

INSECT MONITORING REPORTS

Report for Aug. 18-24, 2011

APHIDS: Lots of aphids this week! Aphids were found in 16 of the 23 fields (70%) we surveyed. We found both winged and wingless green peach aphids (GPA). Wingless colonizing GPAs were collected in 12 of the 23 fields (52%). The fields that had wingless aphids averaged 0.6 aphids/plant.

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 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.

SPIDER MITES: Growers should continue to look for two-spotted spider mites in potato fields. We found large populations of spider mites in two of the fields we surveyed this week. 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. Mites damage potato plants by feeding on the leaves, which causes them to develop small yellow splotches that darken to reddish brown lesions. Heavy infestations often lead to early plant senescence. **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.** A well-timed application is made when mite populations reach 2 mites per leaf, which is close to the detection limit for the pest. Include a surfactant to improve coverage. In most cases, a single, well-timed, application will control mites. 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.

POTATO TUBERWORM: Potato tuberworm (PTW) moths were collected in four of our network traps this week; one near Pasco with 7 moths/trap, one off of the Kahlotus Highway with 1 moth/trap, one near Burbank, WA with 1 moth/trap, and one close to the Oregon border with 30 moths/trap. This is the most PTW moths caught so far this season! We expect the numbers

of moths to continue to build in the southern 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 PTW 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 PTW 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. Cultural methods reported to reduce PTW damage include 1) eliminating cull piles and volunteers to reduce overwintering stages of PTW; 2) maintaining soil moisture (apply 0.1" per day) after vine kill to prevent soil cracking; 3) minimizing the time between desiccation and harvest; and 4) maintaining more than 2" of soil over tubers during the season, and covering hills with 1-2" of soil after vine kill. Insecticide spray programs beginning 4-8 weeks before harvest have been successful in reducing tuberworm in potato tubers. For a list of products recommended for PTW control go to ***IPM Guidelines for Insects and Mites in ID, OR, and WA Potatoes***.

BEET LEAFHOPPERS: Beet leafhopper (BLH) populations near potato fields continue to be small in most parts of the Basin. Our network of yellow sticky traps averaged only 1.4 BLH/trap. The most collected this week was 51 BLH on a trap near Eltopia. Another trap on the Royal Slope had 18 BLH. All other traps had 5 BLH/trap or fewer. If you are seeing purple top symptoms in your field, please send a quick note via email to cwohle@wsu.edu. We would like to assess how widespread this disease is in the Basin.

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 sometimes in 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.

BENEFICIAL INSECTS: We are not finding many big-eyed bugs this late into the growing season, but are continuing to find damsel bugs. Damsel bugs were found in 17% of the fields we monitored this week.