

INSECT MONITORING REPORTS

Report for April 25- May 1, 2012

BEET LEAFHOPPERS: We did not find any beet leafhoppers (BLH) on our traps located in the Columbia Basin this week. They probably will not begin to show up on our traps until late May.

Beet leafhoppers are important pests because they transmit BLTVA, a phytoplasma that causes purple top disease in potatoes. In the Columbia Basin, the first spring generation of BLH usually migrates towards potato fields in late May and early June, with a peak flight in late June. Yellow sticky traps placed near potato fields are one way to monitor BLH. Information about setting up traps and identifying BLH can be found in the article, "[Beet Leafhopper Monitoring with Yellow Sticky Cards](#)". Treatment thresholds based on BLH numbers on traps have not been established, but we know that the risk of infection increases as BLH populations become large. If the numbers on traps build up to 40 or more BLH per week, then it is probably time to be concerned. A typical weekly catch during peak BLH activity is 100. Eliminating weed hosts (wild mustards, Russian thistle, kochia) in areas surrounding potato fields is an important cultural management approach for BLH. Potato growers may also select cultivars that are less susceptible to purple top (Ranger, Umatilla, and Norkotah are considered highly susceptible; Russet Burbank is susceptible; and Alturas and Shepody are moderately susceptible). A number of insecticides are labeled for use on potatoes to control leafhoppers. There is new research to suggest that systemic at-planting insecticides, especially those with longer residual activity applied at the maximum allowed rate, provide adequate early season control of BLH. Results may vary depending on the product used, application rate, soil and environmental conditions, and insect pressure. Foliar insecticides may also be used to control BLH. These are usually applied in May, June, and sometimes July. Insecticides with long residual activity (10-14 days) are preferred. If you apply a non-systemic insecticide, it may be necessary to shorten the application interval during periods of rapid plant growth to ensure adequate plant coverage. Remember to always read and follow instructions on the pesticide label. For more information about managing BLH, visit [IPM Guidelines for Insects and Mites in ID, OR, and WA Potatoes](#) and the [2011 PNW Insect Management Handbook](#).

POTATO TUBERWORM: Potato tuberworm (PTW) moths were found in six of our pheromone traps in the Columbia Basin this week. Traps with moths were all located in the south, either near the Oregon border or near the city of Pasco. Moth counts ranged from 1-8 moths/trap.

Potato tuberworm (PTW) was first recognized as an important pest of potatoes in the southern Columbia Basin in 2003. PTW larvae feed on tubers causing damage that renders them unmarketable. Potato growers with fields south of Connell, WA are recommended to pay close attention to regional trapping data, and should deploy pheromone traps. Infestations of PTW are highly localized, and it is risky to conclude too much from traps that may be several miles away. Information about setting up traps and identifying PTW moths can be found in the article, "[Tuberworm Monitoring with Pheromone Traps](#)". Trap counts from mid-season to harvest are particularly important to watch. Pre-harvest control measures may be warranted in fields where

PTW moths in pheromone traps are found to be increasing every week, especially in August-October.

APHIDS: We will begin monitoring aphids in a couple of weeks when potatoes in our sampling network have emerged.

Aphids are important pests because they transmit several important potato viruses, especially potato leafroll virus (PLRV) and potato virus Y (PVY). Green peach aphids are the most important vector of PLRV, which has caused substantial yield and tuber quality losses in the Columbia Basin. PLRV causes net necrosis in some cultivars, an unacceptable tuber defect in processing potatoes. PVY can also result in significant yield losses, and some strains cause tuber defects. Potato growers should monitor fields for aphids at least once a week, because early recognition and control of aphids is the best tactic in limiting spread of potato viruses. Current recommendations are to treat long-season storage potatoes as soon as wingless aphids are detected. Low tolerances have been established because even a low incidence of seed borne PVY and PLRV can spread rapidly if aphids go unchecked.

POTATO PSYLLIDS: We will begin monitoring psyllids in a couple of weeks when potatoes in our sampling network have emerged.

Potato psyllids are important pests mostly because they can transmit a bacterium (*Candidatus Liberibacter*) to potatoes that causes zebra chip disease (ZC). This disease reduces both yield and tuber quality and has led to serious economic losses in some regions. ZC was first detected in potato fields in the Columbia Basin in 2011. It is difficult to predict whether ZC will show up again in 2012, but it is important to be prepared. Unfortunately, potato psyllids are not easy to monitor with traps. They are not attracted to yellow, and there is no pheromone currently available to attract them. We will be using a modified leaf blower/vacuum to monitor psyllids this season on the sampling network. Early detection and control of psyllids will be important to minimize ZC. Current recommendations are that first detection of potato psyllids, in any life stage, is the threshold for action until more information is available. For more information about psyllids, including control recommendations, read *Biology and Management of Potato Psyllid in Pacific Northwest Potatoes*.