AVRDC’s improved varieties and pest management strategies turned eggplant and okra into the largest income earners for local farmers. Home garden training participants provided twice as many vegetables to their families as those who were not trained, and were able to reduce the amount of vegetables they purchased at the market by one-third.

More than 1500 molecular markers were produced in a cost- and time-efficient manner for mapping mungbean (Vigna radiata) populations.

The AVRDC genebank holds the world’s largest public-sector collection of global and traditional vegetable germplasm, and is the fifth largest international public genebank in the world, with 67,817 accessions and sub-accessions in its collections.

Biological control of the legume pod borer (Maruca vitrata) is a step closer now that AVRDC has identified a species-specific M. vitrata larval parasitoid, Therophilus javanus, in Lao PDR, Malaysia, Taiwan, Thailand and Vietnam. T. javanus is adapted to the heat of the tropics, where M. vitrata causes major damage to mungbean, soybean and cowpea.
Disaster victims around the world received vegetable seeds from AVRDC: 4000 packs containing seed of six leafy vegetables were distributed by Catholic Relief Services to flood-affected victims in Assam, northeast India; 3000 seed packs of six vegetables were distributed to flood-affected victims in Odisha, India; 10,000 seed packs containing amaranth, Malabar spinach, okra, mungbean and kangkong were distributed in Fiji for cyclone-affected victims; and 680 seed kits containing four traditional crops were distributed to 200 vulnerable households affected by war in Douentza, Mali.

AVRDC introduced tomato grafting in Vietnam in 2002. Ten years later, the impact of the technique was evaluated through surveys with 225 tomato farmers in Lam Dong province in southern Vietnam and 75 tomato farmers in the Red River Delta in northern Vietnam. In Lam Dong, 100% of the tomato farmers used grafted seedlings to overcome bacterial wilt and increase production; in the Red River Delta, where bacterial wilt is less of a problem, 48% adopted the technique. Results indicated grafting increased yield by 30% or more, and grafted tomato fetch higher prices in the market.

Mr. Balasaheb Datal, a lead farmer in Mamdapur village, Latur district, Maharashtra, India produced 400 kg of seed of ‘Swarna Vasundhara’, a vegetable soybean cultivar developed from AVRDC germplasm, to distribute to fellow farmers. AVRDC introduced vegetable soybean to India, and demand from farmers and consumers is increasing for this unfamiliar but tasty legume.

Forty school gardens were established in East Java and Bali, Indonesia. The school garden model has been adopted by several other schools in the two provinces, as part of a country-wide “green school” concept.

Translations of easy-to-understand instructions on vegetable cultivation, preparation and nutrition reached a global audience: Assamese (materials on amaranth, Malabar spinach, kangkong, spinach, fenugreek, vegetable mustard and chenopodium); Bahasa Indonesia (saving seed, natural enemies to control pests, control of late blight, tomato production, eggplant pest control, grafting tomato); Bambara (information sheets on tomato, onion and amaranth); Bangla (tomato production); Burmese (tomato grafting, postharvest); Chinese (eggplant pest control); French (posters on onion bulb production and processing); Khmer (postharvest, tomato production, eggplant pest control); Kiswahili (brochures for amaranth, African nightshade, vegetable cowpea and spider plant); and Tagalog (tomato production, eggplant pest control).

The Center celebrated 40 years of service to tropical agriculture with a symposium entitled “AVRDC@40: A ‘Fresh’ Look Forward” on 17-18 October 2013 at headquarters. Nobel Laureate in Chemistry Yuan Tseh Lee presented the introductory paper on Food Security in a Low Carbon Society to an audience of more than 100 scientists, development experts and government representatives. Keynote speakers were Tony Simons, Director General, World Agroforestry Centre (ICRAF), who spoke on Making Landscapes and Livelihoods More Fruitful and Jacqueline Hughes, Deputy Director General for Research, AVRDC, who presented A ‘Fresh’ Look Forward for Tropical Vegetables.

Participatory Guarantee System groups were formed in Fiji (3) and the Solomon Islands (1) to engage vegetable growers in quality assurance activities. With improved production skills and enhanced awareness of consumer demand, growers are obtaining better prices for produce sold to high-end markets such as hotels and resorts.

A survey of 677 women in Bangladesh suggests those who received training in home vegetable gardening produced a wider diversity of vegetables, and harvested vegetables more frequently. They also produced and consumed more leafy vegetables instead of starchier pumpkins and gourds.