Potato Progress

Research and Extension for Washington's Potato Industry
Published by Washington State Potato Commission **www.potatoes.com**
Andrew Jensen, Editor. Submit articles and comments to: ajensen@potatoes.com
108 Interlake Rd., Moses Lake, WA 98837; Fax: 509-765-4853; Phone: 509-765-8845.

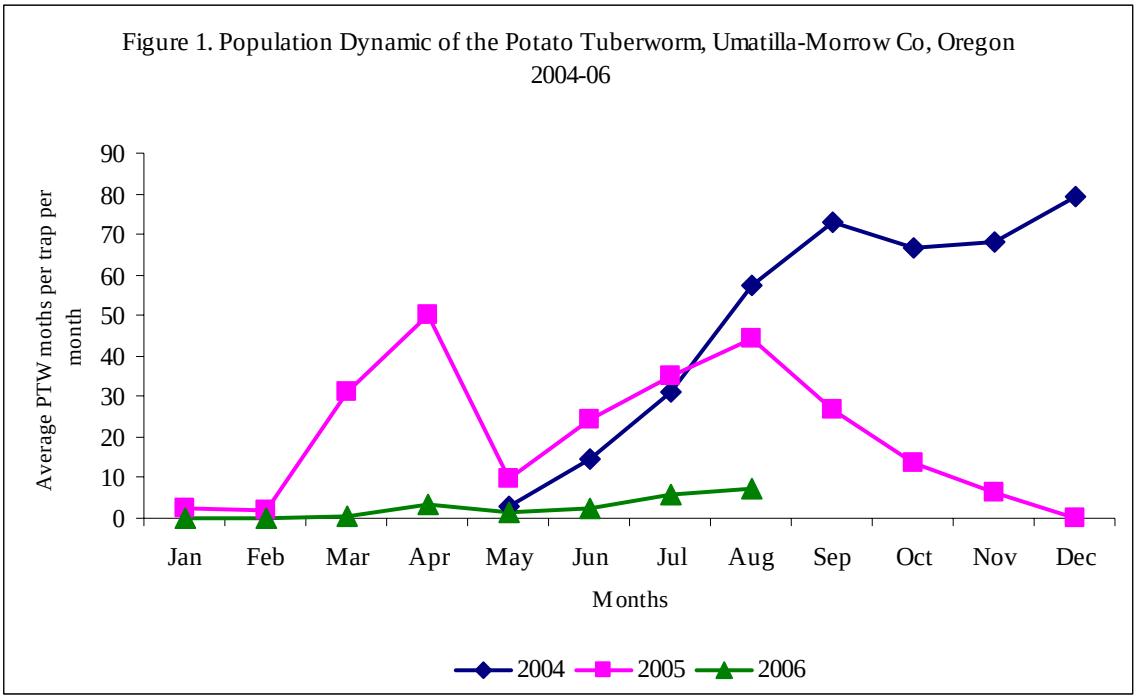
Volume VI, Number 9 *August 23, 2006*

Population Dynamics of the Potato Tubermoth in Eastern Washington/Oregon

Silvia Rondon[1], Phil Hamm[1], and Andy Jensen[2]
[1]Oregon State University, Hermiston Agricultural Research and Extension Center
[2]Washington State Potato Commission

Since 2002, the potato industry has faced the presence of the potato tubermoth ("official" common name: potato tuberworm). A pheromone trapping network throughout the potato production area of northeastern OR and central WA has documented an increase in the potato tubermoth's range. In 2005, reports confirm the presence of the potato tubermoth in central and western OR and in at least two counties in western ID. Potato tubermoth larvae mine leaves, stems, petioles, and bore into potato tubers. Control of the potato tubermoth damage is critical because its larvae infest tubers (in the field as well as in storage), rendering them unmarketable. There is a zero level of tolerance in processed potatoes.

Field trapping has found wide swings in tubermoth population over the last three years. Although in 2004 and 2005 high numbers of tubermoth were found throughout the year, the 2006 growing season turned out to be a substantially different. So far tubermoth numbers have been substantially lower than counts from the previous 2 years. We cannot speculate at this time what these low numbers may mean concerning tuber damage risk at the end of this growing season. A previous study suggested that the severity of moth damage the next growing season was primarily dependent upon its ability to overwinter in larger numbers. This statement may hold true in the Columbia Basin as well. Populations of tubermoth were reduced between November 2005 – March 2006 and apparently never recovered. Does one need to spray this season? It seems to be unnecessary in most fields since tubermoth numbers are substantially down but continuing to scout individual fields using pheromone traps is important since high numbers have been found near isolated fields. Will the population of the potato tubermoth be different the next growing season? At this time it is hard to predict. What is important is the current on going effort to track the development of this pest and to continue investigating the basic biological, chemical, and ecological information to be able to adequately control this pest in the future.



New Potato Enterprise Budget Available

The cost of producing both processing and fresh market potatoes has increased over the past five years. Therefore, WSU Extension Economist Herb Hinman has updated the 2001 Enterprise Budget to reflect the 2006 Cost of Producing Processing and Fresh Potatoes under Center Pivot Irrigation - Columbia Basin, Washington. The new budget is now available online at http://www.farm-mgmt.wsu.edu/irr.htm. Just click on Pub # EB2015E or the title of the budget. Also available is an Excel spreadsheet that can be modified to fit your operation. Find the link just below the title for the new potato budget. A limited number of hard copies of the new budget will soon be available at the Grant/Adams Area Extension office, contact Mark Trent at 509.754.2011 ext. 413.

Important non-Tuber Moth Specimens in Traps

As many of you already know, the pheromone lures that we use for attracting tuberworm moths also attract other species of related moths. Ironically, this problem does not exist in South America where tuberworm is supposed to have originated. Below are three of the most common non-tuberworm moths that we see in our regional trapping network. **These other species are not pests**, and care should be taken to avoid mis-identification.

Potato tuberworm moth (1) and three of its relatives (2-4) that are commonly caught in pheromone-baited traps in central Washington.

Growing Rubber?
Research on Another Possible Rotation Crop

During World War II, there was research on a plant called the rubber dandelion (*Taraxacum kok-saghyz*). This plant is a close relative of the lawn weed we all know and love, but its roots produce a high-quality latex used in making rubber. The roots also contain a lot of a starch-like compound called inulin. After the extraction of the latex, the inulin can be used to produce ethanol. Rubber from this plant was used by the Russians during World War II during a time of rubber shortage.

At the time of the U.S. research in the mid-twentieth century, it was found that rubber dandelion grew well in the northern U.S. Today there is small-scale research on rubber dandelion going at the WSU Prosser station. Although the idea of growing rubber dandelion in Washington is a long way from a commercial reality, it might be worth the time of some to start researching it, and to encourage the development of the infrastructure needed for our area to produce rubber, and possibly ethanol, from the rubber dandelion. Interested folks might want to contact Joan Davenport at the Prosser station for more information (509-786-9226 or jdavenp@tricity.wsu.edu).

Topics for the Washington Potato Conference

The program committee for the Washington State Potato Conference is starting to develop a list of topics that might be covered during the February conference this winter. If there is anything you would particularly like to hear about, please contact Andy Jensen at the commission office, or Mark Pavek at WSU in Pullman (509-335-6861 or mjpavek@wsu.edu).