

## **LATE BLIGHT IN IDAHO 2004**

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Potato late blight does very well when conditions are wet and the 2004 season was somewhat wetter than normal. The production areas of the south central and southeast were blessed with minor rain showers, almost on a daily basis. Generally these showers weren't significant enough to require changes in irrigation scheduling, but they did provide excellent conditions for the development and spread of potato late blight.

We had our first confirmed reports of late blight from the south eastern region (Bingham County) on July 24. This report was followed within a couple of days by confirmed reports from the south central region (Minidoka County). By season's end, we had confirmed positive finds in fields from as far north as the Rexburg bench. Late blight was also reported in several storages throughout the areas where foliar symptoms were observed.

What this means for 2005 is that we will begin the season with late blight already in our system. We know that infected cull potatoes will be present and the possibility that there will be infected volunteers is also very high. If we combine the presence of the disease with favorable weather this coming spring, the industry could face some serious late blight problems in 2005.

What did we find out in 2004? The model that we have been working on for late blight prediction worked well. The model consists of two parts. The first portion of the model simply estimates the likelihood that late blight will occur during the season, and is not designed to predict when it will occur. The amount of precipitation and the number of "Favorable Hours" during April and May have been shown to be highly correlated to outbreaks of late blight. A "Favorable Hour" is defined as an hour during which temperatures were between 50 and 80 F and the relative humidity (RH) was at least 80%. There were enough favorable hours during this time frame for the model to indicate that late blight was very likely to occur in the Magic Valley and eastern Idaho sometime during the season.

The second part of the model uses similar data to calculate "severity values" based on the number of hours that leaves are wet combined with the average temperature during that time period. When 17 severity values are reached, late blight is predicted within 1 to 2 weeks later. In 2004 the critical level of 17 severity values was reached on July 17 in Aberdeen. Late blight was reported on July 24.

Time will tell whether or not these models are really going to be reliable, but they certainly seemed to work well this season. Information on when and where late blight is occurring is absolutely vital to proper management of the disease and for properly configuring and validating the models. The temptation exists for growers or consultants to withhold information on late blight incidence. While this practice may seem advantageous or necessary to some, it is dangerous. Growers in many areas of eastern Idaho thought they were safe from late blight since the disease had not been confirmed in their area. Late season confirmation of late blight caught many growers by surprise. Subsequent investigation indicated that late blight had been moving towards their production areas, but we had no information to share because people had stopped reporting.

Remember that late blight is a community disease and we need to work together as a community to manage the problem. We were fortunate that late blight was not worse than it was in 2004. Here's a sobering thought: we have had late blight in Idaho in 7 of the last 10 seasons and it reached problem levels in 2 of those seven years. As an industry, we have to take this threat seriously. Thanks to all in the industry who worked with us in providing timely, accurate information.