



*Prosperity for the Poor,
Health for All*

Research

The South Asia program started in 2006 and focuses on areas with the highest poverty levels. It covers the following countries: Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka. Building networks with public and private sector organizations active in seed and vegetable production in the region is a crucial component of the Center's activities.

Development activities aim to provide short- and long-term training on identified aspects of the vegetable sector. The Regional Center for South Asia offers research internships, postgraduate and postdoctoral research in different areas such as agronomy, vegetable breeding, and crop protection.

Major activities at AVRDC-RCSA are:

- Collection, conservation and evaluation of indigenous and exotic vegetables important to the region
- Identification of suitable vegetable lines to share with national partners for adoption, multiplication, distribution and utilization
- Identification of good agricultural practices for quality seed production and increasing yield and quality aspects of vegetable crops in the region
- User-friendly knowledge sharing, capacity building, and training on approaches and methodologies
- Promoting urban and peri-urban vegetable production and marketing for income generation, nutritional security, diet diversification, and human health

Crop focus

The Regional Center for South Asia's priority vegetable crops have been identified in close collaboration with regional partners. They include:

- **Solanaceous crops:** tomato, pepper, eggplant
- **Bulb alliums:** onion, garlic
- **Crucifers:** cabbage, cauliflower, broccoli
- **Vegetable legumes:** mungbean, soybean, cowpea
- **Cucurbits:** melons and gourds
- **Indigenous leafy and other strategically important vegetables** in South Asia, including: amaranthus, chenopodium, moringa, fenugreek, beans, okra, and pumpkin.

Highlights

An important field: Indigenous vegetables

AVRDC-RCSA initiated and organized the first international conference on indigenous vegetables and legumes in December 2006. Conference participants documented scientific information and research on indigenous vegetable species and developed strategies to promote indigenous vegetables globally.

Diversity opens possibilities for partnership

AVRDC - The World Vegetable Center maintains more than 56,000 accessions of vegetable germplasm, including over 10,000 samples of indigenous vegetables. This germplasm is shared with NARES, NGOs, and the private sector around the world. In Asia, 75% of seed companies make use of the Center's germplasm; in South Asia alone, 36 seed enterprises benefit from the Center's extensive collection.

Our mission

To alleviate poverty and malnutrition in the developing world through the increased production and consumption of safe vegetables.

Our strategy at the Regional Center for South Asia (RCSA)

South Asia is home to a large proportion of the world's poor, most of whom live in rural areas. To improve the nutrition of rural families, vegetables must be integrated into the region's predominantly cereal-based farming systems. At the same time, the increasing demand for food from the urban poor living in megacities needs to be satisfied. AVRDC - The World Vegetable Center, with its regional networks and international partners, is developing improved varieties and integrated pest management (IPM) strategies for the region.





Safe vegetable production

Misuse of pesticides and fertilizers is a cause of growing health problems in many parts of Asia. In South Asia, eggplant farmers typically control pests such as the eggplant fruit-and-shoot borer with frequent and excessive applications of pesticide. Integrated pest management (IPM) strategies developed by the Center have helped reduce pesticide application significantly.

The next revolution for mungbeans

Mungbean is one of the region's most important legumes, providing a major source of protein in South Asian diets. This versatile bean can be sprouted and eaten fresh, or cooked as dal. The Center's work on improving mungbean varieties led to a revolution in the crop's use in South Asia during the 1990s, when more than 100 new varieties were released. The high-yielding, short-season varieties permitted double-cropping after cereals, improving crop-rotations and local diets. New varieties and methods of pest control are now under development, including the world's first hybrids. Breeding methods and two biological control agents discovered by the Center's scientists are being tested to control two major insect pests of legumes: bruchids, which damage stored seed, and the bean pod borer which destroys flowers and pods.

"Golden Tomatoes" combat micronutrient malnutrition

Worldwide, deficiencies in micronutrients such as vitamin A affect almost four times as many people as hunger. AVRDC - The World Vegetable Center screens and selects globally important as well as exotic and indigenous varieties for essential micronutrients, antioxidants and other anti-cancer compounds. A notable outcome of the Center's breeding program is the "golden tomato". A single fruit of this conventionally bred tomato variety provides enough vitamin A to fulfill daily nutritional requirements.

About the Center

AVRDC - The World Vegetable Center is the world's leading international, not-for-profit institute for vegetable research and development. Founded in 1971, the Center develops vegetable varieties and other technologies to increase vegetable production and consumption in developing countries, leading to more income opportunities and healthier diets for the poor.

The Regional Center for South Asia (RCSA) was established in 2006. It is located 30 km from Hyderabad, India.



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