

# Management of White Blister (*Albugo candida*) on Broccoli

Elizabeth Minchinton and Narelle Kita, IHD - Knoxfield, DNRE, PB 15, Ferntree Gully Business Centre, VIC 3176



White blister on leaves



White blister gall on stem of  
broccoli seedling



White blister on broccoli floret

## Symptoms

- Yellow to brown spots form on the upper leaf surface and white, round to oval blisters develop on the matching under leaf surface.
- The blisters consist of masses of white dust-like spores.
- The fungus can cause swellings on roots and stems, and distortions of flowers and leaves.

## Host range

- Confined to crucifers.

## Conditions for Infection

- Free water (dew, fog or rain) on leaves and stems.
- Spores germinate at temperatures of 1°C - 20°C.
- The best conditions for spores to infect plants are 3 hours of leaf wetness at 20°C.
- The disease develops at temperatures ranging from 10°C - 25°C.
- Blisters take 6 to 10 days to form after infection.

## Source of the disease

- Diseased plants or crops.
- Volunteer crucifers.
- Wild crucifers and crucifer weeds.
- Debris.
- Seed.

## Spread

- Wind, rain or insects disperse aerial spores.
- Rain splash of spores from soil.

## Control Strategies

***Control white blister with a combination of management practices.***

### Controlled watering

Spores need water to germinate and wet leaf surfaces to infect plants. A short, heavy watering is preferable to a long, light watering. If possible avoid night irrigation.

### Ventilation

Maintain good air-movement in the environment to dry leaves off quickly and reduce infection. This may mean running rows in the direction of the wind and increasing plant spacing.

### Nutrition

Maintain a balanced program of nutrition. Applications of phosphorous (P) and potassium (K) fertilisers have been shown to reduce the susceptibility of radish to white blister.

### Hygiene

Remove sources of spores, such as volunteer radish, crucifer weeds and if possible crop debris.

### Fungicides

No fungicides are currently registered.

# Life cycle of white blister on broccoli

