Potato Progress

Research and Extension for Washington's Potato Industry
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Region-wide Leafhopper Trapping – Weeks 1-3

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The Potato Commissions in Oregon and Washington are funding a region-wide leafhopper trapping network this season. Using yellow sticky cards placed throughout most of the potato-producing areas of the Columbia Basin of Washington and Oregon, the network is meant to detect leafhopper population size and movement on a regional basis. There are 35 sites in Oregon, and 70 sites in Washington. If you are interested in leafhopper activity in or near a specific field, you should sample that specific area with a sweep net and yellow sticky cards.

Methods: We use 3x5 inch sticky cards, which are mounted on a wooden stake. The stakes are 12 inches long, with about 3 inches inserted in the ground. The bottom edge of each card is about 3-4 inches above the ground, and cards are held onto the stake with a large paper-binding clip. Trap placement near the ground has been shown by other research to catch the most leafhoppers, and to best represent all the species present. Most of our cards are placed near potato fields in uncultivated areas with resident plants such as grasses, mustards, kochia, Russian thistle, rabbit brush, sage brush, prickly lettuce, etc. A few traps are placed in wild areas far from potato fields. All vegetation within 2-3 feet of the trap is kept trimmed to a height of less than 3 inches.

Results from weeks 1-3: As data continue to accumulate in other aspects of the leafhopper/phytoplasma research project, it appears that beet leafhopper is the most important species for us to watch. Below (Table 1) we report only beet leafhopper numbers for general regions of the Columbia Basin. Due to various circumstances, a few traps are not collected every week.

The numbers of beet leafhoppers region-wide are still very low. In May and June last year, we were routinely finding single traps with more than 50 beet leafhoppers per trap. Note that the numbers in Table 1 refer to numbers of beet leafhopper on many traps combined. The specimens seen so far are the adults that passed through the winter. Their offspring are probably already hatched in many areas, and will be maturing in late May and into June, depending on region and weather.

More detailed results will be posted in future weeks at the following web sites:
www.potatoes.com (click on "Research")
www.potato.prosser.wsu.edu (a link on this page for leafhoppers)

Table 1. **Beet leafhopper** catches on 3x5 yellow sticky cards in Oregon and Washington, grouped by region. Not all traps are present every week. A severe wind on April 27 limited the effectiveness of many traps beyond that date.

	Week Ending*		
Region	4/18	4/24	5/1
Oregon (35 traps)	9	2	6
Washington south of Tri-Cities & east along Snake River (16 traps)	5	1	3
Pasco North to Basin City Area (14 traps)	2	0	1
North of Basin City area, south of I-90, & west of Hwy 17 (15 traps)	0	0	0
North of Mesa, south of I-90, & east of Hwy 17 (10 traps)	0	0	0
North of I-90 & east of Moses Lake (6 traps)	0	0	0
North of I-90 & west of Moses Lake (9 traps)	0	0	1

*Exact dates vary slightly by region – all traps are collected Friday thru Monday near the dates noted.

Washington State Potato Commission

Final Research Project Funding List for 2004-2005

Below are the research projects funded for the coming research season by the Washington State Potato Commission. For general questions/comments, please contact Andy Jensen at the Commission, or for questions/comments about a specific project, contact one of the researchers listed below.

Title	Leader (Contact #)	Amount 2004-2005
Research Support	Bill Hendrix (509-335-9502)	$42,000
Wireworm field studies	Dave Horton (509-454-5639)	$21,000
Verticillium Wilt on Vegetables in Western Washington: Potatoes	Debbie Inglis (360-848-6134)	$4,000
Water Mold Diseases of Potato: Biology and Management	Debbie Inglis (360-848-6134)	$19,857
Tuber moth trapping network for Washington	Phil Hamm (541-567-8321)	$3,256

Title	Leader (Contact #)	Amount 2004-2005
Integrated Disease Management of Potato White Mold (Sclerotinia Stem Rot): Development and Evaluation of a Disease Risk Assessment	Dennis Johnson (509-335-3753)	$17,000
Management of Bacterial Stem Rot, Black Dot, and Late Blight Tuber Rot of Potato	Dennis Johnson (509-335-3753)	$39,000
Postharvest Quality of New Clones and Cultivars	Rick Knowles (509-335-3451)	$56,600
Development of Natural Sprout Inhibitors and Cultivar-Specific Storage Regimes	Rick Knowles (509-335-3451)	$25,500
In Field Testing of Potato Clones and Cultivars for Adaptability for Production in Washington State	Mark Pavek (509-335-6861)	$61,000
Washington Commercial Potato Seed Lot and Demonstration Trials	Mark Pavek (509-335-6861)	$20,000
Green Peach Aphid and Aphid-Vectored Potato Viruses – Regional Assessment and Management	Keith Pike (509-786-9269)	$35,450
Development of Rapid Diagnostic Tests for detection of Viruliferous Stubby Root Nematodes	Ekaterini Riga (509-786-9256)	$26,121
Seed Corn Maggot in Potatoes	Alan Schreiber (509-266-4348)	$5,340
Epidemiology and Management of Potato Yellows Syndrome (a.k.a. Purple Top/BLTVA)	Andy Jensen (509-765-8845)	$37,940
Development of Crop Protection Chemicals for Potatoes - 2004	Schreiber, Alan (509-266-4348)	$42,100
Maximizing the Nutritional Content of Potato	Roy Navarre (509-786-9261)	$38,800
Exploiting Phytonutrient Components in Potato for New Market Development	Chuck Brown (509-786-9252)	$28,545
Grand Total		**$523,509**

Upcoming Field Days

Seed Lot Field Day: June 25, WSU Research Unit, Othello
USDA-ARS Paterson Field Day: July 8

Potato Progress Switching to E-mail or Fax Distribution

In an effort to cut postage costs, the Commission is moving most of its newsletter distributions to e-mail and fax. **If you want to continue to receive *Potato Progress*, you will need to be sure that we have a valid e-mail address or fax number (unless you have neither).** Note that the e-mail form of *Potato Progress* will arrive as a PDF, and so you will need Acrobat Reader on your computer to view the attachment. The form below will help you supply us with one of these two options.

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G Please send *Potato Progress* to me by e-mail. My e-mail address is:

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G I do not use e-mail, nor do I have a fax machine, but I would still like to receive *Potato Progress.*

Name: _____

G Washington grower G Washington allied industry

G Washington scientist G Out of state. Affiliation_____

Fax or mail this form back to:

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Or send an e-mail to ajensen@potatoes.com expressing your preference, and providing the necessary fax number or e-mail address.