

Nepal

Integrated Pest Management Innovation Lab country profile



Map courtesy CIA World Factbook

Population: 31.6 M
GDP per capita: \$2,400
Feed the Future country? Yes
Involvement in this country since: 2008

Challenges:

- Pesticide overuse
- Value chain issues
- Loss of biodiversity
- Chemical pesticide overuse

Related Projects:

1. Vegetable Crops and Mango IPM in Asia

Implementing ecologically-based, participatory integrated pest management of insect pests, pathogens and weeds, focusing on tomato, eggplant, cabbage, cauliflower, beans, cucurbits, and onion.

2. Modeling for Biodiversity and Climate Change

Assesses biodiversity in several categories linked to agricultural resilience and sustainable pest control across an altitudinal transect in the Chitwan-Annapure landscape of central Nepal.

Previous Accomplishments:

1. **Developed IPM packages for high-value vegetable crops:** By applying an IPM package consisting of mostly compost (farm yard manure), farmers increased the yields of bitter melon, cucumber, cauliflower, and coffee.
2. **Reduced the use of toxic pesticides:** The combined effect of bio-fertilizers and bio-pesticides has allowed farmers to apply pesticides less frequently on IPM-fields in Nepal.
3. **Conducted long-term training and workshops:** Nepalese scientists had the opportunity to travel for training and workshops on IPM techniques like grafting, pheromone trapping, and beneficial fungus development and application.
4. **Transferred IPM technology:** With the help of partnering organizations, this project reaches tens of thousands of farmers, stimulating small business development for IPM inputs such as pheromones, disease test kits, entomopathogenic organisms, and traps.



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A Nepalese women's farmer group (left) greet IPM researchers, and (right) USAID administrator Raj Shah paid a visit to the IPM Innovation Lab site in Nepal.

Developing a suite of techniques to make the farmer's job easier

In Nepal, IPM packages — a suite of techniques tailored to a specific crop — for cauliflower, cucumber, bitter melon, eggplant, tomato, coffee, and tea have been developed. These packages include a variety of recommendations including biofertilizer treatments for seed and seedbeds, grafting on disease-resistant rootstocks, amended composts, solarization, mulching, pheromone and soap water traps, and biopesticides. The pest problems that have been identified and addressed include the following: fruit fly in cucurbits, tomato fruit worm, tobacco caterpillar, brinjal shoot and fruit borer, coffee white stem borer, clubroot of cruciferous crops, root-knot nematode, white fly, diamondback moth, potato tuber moth, white grubs, and Ralstonia wilt. IPM packages developed for vegetable crops in the Lalitpur and Pokra districts will be transferred to Banke and Surkhet.

IPM researchers played a large part in disseminating a technique whereby bacterial wilt-resistant rootstocks are grafted onto tomato plants and wild eggplant. This technique has been adopted by several farmers and nurseries. Additionally, a local company called Agricare has started to produce the beneficial fungus *Trichoderma* and supply it to farmers in Nepal.

Relevant websites

<http://www.oired.vt.edu/ipmil/our-work/projects/phase-v-projects/modeling-for-biodiversity-and-climate-change-in-nepal/>

<http://www.oired.vt.edu/ipmil/our-work/projects/phase-v-projects/vegetable-crops-and-mango-ipm-in-asia/>

Local Implementers

iDE Nepal

National Agricultural Research Council

Department of Agriculture

Center for Environmental and Agricultural Policy Research, Extension and Development

Himalayan College of Agricultural Sciences and Technology

Regions/provinces

Rupandehi, Pokhara, Lalitpur, Kaski, Illam, Palpa, Sharma, Surkhet, Banke, Narasingdi

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