

IDAHO POTATO PULSE



Brought to you by the Idaho Potato Commission

Website: www.idahopotato.com

On October 7, 2011 an announcement was made regarding a new potato disease found in Idaho. It is called Zebra Chip. This disease is caused by a bacterium (*Liberibacter*) that is transmitted by Potato Psyllids. This disease has been around for numerous years, traditionally plaguing southern US potato fields. In September it was found in the Columbia Basin of OR and WA and has now been confirmed in Idaho. Although research has been done over the last several years there is still a lot we do not know about this disease and psyllid movement.

Tuber samples of several varieties were collected in Jerome and Twin Falls counties during the last two weeks. Please see the photos below for reference. Zebra Chip causes necrotic flecking in the flesh of the tuber similar to net necrosis but the symptoms extends throughout the length of the tuber. When diseased tuber tissues are fried the disease causes severe darkening in both chips and fries. Because symptoms can be seen in uncooked tissues, the disease is a concern for both fresh and process potatoes. One interesting thing to note is that typically infected tubers will not sprout.

Samples may be submitted to the University of Idaho for verification. Samples can be taken to your county extension office or taken directly to Phil Nolte (Idaho Falls R & E Center, 208-529-8376), Mike Thornton (Parma R & E Center, 208-722-6701) or Nora Olsen (Twin Falls R & E Center, 208-736-3600). We can either confirm it from visual symptoms or will send it off for verification. Please note the county and variety with the sample. No need to keep samples cool now that the weather has changed but do keep them from freezing. Place cut tuber in a plastic bag with insulation around it and fed ex to one of us. Avoid sending on Friday since the sample may be left out unprotected. Questions can be directed to Phil Nolte at the above number.

We will keep you posted on the progress of this disease in Idaho. The good news is that of the fields identified as infected to date, the incidence of infected tubers has been extremely low. We should also note that potato psyllids are not known to overwinter in the northern US, so their presence may be a transient problem related to the unusual weather pattern during 2011. We are all currently on a steep learning curve and need to work together to identify the scope of this problem and the best way to manage it.

Additional information can be found at <http://agrilife.org/zebrachip/>

Phil Nolte, Mike Thornton and Nora Olsen, University of Idaho.

Photo 1. Look for internal flecking similar to net necrosis but it will be throughout the tuber, not just the stem end. Some varieties may show an external symptom of a blackened area around the stolon attachment but do not depend upon this symptom to be present. Tubers must be cut to see the visual necrosis. This photo was taken of Russet Norkotah.



Photo 2. Look for the necrosis throughout the tuber as seen below.

