

HAVE YOU GOT WHITE BLISTER?

Background

White blister, caused by the fungal pathogen *Albugo candida*, was recently discovered on a few heads of broccoli by an observant Canterbury grower.

This disease has been known in New Zealand for many years but very rarely affecting vegetable crops. White blister has recently caused severe problems in broccoli and cauliflower crops in Australia, possibly because a new strain of *A. candida* has developed.

It is very important that you immediately report any new outbreaks on brassicas (especially broccoli, cauliflower, cabbage and Brussels sprouts). Early warning will assist in determining the disease distribution in New Zealand. It will also provide an opportunity for implementing timely and appropriate control strategies.



Infections on leaves of growing and mature plants are usually visible as yellow to brown discolourations on upper leaf surfaces, associated with round to oval white blister lesions on the undersides of leaves

What to look for

Symptoms of *A. candida* infection may occur on all above ground parts of infected plants (leaves, petioles, stems and flowers) at every growth stage.



Young seedlings may have distorted stems



The blisters are almost paper white with smooth surfaces, but burst when mature to release chalky white masses of spores.

This information has been prepared with assistance from; Dr Elizabeth Minchinton, Knoxfield Centre, Primary Industries Research Victoria, Australia, and Dr Richard Falloon, New Zealand Institute for Crop & Food Research Ltd, Lincoln.

photo: courtesy of Elizabeth Minchinton

photo: courtesy of Elizabeth Minchinton

photo: courtesy of Elizabeth Minchinton

THE THREAT

A new strain of *Albugo candida* could severely impact on brassica crop production

February 2005



If you find what you believe is white blister please submit a sample or:
Contact Biosecurity New Zealand on: **0800 80 99 66**

Vegfed





Severely infected broccoli inflorescences may have distorted surrounding leaves and can be discoloured

photo: courtesy of Elizabeth Minchinton



Individual florets infected inflorescences can have white blister symptoms

photo: Robert Lamberts



How does it spread?

The disease can be spread by planting contaminated seed and by insect, wind and water-splash dispersal of spores from affected plants. Oospores (overwintering structures) of *A. candida* can also survive in the soil for many years and can therefore cause recurring white blister.



How is it controlled?

- Use seed from a reputable source.
- Remove crop debris (capable of harbouring oospores) and rotate with non-brassica crops.
- Damp conditions enhance spore germination so appropriate irrigation (short periods, early in the day), wide row spacing and orientation towards prevailing winds assist rapid drying of leaves.
- Crops can be protected with correct selection of fungicides although there are none currently registered specifically for white blister control in New Zealand. Growers should be aware of regulations for off-label use of pesticides in brassicas.
- Maintaining good crop nutrition (particularly adequate potassium and phosphorus) can reduce susceptibility of plants to the disease.

How can you help?

If what you see looks similar to the above pictures please collect a sample into a double plastic bag, seal it in a non-breakable container and send to:

If in the South Island:

Freepost 120201
White Blister Survey
MAF Laboratory
PO Box 24
Lincoln, Canterbury 8152

If in the North Island:

Freepost 120201
White Blister Survey
MAF Laboratory
PO Box 2095
Auckland 1015

Please include your contact details, date and location of collection, and the type of produce it was found on.

THE THREAT

A new strain of *Albugo candida* could severely impact on brassica crop production

February 2005



If you find what you believe is white blister please submit a sample or:

Contact Biosecurity New Zealand on: **0800 80 99 66**

Vegfed

