CIP, CENTRO INTERNACIONAL DE LA PAPA, PERÚ

Pest management in native potatoes of the Andes

Development and application of ecological practices in pest management to increase sustainable potato production by low-income farmers in the Andean regions of Bolivia, Ecuador and Peru

+1500
Farmers benefited

-39%
Weevil damage reduction

807US/ha
Net profit up to

Research and Development

The implemented initiative

The project proposed to improve the livelihoods of low-income potato producers in the Andean region, substantially reducing their economic losses, caused by major pests and pesticide impacts, through the development and implementation of environmentally reliable IPM strategies, through in order to improve the competitiveness of the crop, sustainable potato production systems and human health. The specific objectives of the project include the development of decision-making tools, improve the effectiveness of natural enemies, and develop techniques for biological control, physical control, and attractants.

Dissemination of a new Potato Integrated Pest Management program

The technological solution

An Integrated Management strategy was developed with new ecological tools to reduce the use of insecticides. Phenological models were developed for the two species of moths (S. tangolias) and (T. solanivora), with which the "Insect Life Cycle Modeling" (ILCYM) software was developed, which is a tool to predict the potential growth of pest populations in different potato agroecosystems. The introduction of parasitoids (Apanteles subandinus) and (Orgilus lepidus) from CIP-Peru to Ecuador was carried out, which have good potential to carry out classical biological control. The beneficial fauna was increased by maintaining aromatic and floricultural plants near the crops. In the case of the Andes weevil, the use of entomopathogenic nematodes is a potential biological tool for the control of larvae, while the adults were controlled with the use of plastic barriers.

MÁS INFO

Results

With these ecological tools, a new Potato Integrated Pest Management (IPM) program has been developed for the Andean zone, which includes the use of plastic barriers, attracides, increased functional diversity and the use of Bt talc for control. of moths in storage, which proved to be as efficient as chemical control, with the added benefits of protecting natural enemies and the environment. The knowledge obtained with the development of the project allowed training and dissemination of the new technologies developed in Peru, Ecuador and Bolivia.

Main donors

Participating Organizations

FONTAGRO