TIME TO PROTECT CUCURBITS AS SEASON WARMS

24 August 2011

WITH an unusually cool start to this year's main northern cucurbit season – which runs from early March through to October/November – crop growth has been slow and disease pressure not as high as last year.

However growers are busy gearing up to protect their crops as conditions warm, including protection against the fungal disease powdery mildew.

A&B Rural field officer Justin Martin, Ayr, said Burdekin growers were inspecting their crops and starting to apply protectant fungicides.

"The aim is to keep the crop as clean as possible, to hold powdery mildew at bay before it really sets in with the warmer temperatures of August/September.

"Several growers are trying the new protectant fungicide Vivando for the first time – especially those growers who have had problems with powdery mildew resistance to Amistar. Their aim is to avoid starting their spray program with a fungicide from the same fungicide group (Group 11 – formerly Group K), which has been displaying some level of resistance."

Vivando is based on metrafenone - belonging to the U8 group of fungicides - and is the first product on the market from this class of chemistry.

Apart from adding a new active ingredient to growers' powdery mildew rotational spray program, Vivando's long-lasting activity (up to 14 days after application) allows for longer spray intervals; it is rainfast within an hour of spraying so there is no need to reapply after rain; and its vapour activity helps to extend the protectant coverage into the crop.

Mr Martin said growers needed to be mindful that good protection only comes from good plant coverage with a protectant fungicide.

"Growers may try to reduce the spray volume – to get over more area more quickly, and to reduce the number of refilling stops. That may be OK when the plants are smaller, but as crop size increases the result may be poor disease control and a wasted application.

"If you want any fungicide to work and do a good job, you need to put on sufficient volume to the point of runoff, and have the sprayer set up for even coverage throughout the crop canopy. This is particularly important from here on, as crop growth increases with the warming weather. Care should be taken to achieve adequate spray coverage of the older leaves in the lower part of the canopy – as these are the most susceptible to powdery mildew."

Fungicides were trialed for their effectiveness against powdery mildew in a commercial zucchini crop at Sylvan in Victoria's Yarra Ranges last summer.

Untreated zucchini plants in the foreground, showing high levels of powdery mildew infection in February 2011 – part of the Victorian fungicide trial.

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Most Recent Trials

Earlier this year, in a trial in a commercial zucchini crop in Victoria's Yarra Ranges, Vivando proved an effective protectant fungicide for controlling powdery mildew, providing equivalent or better control of powdery mildew on leaves and stems compared with the industry standard Bayfidan (Group 3 – formerly Group C).

Applying Vivando in two consecutive sprays appeared more effective than as every alternate spray.

Application Advice

In a powdery mildew spray program rotating different fungicide groups, Crop Care advises cucurbit growers to only use Vivando as a protectant spray, applying two consecutive sprays 7 to 10 days apart, before powdery mildew is evident on the undersides of older leaves.

Growers who have experienced some resistance to other fungicide groups are advised to begin their spray program with Vivando, when conditions begin to favour powdery mildew.

Preserving the new fungicide's usefulness

A second block of two Vivando sprays can be applied, if required – provided this second block of sprays is preceded and followed by at least two applications of fungicides from a different fungicide group (such as Collis – Groups 7 and 11), for resistance management.

To preserve the usefulness of this new chemistry, Vivando should only be used as a protectant fungicide, and should not be used on cucurbit crops already showing powdery mildew symptoms.

No more than four applications of Vivando should be applied per crop, and it should contribute only one third of the total powdery mildew spray program.

The addition of Du Wett – a low-volume-application spreader – will assist Vivando performance at all spray volumes, but is especially recommended with reduced spray volumes.

BACKGROUND INFORMATION

Powdery mildew is a serious economic disease in Australia's cucurbit crops, which can result in substantial reduction in fruit yield and quality. Infection commonly occurs when the plant experiences some kind of stress – such as at flowering or fruiting; the disease develops quickly once infection has occurred.

Conditions favouring powdery mildew include dense shady canopies and/or overcast weather; high humidity or light dews; temperatures between 20 to 27°C; and vigorous new plant growth.

Applying fungicide treatments in the Victorian trial. The trial included Vivando, a fungicide from a totally new chemical group.

Healthy zucchini flowers and fruit protected from powdery mildew by Vivando, applied as a protectant leading up to and during the critical fruiting stage.

For More Information:

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