

# Fungicide Selection for Late Blight Control

A late blight control program must be part of every potato growers crop management plan. All aspects of disease management must be considered including:

- Certified blight-free seed
- Cull potato destruction
- Sprayer application equipment
- Timing of pesticide application
- Field scouting
- Weather conditions
- Choice of fungicides to use

Most fungicides will only act as a protectant and they act on contact. Bravo (chlorothalonil) and Dithane (mancozeb) are contact fungicides and you must start applying them early. Contact fungicides will be the backbone of any late blight spray program because they are cost effective. Even under severe late blight conditions the use of properly applied contact fungicides will give excellent late blight protection.

A potato grower should have the sprayer capacity to spray his entire crop once every 5 days, plan for a 7 day spray interval and be prepared to move down to a 5 day schedule if there is rapid plant growth. You can use a 10 day period when there is dry weather. More frequent applications are required if the plants are rapidly growing.

More expensive "mobile" fungicides should be considered under the following crop growing conditions:

- Early applications, where they may limit the potential of potato late blight arising from infected seed;
- As the crop enters the rapid phase of growth; and,
- When unsettled weather, conducive to blight, increases the difficulty in maintaining an application schedule.

Acrobat MZ (dimethomorph, mancozeb) and Tattoo C (propamocarb HCL, chlorothalonil) are mobile fungicides that move through the plant. They are applied when there is rapid plant growth which allows the fungicide to move.

As previously mentioned, contact fungicides require shorter 5-10 day spray intervals whereas mobile fungicides will require spray intervals of 10 to 14 days.

Remember: Use the maximum rates as outlined on the label and read the fungicide limitations

You should start your spray program when the potato plants are six (6) inches in height. Early application is a must. Keep a fungicide residue on the plant and when the tops are well covered with a fungicide, moisture will move it down into the leaves where it will be most

effective. Spray early in the morning, the extra moisture will help spread contact fungicides and it will run down the stems and give more control.

If there is some sign of blight and the potatoes are not mature, use Dithane (mancozeb) MZ or you can also use Tattoo C or Acrobat MZ. Acrobat used later in the season reduces late blight spores. Use just before topkilling if there is blight in the crop. Use Ridomil (metalaxyl) MZ only in combination with other fungicides to avoid resistance. Rotate your fungicides or tank mix.

When the potato canopy becomes heavy, increase water volume and sprayer pressure to ensure good penetration into lower parts of the canopy. Use hollow cone tip nozzles and apply 20 gallons of water per acre and increase to 35-40 gallons per acre with heavier foliage. Blight control fungicides can be applied successfully with a sprayer pressure of 80 psi or higher.

It is **very important to topkill** to prevent blight from moving down from the stalks and leaves into the tubers. Use Reglone (diquatdibromide) herbicide only for top killing. Don't use Gramaxone as it is **not** registered for this use and can cause darkening of the stem end of the tuber. Further, do not use mobile fungicides such as Tattoo C and Acrobat MZ after topkilling as they are not effective at this stage.

You should continue with an application of Bravo or Dithane after top killing because some of the leaves and stems which might contain blight spores will not have died down. Organic growers can use Copper Sulfate (blue stone) or Kocide (copper hydroxide). These chemicals should only be used at top killing or shortly after top killing. It should be noted that copper-based fungicides are very corrosive on sprayers and nozzles.

Some growers attach a barrel or a tank that will hold at least 50 gallons to the front of the tractor or attach it to the tool bar and apply a fungicide while hilling. This will reduce the amount of fungicide used and allow for early fungicide coverage. Use flat fan nozzles and an electric pump that can be operated from the tractor.

If you need more information on potato blight control, please contact your Crop Specialist, area Agricultural Office or the Crop Insurance Representative servicing your area.