

Cambodia

Integrated Pest Management Innovation Lab country profile



Map courtesy CIA World Factbook

Population: 15 M
GDP per capita: \$2,600
Feed the Future country? Yes
Involvement in this country since: 2009

Challenges:

- General lack of technical expertise in agriculture
- Weak agricultural extension system
- Institutional constraints for commercialization of biocontrol agents
- Water management
- Universities lack faculty members with training in IPM disciplines

Related project name: Regional Project: Southeast Asia

Project overview: The IPM Innovation Lab in Cambodia works to improve food security and safety via participatory IPM research and education programs for Cambodians who grow vegetable and other high value crops. The program collaborates with the National IPM Program in the General Directorate of Agriculture of the Ministry of Agriculture, Forestry, and Fisheries, and Battambang University to introduce IPM strategies to Cambodian farmers. Expertise from the U.S. and international partners is used to improve capacity to diagnose and recommend solutions to plant disease and pest problems. Social aspects of IPM in agriculture are addressed through a Southeast Asia regional gender studies team that works with farm households to understand the role of gender in agriculture.

Accomplishments:

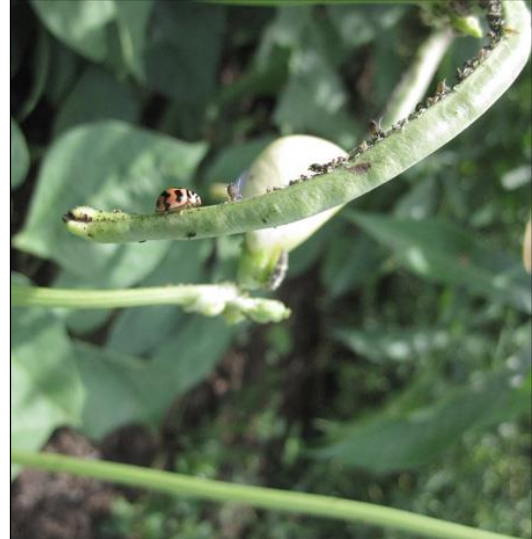
1. **Using a beneficial fungus in compost:** Project scientists identified a local strain of *Trichoderma*, a beneficial fungus, which is being promoted as a low-cost, environmentally-friendly means of combating fungal diseases. Farmers mix it with compost and applies the mixture to crops at planting.
2. **Providing training to NGOs:** Training for on-farm production of *Trichoderma* is a key element of the technology transfer being done in Cambodia. The IPM Innovation Lab has trained employees of NGOs as well as selected, high-performing farmers who have then spread the practices to others.
3. **Training in plant diagnostics:** The project has conducted trainings in plant diagnostics, and is exploring establishing plant disease diagnostics labs at Battambang University and the Ministry of Agriculture.
4. **Capacity building.** The project has sponsored Cambodian participation in IPM workshops conducted in India, Nepal, Indonesia, and the Philippines. These workshops have addressed a variety of IPM strategies that are applicable in Cambodia and for which Cambodia needs to develop local expertise.
5. **Providing input for other USAID Projects.** The IPM Innovation Lab has provided IPM tactics that are being used by the large USAID value chain project (HARVEST) and by other IL projects in Cambodia.



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Agriculture in Cambodia is a labor-intensive business (left). An ability to accurately diagnose diseases and pests can greatly help farmers in their efforts to successfully combat these challenges. At right, a lady beetle gets ready to feast on some aphids attacking a bean plant—an example of biological control.

Training farmers develops valuable skills

Farmer participatory research and demonstrations are conducted in each province, where IPM tactics are compared side-by-side with the farmer's traditional, chemical-based practice. The focus is on vegetable crops including eggplant, tomato, bitter melon, cucumber, chilies, and crucifers. IPM tactics emphasize the use of a local strain of *Trichoderma*, a beneficial fungus, which has shown positive results across a wide array of crops. It is incorporated in compost that is used at planting and applied by aerial application during growing. Local activities are managed by the field staff of the General Directorate of Agriculture. Training for the on-farm production of *Trichoderma* is a key element of the technology transfer being conducted in Cambodia. The pure culture is provided by the General Directorate of Agriculture, and selected farmers then propagate the material to share with others. This effort is being augmented by providing training and materials to NGOs so that they can also incorporate the use of *Trichoderma* in their vegetable farming activities.

Relevant website:

<http://www.oired.vt.edu/ipmcrsp/our-work/projects/southeast-asia/>

Local Implementers:

National IPM Program, General Directorate for Agriculture, Ministry of Agriculture, Forestry and Fisheries and Battambang University

Regions/provinces:

Kandal Province
Kampong Cham Province
Siem Reap Province
Battambang Province

Principal Investigator:

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