The very mention of the word can send some into blind panic. So what is it and how is it prevented?

Background

It is of course perennially associated with the great famine in Ireland from 1846-51. It is believed that it was due to the almost total use of one variety called Lumper (also Lumpers). Apparently this variety came to Ireland from Scotland in 1808, rapidly replacing “Irish Apple” because of its heavier yield. Surprisingly, Lumpers’ can still be found in collections.
Normally blight is single sex; with nothing to mate with it cannot survive in the soil, only in infected tubers either left in the ground or replanted. A second strain first appeared in the middle 1970’s but is now present in the UK. This strain differs in that when this mates with the original strain the eggs (known as oospores) remain in the soil for many years hatching if potatoes or tomatoes are planted nearby.

Cause

Blight is caused by a fungus, the spores of which are wind borne and can travel great distances. Spores landing on leaves are not actually any harm, it is when the weather is warm and humid (muggy) continuously for two twenty four hour periods each with a minimum temperature of 50’F (10’C) and with a minimum of 11 hours of relative humidity of 89%. The spores germinate, enter the leaves and begin to eat the plant from the inside out. The disease usually strikes in mid to late summer; as a rule, providing early potatoes are lifted by early July they are not likely to be infected. Brown patches appear on the edges of leaves. Note it is on the edges not centre of leaves. Other markings often mistaken for blight are usually a deficiency of some kind. Similarly the bottom leaves of potatoes will always turn yellow and drop off, with nothing to do with blight. White fluffy mould very quickly develops. This produces millions of spores to affect nearby plants. Stems develop brown areas. The Haulm will quickly collapse and rot on the soil cutting off further growth to the tubers. That allows rain to wash spores into the ground, where the tubers quickly become infected. Infected tubers show depressions on their surface and if cut open display patches of marbled brown flesh in severe cases accompanied by a slimy smelling rot.

PREVENTION/TREATMENT

The RHS regularly gives out advice when blight has been reported. However for most people, even if they should hear of such advice, it is usually too late.

- To be sure of having some chance of avoiding blight, some sources recommend spraying from the beginning of June.
- Earthing up deeply reduces the chances of any spores entering the tubers.
- Spray the leaves with Bordeaux mixture (organic), a repeat spraying after ten days will be required if conditions persist. Mancozeb, Bio Dithane (945) or copper oxychloride are also effective.
- It is very important to dampen, not soak the leaves, fungicide dripping onto the soil is harmful to essential soil bacteria. It is also important to dampen both top and underneath of leaves, as that is where the mould develops.

- Practice crop rotation. At the very least use a three year plan. Do not grow any member of the Solanaceous family (potatoes, tomatoes, peppers, aubergine) in the same place in consecutive years
- Grow varieties with resistance, although that is not totally reliable because the fungus can mutate, and what was once immune could become susceptible to a new strain of blight. Varieties that currently show resistance are: Cara, Kondor, Estima, Pentland Crown, Maris Peer, Romano, Sante, Record, Valor. Recently two new varieties developed in Hungary, Sarpo Mira and Sarpo Axona have shown excellent resistance and are marketed as the most non-susceptible. These varieties are only available from Thompson and Morgan.
- If haulms show any sign of infection, remove them at soil level. This will of course stop any further development of the tubers. It is important that if haulms are infected that the following precautions are taken when cutting down:
- Place something on the ground beneath the haulms to stop spores entering the soil.
- Although infected haulms can be placed in the compost bin, it requires a temperature of 120F (50C) to kill the spores which do not survive on the foliage only in the tubers, but in practice few compost bins on the allotment will be likely to reach this temperature: therefore burn, or remove from the site.
- Wait a fortnight before lifting and carefully inspecting the tubers.
- Do not store infected tubers, burn them

This material is a compilation of various articles, studies and Reference works.

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Revised November 2005