







## **IPM Innovation Lab training in Nepal** changes lives of merchants and farmers

In Nepal, more than 70 percent of the population works in agriculture, yet problems such as crop pests and diseases threaten the nation's food and economic security. Farmers often resort to expensive, potentially toxic chemical-based fertilizers and pesticides.

Virginia Tech's Integrated Pest Management Innovation Lab disseminates technologies farmers can use in lieu of toxic pesticides, providing not only an environmental benefit, but also an economic value.



Sammar Regmi, left, owner of Laxmi Agrovet in Mehelkuna, Nepal, discusses seed trays with a customer. Thanks to the training he's received from the Integrated Pest Management Innovation Lab, he can offer information on the products he sells.

The Virginia Tech-based lab changed Sammar Bahadur Regmi's life. Regmi, owner of Laxmi Agrovet in Mehelkuna, a village in the Surkhet district in midwestern Nepal, sold only chemical-based fertilizers and pesticides. That changed in 2014.

During the lab's workshops and trainings, Regmi learned how to become one of Nepal's prime distributors of eco-friendly integrated pest management tools. These include nursery materials, biofertilizers and biopesticides, along with lures and traps. By teaching Regmi integrated pest management practices, these workshops enabled him to provide farmers with an embedded service of information along with the products.

"Demands for these products are increasing day by day, and organizations and farmers are looking for these products a lot more than they used to," Regmi said. In 2015 alone, he sold more than \$9,000 worth to more than 1,000 farmers.

Farmers also have been feeling the benefits. For example, Maniram Devkota, a small-scale farmer from Naubasta, a town in the Banke district in southwestern Nepal, used old approaches before receiving the lab's integrated pest management training in 2013. Employing the new methods, Devkota earned more than \$500 from his tomatoes and bitter gourds in 2014 and 2015. Before the training, he earned less than \$30 a year from vegetable sales.

"I am not going to spray any kind of chemical pesticide in my field," Devkota said. "And I am interested in expanding my vegetable production in larger areas. IPM-grown (integrated pest management) produce has a good quality without harmful effects to humans and the environment."

In addition to extra earnings, both Devkota and Regmi say they are excited about the health and environmentally friendly benefits of producing cleaner crops.

"I don't think it would have been possible if I hadn't had the opportunity to work with the IPM Innovation Lab team," Regmi said. "The regular support and encouragement from them made me what I am today."

## Integrated Pest Mangagment (IPM) Innovation Lab Virginia Tech | OIRED 526 Prices Fork Road (0378) | Blacksburg, VA 24061 540-231-3516 ipmcrsp@vt.edu implication www.oired.vt.edu/ipmil implication blog: www.compass.oired.vt.edu Director Muni Muniappan (540) 231-3516 implication muni@vt.edu

The IPM Innovation Lab is housed in the Office of International Research, Education, and Development, a university-wide office at Virginia Tech that supports the university's international efforts in learning, discovery, and engagement. With a portfolio of close to \$100 million, the office manages projects in 30 countries and partners with 80 NGOs, research organizations, private sector concerns, and governmental organizations. The office comprises a staff of 30 people who are well-versed in handling complex, multimillion dollar projects.

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