

INSECT MONITORING REPORTS  
*Report for July 28-Aug. 3, 2011*

**SPIDER MITES:** This is the time of the season when potato growers should be actively looking for two-spotted spider mites. We have not seen many mites in potato fields up to now, but are expecting to see more of them soon. Sampling for mites requires close visual inspection because they are tiny and difficult to see. It helps to shake the plant over a piece of white paper and then look for the tiny moving dots. Mite populations increase rapidly and the damage they cause can go unnoticed for some time, so it is important to scout often. **If you plan to use a miticide, apply it early because none of the registered miticide products provide full control once populations reach outbreak levels.** Mites damage potato plants by puncturing the surface cells of leaves, causing them to develop small yellow splotches that darken to reddish brown lesions. Severe damage may lower yield by reducing the capacity of plants to perform photosynthesis. Mite outbreaks have been related to 1) use of non-selective pesticides, like pyrethroids; 2) close proximity to mite harboring crops like corn, alfalfa, hops, and mint; 3) close proximity to dusty roads; and 4) hot, dry weather.

**APHIDS:** Aphids were found in 17 of the 34 fields (50%) we surveyed in the Columbia Basin this week. Most were winged green peach aphids (GPA). Wingless colonizing GPAs were collected in 10 of the 34 fields (29%). The fields that had wingless aphids averaged only 0.2 aphid/plant, which is a low population density that is not easily detected.

**Management Recommendations:** Early recognition and control of aphids is the best tactic in limiting the spread of potato leafroll virus (PLRV). PLRV infections are less common these days compared to a decade ago, but PLRV continues to be seen occasionally in the Basin. This virus causes a tuber symptom called net necrosis in some cultivars that is unacceptable in processing potatoes. To minimize the spread of virus, university-based recommendations are to treat late-season storage potatoes as soon as non-winged aphids are detected. The low tolerance for net necrosis by processors and the high vectoring capacity of aphids, explains the very low treatment threshold for aphids in potato fields destined for storage and processing. Higher action thresholds may be appropriate for cultivars that do not develop net necrosis when infected with PLRV, and for potatoes that will not be stored. It is important to keep in mind, however, that aphids spread other viruses and can cause direct injury to plants when aphid densities are high. Many foliar insecticides are labeled for the suppression of aphids in potatoes; for a list of products recommended for late-season potatoes go to ***IPM Guidelines for Insects and Mites in ID, OR, and WA Potatoes***. When selecting an insecticide it is important to know the use restrictions (PHI, season limits, etc.), follow guidelines for insecticide resistance management, and consider the impact on natural enemies.

**BEET LEAFHOPPERS:** Beet leafhopper (BLH) populations continue to be quite low. The most collected on our network of yellow sticky cards was 16 BLH on a trap near Othello. Click on the map and graph below to view recent data for the region. The graph is a good way to study the pattern of BLH population development this season.

**Management Recommendations:** Beet leafhoppers are important pests because they transmit BLTVA, a phytoplasma that causes purple top disease in potatoes. Most BLTVA infections occur

early in the season, during May-July, so most chemical treatments for BLH are applied at-planting and/or in May, June, and July. It can take a while for purple top symptoms to develop, but if your potatoes were infected with BLTVA you are probably beginning to see the symptoms of purple top now. Symptoms may include leaf curling with purple coloration, aerial tubers, chlorosis, and early senescence. Potato cultivars vary in susceptibility to purple top. Ranger, Umatilla, and Norkotah are considered highly susceptible; Russet Burbank is susceptible; and Alturas and Shepody are moderately susceptible.

**POTATO TUBERWORM:** Potato tuberworm moths were collected in two of our network traps this week; one trap near Pasco with 2 moths/trap, and one trap close to the Oregon border with 8 moths/trap. We expect the numbers of trapped moths to begin to build in August, particularly in the southern-most parts of the Columbia Basin, with peak populations in September-October.

**Management Recommendations:** If you grow potatoes in the Columbia Basin south of Connell, it would be a good idea to put out your own potato tuberworm pheromone traps to monitor the situation. Information about setting up traps and identifying the moths can be found in the article, "Tuberworm Monitoring with Pheromone Traps". Infestations of potato tuberworm are highly localized, and it is risky to conclude too much from traps that may be several miles away. Unfortunately, we do not have enough information to translate counts from trapping into a risk assessment. It is clear, however, that more moths in traps equal more risk. The traps should be checked weekly. If the moth counts increase from week to week, then control measures may be warranted before harvest. Insecticide spray programs beginning 4-8 weeks before harvest have been successful in reducing tuberworm in potato tubers.

**LYGUS BUGS:** This week we found lygus bugs in 24 of the 34 fields we visited (71%). The numbers were especially high in the Quincy area, averaging about 2.4 lygus per plant. These are not considered damaging pests of potato. Lygus bugs feeding on potatoes may damage young buds and sometimes causes distorted growth or wilted leaves, but does not often affect yield. Chemical treatment for lygus bugs in potatoes is needed only rarely.

**BENEFICIAL INSECTS:** We found fewer beneficial insects in the potato fields we monitor this week. Big-eyed bugs were found in only 24% of the fields, and damsel bugs were found in 29% of the fields.