

INSECT MONITORING REPORTS

Report for July 6-12, 2011

BEET LEAFHOPPERS: The largest populations of beet leafhoppers (BLH) this week were in the potato growing areas between Pasco and Basin City, where trap counts were as high as 32 BLH/trap. BLH populations in the Mattawa area have been declining, and the highest trap count in this area this week was 15 BLH/trap. Most other areas of the Basin are maintaining counts in the range of 1-15 BLH/trap. The potato growing areas between Moses Lake and Connell continue to have some of the lowest BLH populations, with trap counts ranging only 0-4 BLH/trap. Click on the map below to view recent data for the region.

Management Recommendations: The BLH is the only known vector of BLTVA, a phytoplasma that causes purple top disease in potatoes. Infected plants show a range of symptoms, including leaf curling and purpling, aerial tubers, chlorosis, and early senescence. Purple top is managed by controlling BLH and thereby preventing the spread of BLTVA. Yellow sticky traps placed near potato fields are one way to monitor BLH populations. We recommend that growers deploy at least two traps near each of their potato fields. Populations can be spotty, so the more traps near a field, the more likely an infestation will be detected. More information about setting up traps and identifying BLH can be found in the article, "Beet Leafhopper Monitoring with Yellow Sticky Cards". It is also helpful for growers to follow regional trapping results. The long-distance movement of BLH is poorly understood, so growers should consider the possibility of BLH moving quickly from highly infested areas to less infested areas. 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.

POTATO TUBERWORM: Potato tuberworm moths were found in 3 of our network traps this week; one trap near Pasco, and two traps close to the Oregon border. These traps each had only 1 moth/trap. It is still early for much tuberworm activity. We expect the numbers of trapped moths to begin to build in August, particularly in the southern-most parts of the Columbia Basin.

APHIDS: Aphids were found in 21 of the 28 fields (75%) we surveyed in the Basin this week. Most of these continue to be winged green peach aphids. We found wingless colonizing aphids in 7 of the 28 fields (25%). Most of the aphid counts were very low; fields in which we found aphids averaged only 0.2 aphids/plant. However, we did visit a field with a count of 1.6 aphids/plant, which exceeds the recommended treatment threshold for potato fields destined for storage and processing (see more below). Potato growers across the Basin should be checking their fields regularly for aphids. Click on the map below to view recent data for the region.

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.

BENEFICIAL INSECTS: Big-eyed bugs were found in 61% of the fields we surveyed this week. Damsel bugs were found in 43% of the fields we surveyed this week.

WORMS: Worms, a.k.a. loopers and cutworms, are pests beginning to show up in some Columbia Basin potato fields. They are not always easy to find when scouting fields during the day (especially the cutworms), so look for the large holes they chew in potato leaves. Damage in potato fields does not usually impact yield greatly, the plants can sustain substantial defoliation (10%) with little to no yield loss.