



Choppca farmers look for potato weevils. Photo credit: Grupo Yanapai

Pest Management: Yanapai

Agrobiodiversity Project 2005-2015

More resilient and productive ag systems

According to baseline (n=181; 2011) and endline (n=271; 2014) surveys, **losses due to Andean Weevil went from 80% to 26%**. Potato yields increased from 0.52 kilos/ m2 in 2010 to 2.5 in 2014 and native potato yield increased from 0.34 to 0.5. Farmer informants in discussion groups (n=90) say they now have much more production with which to feed their family and sell.

Integrate M&E

Collaborate with organizations at all levels

A final evaluation (2014) with community leaders said they highly value Yanapai in contrast to other NGOs for their **long term commitment, presence** in the zone, and ability to communicate in **Quechua**.

Realistic engagement

Ensure respect for indigenous culture & knowledge

Strengthen capacity in pest research

Participants increased their pest management **knowledge** after training session significantly, especially among **young people**. Many **community leaders** attended the sessions.



Policy impacts including use of toxic inputs as well as market and community policies for P&D control

The **local govts** were convinced of **landscape level action** and hosted a **competition** where the family that had the lowest rate of infestation won a backpack sprayer. The community also banded together to **collectively buy** the blue label pesticide and divide it among themselves.

Incentivize, support & reinforce farmer participation to ensure responsiveness to farmers' needs, knowledge, problems, concerns & constraints

Los Andes Community of Practice



Extension (including games)

To encourage more **widespread impact** of projects results and learning, Yanapai collaborated with another CCRP funded project INNOMIP, that was focused on working with communities to better understand pest dynamics at a **landscape level** and take appropriate actions at an individual and **collective** level. They do this with a **role playing game** tied to a multi-actor computer model that shows the implications of the players' choices on pest populations and potato production over time.



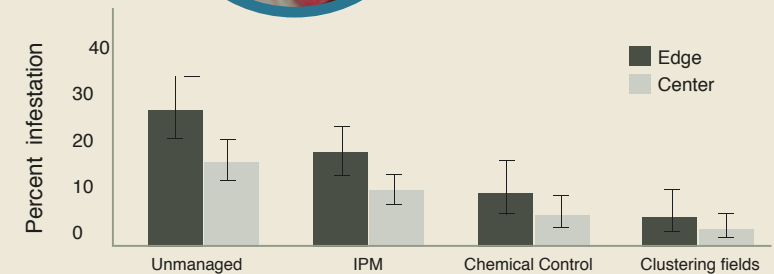
Farmers participating in the IPM modeling game. Photo credit: Olivier Dangles

Participatory research

Collaboration

Test and refine management options (practices), including working with farmers

(2008) Farmers (155) **measured** weevil infestation and recorded their management practices. The most decisive factor in reducing weevil infestation were **physical barriers** like rivers and the borders of the fields. The average level of infestation at the center of the field was 16% and 24% in the **borders** of the field. There were 28 other significant factors including good seed storage practices, use of a low-toxicity pesticide at an optimal time, rotation, and hilling.



Diagnosis

Agrarian reforms -> lands that were once managed **communally** as sectoral fallows -> **privatized** so that potato fields are not as clustered and rotated, thus causing an **explosion in weevil damage** (Parsa, 2009, 2011). Some ecological methods like plastic barriers, were **never adopted** by Choppca farmers.

Contextualization

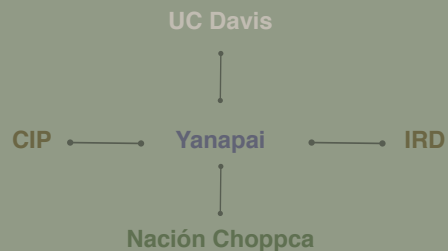
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COLLABORATIVE CROP RESEARCH PROGRAM

THE MCKNIGHT FOUNDATION

Project Partners



Legend for Project Partners:
 - Non-Governmental Organization (blue line)
 - International Ag Research Center (orange line)
 - University outside of Region (grey line)
 - Farmer Organization (green line)