

GREEN PEACH APHID MONITORING, OVERWINTERING, AND POPULATION TRENDS

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Field population development of green peach aphid, *Myzus persicae* (Sulzer), in Washington's Columbia Basin potato-growing area was closely monitored for the potato industry for the last two growing seasons. An aphid-hotline and website were used to communicate and to keep the industry apprised of the results. In addition to the summer happenings, green peach aphid populations growth trends on selected winter annuals and perennial were also monitored through the winter months, 1999-2000.

The summer population trends varied widely across areas and during the season. Because of this, characterization of field populations was largely done on an area by area, or site by site basis. Hotline (888-673-6273) and website (www.wsu.edu/~potatoes) status reports (posted at 10-15 day intervals through the summer) were provided to alert the industry of areas of mounting aphid problems and trouble sites, and to encourage on-farm scouting of fields.

Herbaceous Winter Hosts of Green Peach Aphid: Green peach aphids, in addition to surviving as eggs on peach and almonds in the Northwest, survive as nymphs and adults on selected winter annuals and perennials, at least in years of mild winters. This was first confirmed from collections of green peach aphids taken in early spring, 1999, along the Columbia Gorge on tumble mustard, before winged forms commenced their migration from peaches. It was further confirmed at numerous sites and on numerous plants during the winter of 1999-2000. Following is a partial list of plants that remain green or partially green through the winter and serve as winter hosts for green peach aphid nymphs and adults: flixweed, *Descurainia sophia*; mallow, *Malva neglecta*; rape, *Brassica napus*; shepherd's-purse, *Capsella bursa-pastoris*; storksbill, *Erodium cicutarium*; and tumble mustard, *Sisymbrium altissimum*. Mallow, shepherd's-purse, and tumble mustard were also found to sometimes host potato leafroll virus (PLRV) (collaborative work with P. Thomas, plant pathologist, USDA-ARS-Prosser). Details on the aphid's overwinter (1999-2000 winter) will be presented at the conference.