

## **Remember TWO key management strategies in the fight against White Blister**

**Irrigation scheduling** and growing **resistant varieties** are two ways of combating the destructive disease white blister.

After a year's research, Plant Pathologist Dr Elizabeth Minchinton of the Victorian Department of Primary Industries (DPI) and her team found that the incidence of white blister on broccoli heads was, on average, 50% less in crops watered by overhead irrigation at dawn (4am) than in crops watered in the evening (8pm). An economic analysis showed that irrigating at dawn improved farm profit by up to 5%.

**Growing a broccoli variety tolerant to white blister reduced the disease on heads by 96% and increased profits by 22%.**

Dr Minchinton said that **watering at dawn** coincides with the morning dew period. That means that leaves are only wet once in the day instead of twice with the afternoon or evening watering (morning dew followed by overhead irrigation later in day). Leaves have several hours to dry during the warmer day temperatures with morning irrigation, whereas with evening irrigation leaves may stay wet for longer.

The leaf surface needs to be wet for a period of three hours for the organism that causes white blister to infect and cause disease. So the shorter the periods of leaf wetness, the lower the risk of infection. Irrigation scheduling is most critical during spring and autumn when climatic conditions are ideal for the disease" said Dr Minchinton.

The benefits of timing irrigation scheduling as a tool to reduce white blister in the crops, applied equally to varieties which are both susceptible and currently tolerance to it.

Unfortunately broccoli varieties tolerant to white blister are not available all year.

She added that young plant tissues were very susceptible to white blister, for example side shoots and buttons of broccoli. Growers should avoid growing varieties with prolific side shoots and protect young tissues with a registered fungicide.

The trial was located next to the Werribee Expo site with seedlings supplied courtesy of Boomaroo Nursery and an industry field day was held in November 2009.

