

Volunteer Potato Forecast for Columbia Basin in 2013  
Marc Seymour & Rick Boydston, USDA-ARS, Prosser, WA

The minimum air temperature at the Paterson USDA-ARS research farm for the period December 22 2012 thru February 14 2013 was 16<sup>o</sup> F recorded on January 12, 2013. Temperatures at 2 ¾” deep fell below 28<sup>o</sup> F (the threshold to kill tubers) on several occasions between January 12<sup>th</sup> and January 24<sup>th</sup>, but it was not until January 24<sup>th</sup> that soil temperatures at 4 ¾” fell to a low of 27.5<sup>o</sup> F. Minimum soil temperatures at 6 ¾” and 8 ¾” did not fall below 30<sup>o</sup> F for the period January 12<sup>th</sup> thru January 24<sup>th</sup> when the lowest ambient air temperatures for the winter were recorded.

Surveys in the Columbia Basin have revealed that post-harvest tuber leavings at depths greater than 4” can be as high as 25,742 tubers per acre. We estimate that approximately 75% of volunteer tubers were killed by winter temperatures this year, but that tubers below about 5” deep survived. Tuber leavings below 5” deep account for about 18,000 tubers per acre, which is greater than a standard commercial planting rate.

Plants from volunteer tubers will emerge late this spring because of the depth of viable tuber leavings and emergence will take place in a shorter time span than in years when tubers close to the surface remain viable. However, their numbers will represent a significant challenge to rotation crops that emerge slowly and compete poorly early in the season.

Control measures for volunteer potatoes in crop rotations can be found on the Prosser USDA-ARS website; [http://www.ars.usda.gov/main/site\\_main.htm?modecode=53-54-00-00](http://www.ars.usda.gov/main/site_main.htm?modecode=53-54-00-00)

A presentation on control of volunteer potatoes at the Pacific Northwest Vegetable Association Conference is posted at <http://www.pnva.org/files/files/2012PVNAPestManagementSess.pdf>