



Potato Progress

Research and Extension for Washington's Potato Industry

Published by Washington State Potato Commission www.potatoes.com

Andrew Jensen, Editor. Submit articles and comments to: ajensen@potatoes.com

108 Interlake Rd., Moses Lake, WA 98837; Fax: 509-765-4853; Phone: 509-765-8845.

Volume X, Number 4

May 7, 2010

New Insect and Mite Pest Management Web Resource

<http://www.potatoes.com/IPM-Home.cfm>

In cooperation with pest management scientists and extension educators in WA, OR, and ID, the potato commission is launching this week a new web resource for pest management and insect trapping/monitoring data. This new portion of the potatoes.com site is funded by a large USDA-NIFA grant written and coordinated by WSU's Bill Snyder.

The site has a new interactive map interface for reporting of leafhopper, tuberworm, and aphid population data from the insect monitoring project led by Carrie Wohleb, Grant/Adams County Extension. It has basic information on pests, beneficials, and insect transmitted diseases. There are links to resources on pest management and contact information for the specialists on the project. This web resource is a starting point for a continually expanding body of information and management suggestions that will emerge from the current federal grant project and ongoing commission-funded research.

Any and all are encourage to check out <http://www.potatoes.com/IPM-Home.cfm> and offer feedback and suggestions for improvement. Also, check the site frequently because we will be making edits on a regular basis.

IPM Supplies Reminder

The commission is once again offering free supplies to WA growers for trapping leafhoppers and tuberworm. We are also supplying WA growers with free beating sheets. We have both all black and two-sided white and black. The beating sheets are \$25 for non-WA growers and others. These supplies are pictured below.

To receive these supplies, simply call the commission office, or send an email to ajensen@potatoes.com specifying how many fields you need to monitor and/or how many traps you need, and whether you want a beating sheet. For help with insect identification or any other aspect of insect monitoring, call (509-765-8845) or email Andy Jensen at the commission office.



Weed Research in Potato

Rick Boydston, USDA-ARS, Prosser, WA

Management of weeds is an integral part of all cropping systems. As part of our ongoing cropping systems research project, we often evaluate new herbicides that have potential for use in potato cropping systems. In 2010 we will be evaluating several herbicides in potatoes at the Paterson USDA-ARS research farm. Interested individuals can arrange to tour the plots with Dr. Rick Boydston.

In 2010, fomesafen (Reflex) herbicide will be tested alone and in combinations with herbicides currently labeled in potatoes. Syngenta is expected to obtain a label for Reflex on potato sometime late in 2010, which will be too late for use during the current season. Fomesafen will only be labeled for pre-emergence use in potatoes. Fomesafen is similar in mode of action to flumioxazin (Chateau) and inhibits the protoporphyrinogen oxidase (protox) enzyme in susceptible plants. Reflex is labeled in cotton, soybeans, and dry beans in certain parts of the U.S. for control of pigweed species, common lambsquarters, black and hairy nightshade, common purslane, and suppression of annual morning glory species. Fomesafen activity on black nightshade is generally better than on hairy nightshade. Fomesafen does not control most grass weeds, but may give some suppression of crabgrass. Fomesafen will likely be useful as a tank mix partner in potatoes to improve control of many of the broadleaf weeds listed above.

Linuron (Lorox) is now being marketed by Tessenlerlo Kerley rather than DuPont. Lorox has been labeled on potatoes grown East of the Rocky Mountains for many years, but not in the western states due to crop injury concerns. We will be evaluating linuron in potato at two application timings and several rates to determine the effect of application timing on potential injury at the Paterson research site. This site has a very sandy soil with only 0.4% organic matter and should maximize any potential injury from linuron. The field is also sprinkler irrigated allowing us to precisely control the amount of irrigation water applied following herbicide applications. A new encapsulated formulation of EPTC (Eptam) is currently being developed by Gowan company. Eptam is normally subject to significant volatility losses during and shortly after application. In preliminary tests in Colorado, an encapsulated formulation of EPTC was far less subject to volatility losses than the normal Eptam EC formulation. As a result, encapsulated EPTC could be potentially applied with a ground rig and activated with sprinkler irrigation several days after application without significant losses. We will be testing a new encapsulated formulation of EPTC and comparing the weed control efficacy to the EC formulation in 2010. In addition to the above trials, four other new herbicides will be evaluated on potatoes at the Paterson site. A potato plant-back trial following several wheat herbicides applied in 2009 is underway at the WSU-Prosser research station. This study will help define safe rotation periods following wheat herbicides with long soil residuals. In other studies, weed hosts of the potato cyst nematode (PCN) found in Idaho in 2006 are being identified as part of the PCN eradication effort. Hairy nightshade biotypes from both Idaho and Washington have proven to be suitable hosts, whereas black nightshade was a relatively poor host.

Contact Information: Rick Boydston, USDA-ARS, Prosser, WA

Ph. (509) 786-9267

Email: rick.boydston@ars.usda.gov

Scientist Profiles – Expertise Available to WA Agriculture

Andy Jensen, WSPC Director of Research

As WSPC Director of Research and editor of *Potato Progress*, I try to keep Washington's potato industry informed of the latest research, events, and expertise available to us. There are many scientists in the PNW that have a lot to offer producers, consultants, and others in agriculture. We will periodically present short profiles of experts who work on potatoes for the potato commission, or who are excellent resources for us and the industry. This will give you names, faces, and interesting biographical tidbits to go along with the many scientists supporting WA ag, mostly in the background.

Insect Expertise at WSU: Richard Zack

I am an entomologist at Washington State University in Pullman and curator of the James Entomological Collection. The Collection houses almost 3,000,000 insects and serves as an international resource for those studying insect diversity, taxonomy, and distributions. My specialty areas are insect taxonomy (the identification and naming of insects) and biological diversity, especially of certain groups of flies, insects that live in aquatic environments, and moths. I've conducted extensive fieldwork throughout Washington and the Pacific Northwest and have separate studies in Guatemala and Northern Marian Islands, especially Guam. I spent the better part of 10 years studying the insect fauna of the Hanford Nuclear Site and have extensive experience with insects of the Basin area. At WSU, I teach two general entomology courses for undergraduate students and have taught applied entomology, a course that deals primarily with insects that attack agricultural crops and how to manage those insects.



My interests with growers are to help them understand the insects that occur in their fields and what the impact of those insects might be. I am very interested in working with growers to help them identify insects that they find and what the consequences they may bring. This includes both pestiferous and beneficial insects. In this capacity I make extensive use of the insect collection at WSU to help with these identifications - insects are often not that easy to identify! I am also very interested in providing continuing education opportunities to growers to help them better understand the good and bad consequences of insects and to help them meet pesticide recertification credit requirements.



Currently, I am working with Peter Landolt, Andy Jensen, and a graduate student, Dax Dugaw, to better understand the caterpillars ("worms") that feed on potato foliage and their economic consequences. The Washington State Potato Commission has supported this project and we are extremely grateful for the support that has been given to us. Please feel free to contact me if I can be of any help.

Contact Information: Richard Zack, WSU Pullman, WA
 Ph. (509) 335-3394
 Email: zack@wsu.edu

Mark Your Calendars

WSU Potato Field Day – June 24, 8:30 am – 1 pm, Othello Research Unit, Hosted lunch.
Contact: Mark Pavek, 509-335-6861, mjpavek@wsu.edu.

Note the field day is on Thursday this year!

OSU Potato Field Day – June 29, 8:30 am, OSU Hermiston. Contact:
<http://oregonstate.edu/dept/hermiston/>

Potato Association of America – August 15-19, Corvallis, OR. Contact:
<http://oregonstate.edu/conferences/event/paa2010/>

Time to Clean Up Cull Piles and Spills

In a recent edition of this newsletter (Volume VII, No. 2) we discussed the importance of cull piles and spilled potatoes in disease and pest issues for the commercial crop. Cull piles and other waste potatoes pose little or no threat during the winter, but with the growing season underway and the crop emerged, it is past time to clean up cull piles and maintain good sanitation around storages and other places where it might be tempting to pile culls. Some of the problems associated with cull piles, such as late blight, are community problems and must be handled by the whole community working together.

Insects and Other "Bugs" in Potato Tubers or Seed

Since the arrival of tuberworm in the Columbia Basin, I (Andy Jensen) have been working to learn about all the insects that invade potato tubers. Several species of flies, beetles, and the like have already been seen and photographed, but I would like your help. If you find potato tubers or seed pieces that have maggots, worms, or other "bugs" in them, I'd like to have a sample. Just give me a call at 509-760-4859 or drop me an e-mail at ajensen@potatoes.com.