Humans: the neglected corner of the disease pyramid - Developing a training guide for resource-poor farmers to control potato late blight

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Disease pyramid

People

Pathogen

Host

Environment

Zadoks and Schein, 1979
What kind of people?

Grow potatoes for food and cash

Low-resource farmers (poverty)
Heavy losses due to LB ...
Inadequate fungicide management ...
Poor knowledge about the pathogen …
New ways of training

• For example, Farmer Field School (FFS)
• Adult education
• Field observation and experimentation
What is missing?

1. Training guides

2. Methodology to develop training guides
Developing a training guide for resource-poor farmers to control potato late blight

Intended users

Analysis of existing materials

Competencies

Learning components

Mental abilities  Physical skills  Attitudes  Knowledge

Learning objectives

Exercises and evaluation tools

Format

Publication

Validation

(Zapata Sánchez, 2005)
Users of the guide

• FFS Facilitators (farmers)
• Extension workers
Analysis of existing materials
Analysis of competencies

Competence: “standardized requirement for an individual to properly perform a specific job, including a combination of knowledge, physical skills, mental abilities and attitudes”
Analysis of competencies

- Workshop in Ecuador (2006)
- 7 FFS Facilitators
- 7 Extension workers
- 8 Plant pathologists
Competencies for LB management

Be able to:

1. Identify the disease symptoms
2. Know its causal agent and how it lives
3. Identify the characteristics and benefits of using resistant potato cultivars
4. Use fungicides appropriately
5. Visit the potato plot frequently
6. Select control measures for LB
Learning components

- **Competence**
  - Be able to use fungicides appropriately

- **Knowledge**
  - Concept of fungicide, active ingredient, commercial name, mode of action, and formulation
  - Criteria for using fungicide
  - Contamination pathways
  - Sprayer basics

- **Mental ability**
  - Decide when to use a fungicide

- **Attitude**
  - Use protective clothing

- **Physical skill**
  - Use the sprayer appropriately
Learning objectives

At the end of the training session participants will be able to:

- Explain verbally what a fungicide is, and provide an example.
- Identify the active ingredient, commercial name, mode of action (contact or systemic), and formulation of at least two fungicides.
Exercises

Identify the active ingredient, commercial name, mode of action (contact or systemic), and formulation of at least two fungicides.

- Reading the labels
- Drawing contest
- Skits
- Simulations
- Analogies

Creativity !!
Evaluation tools

What has been pointed out in this label?

(a) Active ingredient
(b) Commercial name
(c) I don't know
Format

Handout for farmers

- Module structure
- Dimensions of the document
- Type of paper
- Gender considerations
- Font
- Words per line
- Figures
- Etc.
Validation: 3 FFS in Ecuador
Other opinions…

Workshops to analyze the guide:
- Peru: 10 extension workers
- DPRK: 7 extension workers
Guía para facilitar el aprendizaje sobre control de tizón tardío de la papa

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http://gilb.cip.cgiar.org/how-to-resources
Supporting materials

Technical sheets

Radio Spots

http://gilb.cip.cgiar.org/how-to-resources
Perspectives

- Project jumped from US $25,000 to 300,000 (Ecuador)
- International public good
- Training courses in Ecuador
- Measuring impact
- Adaptation for Peru and Bolivia
- Translation into English
Poverty reduction

Better LB management

Resistant cultivars

Better understanding of *P. infestans*

Fungicides

DSS

Training people
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