

# Western IPM Center Project Report Form

**How to submit:** Please submit this completed form electronically, as an attached Microsoft Word file, to Jane Thomas at [jmthomas@tricity.wsu.edu](mailto:jmthomas@tricity.wsu.edu). If you have questions, contact Linda Herbst, (530) 752-7010. **Content:** Complete each section below, and include responses to as many of the questions listed in Attachment A as are relevant to your project. *These are guidelines.* Provide your readers with enough detail that someone who is not familiar with your project can understand what you were trying to achieve, how you went about it, and what you accomplished, but please keep it concise.

## A. Report Data

**Date:** 4/12/11

**Reporting Period:** 2009-2010

**Report Type (please check one):**

Progress Report     Final Report

## B. Grant Data

- Grant Agreement #: UC165A
- Title: Looking for the potato psyllid and zebra chip potato disease in eastern Oregon
- Grant Type: Research/Extension
- Lead investigator:
  - Name: Silvia I. Rondon
  - Title: Assistant Professor, Extension Entomologist Specialist
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- Team members (name, title, institution): Joseph Munyaneza (USDA-ARS); James Crosslin (USDA-ARS)
- State(s) involved: OR, WA

**C. Nontechnical Summary.** An overview of the project, briefly outlining the problem(s), how your project addresses them, and your results, *written to a lay audience*. (500 words)

Zebra Chip (ZC) is a new and emerging disease of potato in southwestern US, Mexico, and Central America that causes losses of millions of dollars to the potato industry. This disease is characterized by the production of a striped or stained pattern of necrosis in tubers produced on infected plants; fried chips made from these infected tubers are commercially unacceptable. The potato psyllid, *Bactericera cockerelli*, is the insect vectoring the disease. Although no ZC has been documented in OR or WA potatoes, this disease can occur in both state, especially if the psyllid arrival occurs early in the season and environmental conditions are conducive to the disease symptom expression. We proposed to survey the presence of this pest in Oregon and investigate the potential of this insect pest to cause ZC in this region.

**D. Objectives and Progress.** List your objectives and describe your progress for each objective.

1. Investigate if the potato psyllid occurs in Oregon and determine its seasonal occurrence in eastern OR
2. Determine if the potato psyllids migrating in the Columbia Basin of Oregon carry the bacterium *Liberibacter*, the putative causal agent of ZC potato disease

**E. Outputs.** List your project's outputs, which might include publications, information, data, meetings held, attendance at meetings held, etc.

One peer reviewed scientific publication, one peer reviewed extension publication, Branch and National Entomological Society of America meeting attendance, Pacific Northwest Insect Management Conference

**F. Impacts and Potential Impacts.** The "impacts" and "potential impacts" sections of your report will help the Western IPM Center highlight the value of IPM research and education by detailing the real-world impacts of Center-funded projects. We will use the information in news articles, reports, and informational brochures to showcase the impacts of projects that our program supports. *See Attachment A at end of form for questions to assist you in describing the impacts of your project.*

**1. Impacts.** Describe any impacts of your work. *Impacts* are specific changes in condition for those affected by your work. Impacts include adoption of technology, creation of jobs, reduced cost to the consumer, less pesticide exposure to farmers, access to more nutritious food, and a cleaner environment and healthier communities.

This survey provided valuable information regarding the timing of the migration route of the potato psyllid as it completes its annual migration into the Pacific Northwest each summer from its overwintering grounds in the southern US and Mexico. Growers are advised not to use pesticides since at this point the psyllids do not pose any threat to OR or WA producers, thus protecting workers and avoiding unnecessary exposure to pesticides.

**2. Potential impacts.** Describe your project's potential impacts. *Potential impacts* are the ways that your project's outputs could directly lead to changes in condition that will unfold in the future.

1. Although psyllids are present in OR and WA, they are not carrying the *Liberobacter*. Thus NO control is necessary at this point. Thus no sprays are necessary.
2. Growers are constantly trained regarding identification techniques and current situation of the pest in the region.

**G. Leveraged Funds.** List *additional funding* you have acquired because of the data and results yielded in this WIPMC-funded project.

**Additional Funding Award #1:**

Date of Award:

Name of Granting Entity:

Dollar Amount:

Name of Grant Program:

Grant Period Duration:

**Additional Funding Award #2:**

Date of Award:

Dollar Amount:

Grant Period Duration:

Name of Granting Entity:

Name of Grant Program:

**Additional Funding Award #3:**

Date of Award:

Dollar Amount:

Grant Period Duration:

Name of Granting Entity:

Name of Grant Program:

## H. Appendices

1. With your report, please attach *at least two (2) photographs* that illustrate your project. Please describe the photo and indicate the name and institution of the person who took the photo. (If you submit more than two photographs, please include those additional descriptions and photo credits under "I. Additional Information," below.)

Photo #1 description:

Potato psyllid adult. Notice the white band in abdomen (Psyllid 1.jpg)

Photo #1 credit (photographer's name and institution):

Joseph Munyaneza, USDA-ARS

Photo #2 description:

Potato psyllid in sticky card (Psyllid 2.jpg)

Photo #2 credit (photographer's name and institution):

OSU-HAREC

2. Also attach any printed fact sheets or other publications resulting from your work that will enhance our understanding of your project and its impacts. Please provide a description of each attached publication below.

Document #1 description:

Document #2 description:

Document #3 description:

## I. Additional Information

*Credit: Some of the language about impacts and potential impacts was adapted from a PowerPoint presentation by H. Michael Harrington, Executive Director, Western Association of Agricultural Experiment Station Directors, Colorado State University.*

## Attachment A

### Questions to Help in Reporting Impacts and Potential Impacts

Below are some questions that will guide you in assessing and then describing the impacts and potential impacts of your project. The relevance of each question may vary depending on whether yours is a research or extension project. Please answer as many as you can to the best of your ability, and feel free to describe any additional types of impacts not mentioned below. Remember to identify any potential impacts.

**1. Innovations in IPM:**

Are there new IPM practices that have been (impacts) or could be (potential impacts) adopted as a direct result of your project? What is the total number of acres (or homes, schools, greenhouses, nurseries) on which these practices could realistically be implemented?

**2. Safeguarding human health and the environment:**

- a. Has the project reduced risk (or could it potentially do so) by changing the use of pesticides on farms, in homes, in schools, etc.? For example, could it result in fewer sprays per season or a switch to lower-risk pesticides? If possible, quantify the changes in condition. (Since there is no unanimous definition of *high* and *low risk*, investigators selecting this indicator are asked to categorize the pesticides they are reporting on as *high* or *low risk* according to the particular situation [e.g., lower risk to natural enemies]).
- b. Are there any other impacts or potential impacts on human health or the environment as a result of your project?

**3. Economic benefits:**

- a. What is (or could be) the economic benefit (e.g., dollars saved) for clientele who adopt IPM strategies and systems you studied? Do you envision potential commercialization or mass production of these systems?
- b. How many clients are satisfied with IPM results (such as improved yield, improved quality of yield, reduced pest populations, more effective pest control, greater preservation of nonpest species)?
- c. Are there other financial benefits that might be realized (potential impact) as a result of your project?

**4. Implementation of IPM:**

- a. How many IPM strategies and systems have been validated through this project (e.g., through on-farm trials, large plot tests, or other methods used to confirm efficacy)?
  - b. How many educational materials were delivered? To whom? And what are the impacts or potential impacts?
  - c. What is the number of growers/personnel trained? And what are the impacts or potential impacts?
  - d. For a Web site, what volume of traffic and type of use has the site experienced? (For example, number of visitors per day or month; number of page views; number of unique user sessions; change in volume during growing season; average viewing time.) And what are the impacts or potential impacts?
  - e. How many more people adopted IPM practices as a direct result of your project, or how many people adopted new IPM practices?
  - f. Are there other ways in which your work will result in improved use or increased implementation of IPM strategies in your region or across the West?
5. Has your project or study increased collaboration among stakeholders interested in the development and implementation of improved IPM strategies and systems?