BRITISH POTATO COUNCIL

growers' advice

Fight against Blight

ISSUE 10: HAULM DESTRUCTION

Desiccants minimise the risk of further development of foliage blight and tuber blight by killing the haulm and therefore limiting the development of the pathogen.

Some desiccant treatments have a limited direct effect on the blight fungus. For example, sulphuric acid and heat treatments will kill the blight spores that they come into contact with. However, some treatments may not kill established blight lesions on the stems, especially where penetration of the crop is limited, and additional blight sprays will be required.

Principles

- The blight fungus requires green living potato tissue in order to develop and produce spores.
- The haulm needs to be protected from blight until there is no green haulm left. The fungicide programme required after the desiccant is applied will depend on how quickly the desiccant acts.
- Ensure that the desiccant programme is sufficient to prevent re-growth of the haulm after treatment.
- Check crops for re-growth.
- Where re-growth occurs it will be necessary to apply more desiccant. Further fungicide treatment may be required if it is known that the application of acid will be delayed.
- Blighted re-growth greatly increases the risk of tuber infection.
- Re-growth is most likely where the crop is being desiccated early or too much fertiliser was applied.
- The generally recommended safe harvest interval to minimise the risk of tuber infection is a minimum of 14 days **after the haulm is completely dead**.
- Stem tissue will be slower to desiccate than leaves. Therefore stems remain a source of inoculum for tuber infection for longer.

First published August 2003, republished 2004, 2005 & 2007

Desiccants

Ensure that the volume of water used to apply the desiccant or acid is appropriate to penetrate into the base of the canopy. This is particularly important if only one application of desiccant is being made to the crop.

Sulphuric acid

- Gives rapid desiccation and therefore limits the opportunity for the production of sporangia and zoospores on desiccated haulm.
- Will kill the *Phytophthora infestans* spores that it comes into contact with.
- Blight fungicide treatment is not required after sulphuric acid is applied. The exception would be if there was substantial regrowth.

Diquat, carfentrazone-ethyl and glufosinate-ammonium

- The rate of haulm desiccation is slower with these products than with sulphuric acid.
- All of these desiccants require fungicide protection to continue after application.
- There are certain application restrictions on some of these products.

Application

- Any measures that improve coverage of the haulm with desiccant will increase the rate of desiccation and therefore reduce the risk of further development of blight.
- The following measures can speed up the rate of haulm desiccation.
    - Sequences of desiccation treatments allow more desiccant to be targeted onto the stem after the initial application removes the top layers of leaves.
    - Flailing, if done well, allows greater deposition of a follow-up desiccant onto the stems.
    - Alternative types of application technology can improve the distribution of desiccant within the crop canopy; i.e. angled nozzles, the Micron Dropspray System and the SprayMax system.

Heat treatment

Defoliation using the Drakedon Greenburner and Green Dragon will kill any of the blight spores that are exposed to the heat and kill infected leaves. However, this treatment may not kill stem lesions because sufficient heat may not penetrate into the stem.

Flailing

If flailing is used in combination with a desiccant then ensure that the pulverised haulm is deposited in the bottom of the furrow. If it is left on top of the ridge then it will reduce the amount of desiccant that reaches the remaining stem bases.

USE PESTICIDES SAFELY, ALWAYS READ THE LABEL

For more information on specific products, please consult your local BASIS registered advisor.

Always consult your buyer protocols before using any pesticides.