Reducing the risk of a pink rot infection this season

Potatoes
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Pink rot disease becomes most apparent during harvest.

By Scott Mathew, Soutions Development Manager - Syngenta

In a recent trip I made down to the processing potato capital of Australia (Tasmania) to discuss a few challenges around disease management and the use of in furrow fungicides.

During my travels a few questions were raised around pink rot management.

What are the conditions suitable for pink rot development?

Pink rot (Phytophthora erythroseptica) survives in the soil by producing oospores which can survive for up to seven years. In the presence of potatoes, the oospores germinate to produce mycelia and sporangia. However if the soil becomes wet, sporangia can germinate directly or release swimming spores called zoospores; these zoospores respond to chemicals released by the potato plant and swim toward potato roots.

Pink rot can infect roots, stolons and underground stems of the plant. Once infected, the pink rot pathogen can grow into the tuber. While the initial infection occurs during the early stages of tuber development, the disease becomes most apparent during harvest—this is sometimes referred to as a latent infection. However later in the season, particularly during prolonged periods of high soil moisture, tubers can also become infected directly through eyes or lenticels.

Pink rot develops rapidly at soil temperatures between 10°C to 30°C; the optimal temperature for infection is 25°C.

What are some of the management strategies I can put in place to reduce the risk of a pink rot infection?

No single control measure will provide effective control of pink rot. The severity of pink rot can be managed using an integrated approach that combines the use of host resistance, cultural and chemical control methods.

Some key pink rot control management strategies include:

- Reduce the amount of inoculum in soil by removing crop debris, and volunteer and culled potatoes from the field.
- Control weed hosts, specifically some nightshade species in non-potato crop years, to help reduce pink rot carry over.
- In irrigated potato production, water management is critical in areas where pink rot is a threat. Overwatering can lead to increased pink rot incidence; this may be especially true late in the season.
- Avoid disease-favourable conditions at harvest; tubers with immature skins are more susceptible to wounding during harvest operations, and wounded tubers are more susceptible to pink rot infection.
- Apply Metalaxyl-M at planting following up with a second application of Metalaxyl-M early in the growing period. Research has shown that this strategy provides effective control of pink rot.

For the best protection against pink rot infections, it is advised to follow a program of applying a RIDOMIL GOLD® 480SL treatment at planting followed by consecutive foliar applications of RIDOMIL GOLD® MZ starting four to six weeks after planting. A second RIDOMIL GOLD MZ application should be made prior to the crop reaching 50% ground cover, particularly as some newer potato varieties have slightly different agronomic characteristics.

Following this program offers potato growers the best protection against pink rot infections.

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