



**Advice Sheet: Potato and tomato blight *Phytophthora infestans***

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**Overview**

*Phytophthora infestans*, more commonly known as potato blight or late potato blight, is a serious disease of both potatoes and tomatoes because it will destroy an entire crop. Attacks are always worse in wet summers but are much less of a problem in drier summers. It will attack greenhouse tomatoes as well as tomatoes that are grown outdoors. It is also sometimes called late blight because the consequences of a blight attack are always seen at the end of the growing summer; just as the crop is ready for harvesting and putting into storage for using later.

(There is an early potato and tomato blight *Alternaria solani* but this is a misleading description because it also appears late in the growing season in the UK. Fortunately it isn't as serious problem to UK potato growers. It is a weak disease and survives in the soil on plant debris but by maintaining adequate soil fertility levels to produce healthy plants, along with good hygiene and practising crop rotations will help to keep it under control. If a serious outbreak of early blight does occur it can be controlled by regular spraying with an approved fungicide. It is more of a problem in North America from where it gets its name of 'early potato and tomato blight'.)

**Symptoms**

The first signs of a blight attack are dark brown blotches that appear near the tips of the leaves. Under damp conditions a white mould will grow on the underside of the blotches gradually increasing in size and the attack may then spread all over the leaves and down the stems of the plants. A humid atmosphere provides the optimum conditions for the rapid development and spread of a blight attack. It can cause a dramatic collapse of the haulm and reduce it to a rotting mess with alarming speed.

Potato blight shouldn't be confused with other brown or black marks that may appear on the edges or tips of the leaves of plants. These are likely to be the result of physical damage caused to the haulms from working between the rows of plants. These can be clearly identified by the appearance of a small greyish mould and don't pose a serious threat to the developing crop. No action is required to control this problem.

**Background**

Potato blight *Phytophthora infestans*, survives on any diseased plant debris left over from a previous crop and it can persist for many seasons. It is essential that every last remnant of the current crop is collected and disposed of. The highest levels of plant and soil hygiene must be observed to minimise the risk of an attack to a following crop.

Potato blight, *Phytophthora infestans* spores are only produced and spread under warm, damp weather conditions. The heavy dews, fogs and mists of late summer provide the ideal breeding

ground for the disease. The risk is greatest when the temperature doesn't fall below 50F/10C for two days and humidity levels are high over a period of 48 hours.

The National Society of Allotment Gardeners recommends the following good practices are followed to minimise the risk of an outbreak of (Late) potato blight, *Phytophthora infestans*:

**ALWAYS** purchase Scottish certified, disease free seed potato tubers from Government registered growers. Open the packaging and inspect each tuber in the unlikely event that any are damaged destroy them immediately.

**NEVER** save your own seed potatoes or accept "gifts" from other gardeners. They will not be safe to grow.

**AVOID** using overhead irrigation. It can wash spores into the soil and earth up regularly to protect the vulnerable developing tubers from infection.

**INSPECT** the foliage regularly from late June onwards looking for signs of blight because it can literally appear overnight. At the first signs of an attack cut down the damaged haulms and destroy them this will help to prevent the spores from being washed into the soil and damaging the tubers This action will slow down the development of the potato tubers and although they can be left in the soil for several weeks it is safer to lift and use them as soon as possible.

An **approved preventative** spray can be applied before an attack is detected and a regular spraying programme must be continued right up until the potatoes are ready to be lifted. The haulms can be cut down a week or two before the lifting date without affecting the weight of the final crop.

**ALWAYS** use crop rotations and grow the following potato crop on a new, clean site. Don't return a potato crop to an area for at least three years. If you do experience a bad outbreak and can't rotate the crop then consider not growing potatoes for at least one season to break the cycle.

Always dig over the potato plot after a crop has been lifted to remove any small, damaged or tubers that are left in the soil. They will always carry the risk of being a source of infection.

Only grow early and second early potato crops because these can be lifted and the site cleared before the end of September whilst the soil is usually still dry and warm. The main threat of a potato blight attack is from maincrop potatoes that are left in the soil until October when the potential risk of worsening weather can delay lifting the crop. There is also the added risk of diseased potato tubers being put into store.

### **How to dispose of infected material**

The traditional advice used to be to destroy the infected haulms and potatoes on the bonfire but these days bonfires are banned by some authorities. The most effective way of disposing of the diseased material is by using the "green waste" facilities provided by the local authorities. This way any potential risk posed to a developing crop will be separated by distance. The Municipal Green Waste systems used in this country are extremely efficient and they destroy all damaging garden pest and diseases by the generation of incredibly high temperatures within the heap. It is super composting at its very best. The resulting material is effective as a soil conditioner or mulch in the garden. Alternatively you can bin or bury (in a trench at least 45cm deep) the material too.

## **Blight resistant varieties as sold by Kings Seeds 2012/13**

### **Potatoes**

- Romano
- Sante
- Winston
- Cara
- Blue Belle
- Lady Balfour
- Kestrel
- Sante
- Sarpo Mira
- Valour

### **Tomatoes**

- Fandango F1
- Cherrola F1 (moderate resistance)

### **Useful website**

**Blight Watch** - The Blightwatch service now covers the whole of the UK down to individual postcode level. The service operates in conjunction with the Potato Councils - Fight Against Blight! - service and delivers daily email and optional SMS alerts if blight risks are identified in your selected area(s). [www.blightwatch.co.uk](http://www.blightwatch.co.uk)