

Washington Potato Conference

Learning How to Cope with Late Blight, Potato Leaf roll and Other Challenges



Chow time at the potato bar.

MOSSES LAKE, Wash. — Where is the late blight inoculum infecting potatoes in the Columbia Basin coming from?

There are a number of sources, according to Dr. Dennis Johnson, who spoke during the 39th Annual Washington Potato Conference and Trade Show, Feb. 1-3, at Big Bend Community College in Moses Lake, Wash.

A plant pathologist at Washington State University (WSU), Johnson was one of several addressing late blight-related topics during the conference. Other presentations varied from understanding potato leaf roll virus, net necrosis, silver scurf, potato water rots and pink eye to approaches to reducing the number of volunteer potato plants. Because of a mild winter this year, volunteer potatoes are expected to be a serious concern.

Infected Seed Difficult to Identify

Seed can be a major source of late blight inoculum, Johnson told the group, noting that late blight is difficult to

detect inside potato storages, particularly if the seed is being held at 40°F or less. At such temperatures, the symptoms don't show, so infected tubers can "sneak through," he said.

Cull piles as well as volunteer potatoes are other sources, the plant pathologist said. When the weather is dry, cull piles are not a factor in the Columbia Basin. However, when a sudden change of weather occurs and it becomes rainy and wet, things can change rapidly. When that happens it's often too late to take effective action.

Volunteer potatoes have been a definite source of inoculum in some areas, he said. Since they are not routinely sprayed with protective fungicides, inoculum can increase and spread.

Late blight tuber infections are coming from a number of sources, including foliage not protected with fungicides, Johnson said. Such infections are favored by an abundance of irrigation water — near the pivot center, in low areas in the field and wherever there are irregular water patterns.

Tubers closest to the pivot center are a particular source of rot once they are

stored, he said, advising growers that the risks associated with harvesting such potatoes far outweigh any extra tonnage benefit.

Late Blight Transmission Factors

Debra Inglis, another WSU plant pathologist, briefed attendees on factors affecting transmission of late blight from seed piece to sprout. Transmission is a function of the amount of inoculum present, the susceptibility of the cultivars, condition of the seed at planting and other factors, she said.

Older physiological seed is more susceptible to late blight infection, she explained. And cut seed, in particular, must be protected.

Inglis said she found Tops-MZ, Curzate M8 and Mancozeb all work as preventatives, adding, however, that if the infection occurs before the treatment goes on none work well as a curative. Hence, the time interval between inoculation and applying an effective fungicide is very important, she said.

It also is important that seed piece fungicides be used during the seed piece cutting operation, Inglis stressed.