

# Ecologically-based IPM Package for potato production in Kyrgyzstan



Central Asia Integrated Pest Management Collaborative Research Support Program:  
Dr. Murat Aitmatov, IPM CRSP Coordinator/Research Fellow, Kyrgyzstan;  
Drs. George Bird, Walter Pett, and David Douches, Michigan State University.



## IPM packages deliver food security

For the past 5 years IPM CRSP researchers have been developing sets of agricultural practices for wheat and vegetable production in Central Asia. The anticipated outcome is improved plant health, reduced pesticide use, and a resulting increase in production and food security along with farmer income.

By partnering with scientists, educators, outreach specialists, and farmers in the region, the IPM CRSP is working to improve the livelihood and food security of people living in poverty in Tajikistan, Uzbekistan, Kyrgyzstan and the surrounding area.



**An IPM package is a set of practices and technologies that can be used in production of a crop to increase yield and reduce pesticide use.** The key pest problems for potato production in Kyrgyzstan are Colorado potato beetles, late blight and potato cyst nematodes. Potential IPM practices to reduce these problems include:

### Disease-free certified seed

Use of certified seed will ensure growers have clean, disease-free seed material to plant.

### Resistant varieties

Collaborating international and local potato breeders are identifying varieties with the traits best able to resist late blight as well as insect pests and nematodes (*Globodera* spp.).

### Biological control

Potato seed is being inoculated with the biopesticide *Trichoderma* to gain biological control of potato fungal pathogens. Other available biopesticides include neem, nucleopolyhedrosis virus, *Verticillium*, *Beauveria Bassiana*, *Metarhizium* and others.

### Cultural control

Mulching in the field conserves moisture and helps with disease control.

Removing disease-infected plants culls weaker plants before they affect the desirable seed.

### Monitoring pests

Placing yellow sticky traps in the field helps monitor for whiteflies and aphids and assists in control decisions.



For more information [www.ipm.msu.edu/central-asia.htm](http://www.ipm.msu.edu/central-asia.htm)



This research was supported by the Integrated Pest Management Collaborative Research Support Program (IPM CRSP), which was made possible by the United States Agency for International Development and the generous support of the American people through USAID Cooperative Agreement No. EPP-A-00-04-00016-00.