



## POTATO LATE BLIGHT RECOMMENDATIONS FOR 2005

Good management includes sanitation, cultural practices, field monitoring and an effective fungicide spray program.

### Sanitation, Cultural Practices and Field Monitoring

1. Visually inspect seed potatoes within 24 hours of delivery. Cut a sample of tubers and look for the reddish, brown, dry rot characteristic of late blight tuber rot. A buyer has only 24 hours to request a re-inspection after delivery.
2. Test your seed for late blight before planting. Ask for a test certificate indicating freedom of late blight if buying seed.
3. Grade seed potatoes before planting. It is important that seed is graded after it is cut and any late blight tuber rot removed before planting. Infected tubers can be a source of early field infections.
4. Frequently disinfect seed cutting equipment (quaternary ammonium-based products).
5. Treat seed with a recommended seed piece fungicide immediately after cutting (mancozeb-based products).
6. Bury cull piles before crop emergence and no later than June 10, 2005. Infected tubers in cull and rock dump piles are major sources of infections. Buried tubers may germinate and grow. Rogue or treat these plants with a herbicide. Slivers and pieces of potato remaining from cutting operations should also be buried.
7. Volunteer potato plants can be source of infection. If there are volunteer potato plants in a field an effort should be made to remove these plants by roguing or herbicide treatment. In non-seed fields where late blight is found, consider applying a sprout inhibitor to control volunteers the following year.
8. Always report any suspect case of late blight immediately. If late blight is identified, rogues and other workers should wear pants and boots which can be disinfected with a bleach solution (diluted 1:9 with water) between fields or farms. Field equipment should also be washed and disinfected before entering other fields.
9. Construction of a good deep hill will help restrict spores from washing down through the soil and infecting the tubers.
10. Monitor your crop. Scout fields where moisture persists after rains or dews such as low areas and along treed edges. Have a good look at stems and leaves for symptoms of late blight. Stem infections do not die during dry periods and will easily re-activate in humid weather.
11. When late blight is first identified, remove and destroy infected plants. When infected plants are rogued they should be placed in plastic bags, then taken out of the field. Top kill or rogue an area twice the size of the area with infected plants.
12. Rolling or rotobating a crop before top killing exposes the soil and lower canopy to drying. Rolling also seals cracks in the soil and may reduce tuber infections.
13. Top kill at least 2 weeks prior to harvest to allow time for infected tubers to rot and to promote tuber

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maturity and thicker skins at harvest. Vines should be completely dead at harvest.

14. Spores survive longer in wet soils. Harvest when the soil surface is dry or windrow the potatoes and allow the surface of tubers to dry before harvest.
15. Dig sprayer rows and low areas last and store these potatoes where they can be easily moved in case of problems.
16. Wet or bruised tubers are more likely to get infected with late blight. Skinning, cuts, and bruises provide direct entry points for late blight, as well as other diseases.
17. Grade potatoes before they are put into storage.
18. If late blight is seen on plants, there will likely be tuber infections. When stored, these should be ventilated with a high volume of air at low humidity until the potatoes are dry. This may lead to higher shrinkage than normal, but losses due to storage rots will be reduced.
19. Potatoes with 5% or more tuber infections are very difficult to store. These potatoes should be stored in the front of the storage or in separate bins so they can be easily removed.

### **Fungicide Spray Program**

A preventive spray program is recommended for 2005. Systemic fungicides are used in a preventive program as part of an integrated pest management (IPM) program to control resistance. Effective control by fungicides requires good coverage of the leaves, proper rates of application and proper timing of applications.

**In a preventive program the first 3 sprays are the most important sprays of the entire season**

1. Begin spraying at 80% emergence using a fungicide label at label rate.
2. Let the spray booms fill and run for a minute at the edge of the field before starting to spray the crop.
3. Start spraying in the opposite direction each time a field is sprayed to provide better overall coverage of a crop. This is especially true for a variety such as Shepody that has cupped leaves and it is difficult to get even coverage over the whole leaf.
4. Application volume should be at least 233 l/ha (52 gal/ha or 21 gal/acre) applied at 690 kPa (100 psi). Select a nozzle that produces a droplet spectrum between medium and fine.
5. Consider using the shortest spray interval, especially during active growth of the plants and if 20 - 25 mm or more of rain occurs in 24 hours. The spray intervals during the season should be 5 - 7 days depending on the late blight forecast.
6. The application of fungicides should continue after top killing until the plants are completely dead.
7. Copper-based fungicides can be applied with the top killer or after top killing. Copper on the soil will kill spores that wash off the leaves and stems onto the ground. These spores can cause tuber rot late in the season.
8. If an area of a field is to be top killed because of late blight infections, spray the whole field with a fungicide mixture containing a product with sporicidal action. Spray the infected area last and exit the field. Then top kill the infected area. Spray the infected area again 2-3 days after topkilling.

**For further information contact the Potato Development Centre at (506) 392-5199  
or toll free at 1-866-778-3762**