

INSECT MONITORING REPORTS

Report for July 20-26, 2011

APHIDS: Aphids were found in 21 of the 29 fields (72%) we surveyed in the Columbia Basin this week. Most were winged green peach aphids (GPA). Wingless colonizing GPAs were collected in 5 of the 29 fields (17%). The fields that had wingless aphids averaged only 0.1 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 are down again this week. The most collected on our network of yellow sticky cards was only 7 BLH/trap. 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: 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. A guide to 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. In the Columbia Basin, chemical treatments for BLH are usually applied at-planting and/or in May, June, and July.

POTATO TUBERWORM: Potato tuberworm moths were collected in three of our network traps this week; one trap near Pasco with 1 moth/trap, one trap south of Kennewick with 1 moth/trap; and one trap close to the Oregon border with 5 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.

BENEFICIAL INSECTS: Beneficial insects, a.k.a. natural enemies, continue to be seen in the majority of potato fields we monitor in the Basin. This week, big-eyed bugs were found in 55% of the fields, and damsel bugs were found in 38% of the fields. These beneficial insects both feed on spider mites and a wide variety of soft-bodied insects, including aphids, leafhoppers, etc.