With late blight having occurred at some level in many of the seed potato production regions across the U.S. and Canada last season, the danger posed by late blight is high for all growers in all production areas this year. Even if your production area was free from blight last year, seed-borne late blight infection can bring the disease into areas where the problem did not occur the previous year.

Whether late blight is found and the timing of its appearance will be highly dependent on several factors, including survival of the pathogen over the winter in infected seed and volunteer potatoes, the weather and fungicide use patterns by growers. In areas that had late blight last year, seed-borne late blight simply poses one more possible avenue for the disease to get started.

Cultural practices are the first line of defense against late blight. Firstly, it is important to eliminate sources of inoculum. Cull piles and volunteers are traditionally good places for the disease to get a fresh start in a new season; therefore, it is important to keep a clean operation by destroying all cull and volunteer potatoes. Rock piles that are deposited after planting contain rocks and potato seed pieces and should also be monitored carefully throughout the growing season. Emerging plants should be killed off with an effective herbicide. It is also very important to make sure that you plant only certified seed. Using seed saved from local crops may increase the risk of late blight.

A new and troubling problem that has emerged in the past two years is that some of the late blight strains that infested potato crops originated from tomato transplants. These tomato-infecting strains are new strains of late blight that are virulent on both tomato and potato. Since these new strains have not been around long enough for researchers to have tested them very extensively, important characteristics of the strains such as aggressiveness, generation time, survivability and others have not yet been determined for them. As such, growers in areas where tomatoes are also grown should be extra vigilant.

Secondly, avoid conditions that favor late blight. Weather conditions strongly influence the incidence and severity of the disease. Late blight is a disease that thrives under cool, wet production conditions. Fortunately, many areas have developed forecasting systems for late blight and can provide management recommendations when conditions for disease development have been very favorable. Although weather conditions are beyond our control, field selection and carefully managed irrigation practices can help reduce the extent of periods favorable for disease development.

It is very important to carry out regular scouting of areas on your farm that are likely spots for blight to begin, especially after favorable conditions for disease development have occurred. Areas where late blight is likely to show up first are anywhere that foliage remains wet, such as shaded areas of the field near windbreaks, low spots, middle tower areas of center pivots, and rows where solid set pipes run.

It is also beneficial to control weeds and alternative late blight hosts such as hairy night-shade, which may contribute to disease spread under some conditions. Although weed species are not late blight hosts, they can contribute to conditions that favor disease development by restricting air movement within the canopy. Heavy weed infestations also prevent adequate coverage of potato foliage with fungicides.

Current research indicates that when late blight infestations are found early in small patches, it may be beneficial to disk, burn with a propane burner or spray these patches with a desiccant to remove these local sources of inoculum. For destruction of affected areas within crops, the rule is that 30 rows on each side of the newest lesions at the border of the late blight locus and 100 feet along the row (each side) should be killed. Although this sounds harsh, university trials have shown that the latent period between infection and symptom development is about 7 days. Although symptoms are not visible, plants within this area may already be infected.