

INSECT MONITORING REPORT

Summarized Report for Aug. 12-18, 2010

APHIDS: Aphids (non-winged, colonizing forms) were found in 38% of the fields we sampled this week. In fields where aphids were present, the counts averaged 0.7 aphids/plant and ranged from 0.1 to 4.1 aphids/plant.

Recommendations: It is important for growers to continue to monitor fields for aphids. Early recognition and control of aphids is the best tactic in limiting the spread of potato leafroll virus (PLRV). 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. 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.

Organic potato growers have only a few choices for chemical control of aphids, including insecticidal soaps, *Beauveria bassiana* products, and neem oil (azadirachtin). Unfortunately, we do not have information on the efficacy of these organic options for control of aphids in potatoes. Be sure to check with the WSDA Organic Food Program to confirm that a product is approved for use in certified organic crops in WA.

SPIDER MITES: Growers should be actively looking for mites. Many fields in the Basin have large populations of mites now, and the damage to the crop is becoming apparent. Sampling for mites requires close visual inspection because they are tiny and difficult to see. It helps to shake the plant over a sheet 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.**

POTATO TUBERWORM: Potato tuberworm (PTW) moths were found in three survey traps this week; one near Connell, and two north of Pasco. These traps had 2-5 moths/trap. The traps near Pasco had the most PTW moths per trap. We are expecting the PTW population to build over the next few weeks.

Recommendations: Potato growers in areas potentially impacted by these insects should maintain at least one pheromone trap adjacent to each of their potato fields. PTW infestations can be highly localized, and it is risky to conclude too much from traps that are miles away from your fields. 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 after vine kill to prevent soil cracking (researchers have shown applying 0.1" of sprinkler irrigation daily from vine kill to harvest decreases PTW

tuber damage without increasing fungal or bacterial diseases); 3) minimizing the time between desiccation and harvest (the longer tubers remain in the field after vine kill, the greater the likelihood of tuber infestation); and 4) maintaining more than 2” of soil over tubers during the season, and covering hills with 1-2” of soil after vine kill (tubers exposed or close to the surface are at high risk for PTW damage). Insecticide spray programs beginning 4 to 8 weeks before harvest have been successful in reducing PTW in potato tubers.

BEET LEAFHOPPERS: The highest BLH counts this week were in the West Basin (near Mattawa, Quincy, Ephrata). Mattawa area counts averaged 11 BLH/trap and ranged 0-33 BLH/trap. Traps in the North Basin (excluding Mattawa) averaged 12 BLH/trap and ranged 0-60 BLH/trap. The lowest BLH counts were in the South Basin; traps in the South Basin averaged only 3 BLH/trap and ranged 0-21 BLH/trap.

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 and June, and possibly in July. So, the time to control BLH in potatoes is over. It takes a while for purple top symptoms to develop. 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.