

POTATO TUBERWORM IN THE COLUMBIA BASIN

Silvia I. Rondon

Oregon State University
Hermiston Agricultural Research and Extension Center
PO Box 105, Hermiston OR

The potato tuberworm (PTW) or potato tuber moth *Phthorimaea operculella* (Zeller) is a cosmopolitan, oligophagous pest of solanaceous crops commonly found in tropical and subtropical regions. Tuberworm has been recorded in California as early as 1856; however, PTW was not a major concern for growers in Oregon and Washington until 2002 when a field with severe tuber damage was documented in northeastern Oregon and southeastern Washington, and was not considered an issue in Idaho until confirmation of the occurrence of this insect in 2005.

The history of PTW in the Pacific Northwest dates back to 1913, when Chittenden reported the presence of PTW in Washington, and British Columbia. Additional reports from the Pacific Northwest are not found until tubers suspected to have been damaged by PTW were found in 2000 and 2001. In 2003, several fields in the Columbia Basin were rejected for market due to PTW infestation resulting in an economic loss. Economic losses increased substantially in 2004 and 2005. Adequate control of PTW is critical because larvae infest tubers, rendering them unmarketable (there is a zero tolerance for the presence of tuberworm larvae in raw processing product because they are classified as foreign material). Since this region stores large quantities of potatoes, additional losses are likely from infested tubers that rot in storage.

Researchers, crop consultants, and growers in Oregon, Washington and Idaho are currently using the Pacific Northwest PTW protocol to determine the presence of the insect. Growers in areas potentially affected are encouraged to monitor insect numbers using pheromone traps. For current information on PTW trapping in Oregon visit:

<http://oregonstate.edu/Dept/hermiston/TrapReports.php> (OSU, HAREC), in Washington,
www.potatoes.com/research.cfm (Washington State Potato Commission), and in Idaho
<http://www.ag.uidaho.edu/potato/currentissues/index.htm>.