

Vivando – A Novel Approach to Powdery Mildew

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AUSTRALIAN cucurbit growers have an important new tool to include in their 2011 powdery mildew spray programs.

Crop Care Australasia has just received registration of a new protectant fungicide Vivando[®], following on the heels of last season's introduction of Collis[®] – which added new vigour to powdery mildew control and resistance management in cucurbit crops.

Crop Care horticulture national business manager Kerrie Mackay said the new fungicides highlighted the company's problem-solving approach, working with rural industries to find new solutions to major and emerging problems.

"Powdery mildew is a widespread and serious disease of cucurbits – one of Australia's major horticulture cropping categories – including melons, cucumbers, zucchinis, squash and pumpkins. In all Australian regions, growers depend on a rotational spray program to prevent or reduce infection, and they face major disease resistance to current fungicide groups.

"Vivando is based on a new active ingredient, metrafenone, which has not been used before in Australia. The first fungicide to be commercialised from this novel class of chemistry, Vivando stocks will be available in April.

"It has excellent, long-lasting activity (up to 14 days after application) to maximize spray intervals; it is rainfast within an hour, so there is no need to reapply Vivando after rain; vapour activity extends the area of crop protected by the spray application; and the water-based liquid formulation is easy to apply."

Ms Kerrie Mackay said last year's introduction, Collis, had also taken a new approach to powdery mildew control, combining two active ingredients (boscalid and kresoxim methyl) from different chemical groups (Groups 7 and 11), to help delay the onset of resistant disease strains.

Excellent control in Australian field trials

Vivando and Collis have been tested separately and together from 2003 to 2010 on a range of crops in field trials, in the important cucurbit-growing regions of Kununurra, WA; the Burdekin region of north Queensland; and in Victoria.

Used as protectant fungicides, the products provided excellent control of powdery mildew.

Application advice

Crop Care advises the application of two consecutive Vivando sprays 7-10 days apart as a cucurbit crop protectant, before disease is evident on the underside of older leaves.

A second block of two Vivando sprays may be applied, but only after at least two applications of a different fungicide group – such as Collis.

Care should be taken to achieve adequate spray coverage of the undersides of older leaves that are lower in the plant canopy, as these are the most susceptible to powdery mildew.

Crop Care Australasia Pty Ltd

ABN: 53 061 362 347

Portal North – Unit 15/16 Metroplex Avenue Murarrie QLD 4172

PO Box 84 Morningside QLD 4170

Phone: 07 3909 2000 Fax: 07 3909 2010 www.cropcare.com.au



Crop Care/Nufarm R&D projects coordinator Doug Wilson advises growers with a history of using strobilurin fungicides to begin their spray programs with Vivando, when conditions begin to favour powdery mildew infection.

“Products such as sulphur can be used earlier in the season before disease pressure increases.

“The organosilicon surfactant Du-Wett will assist the performance of both Vivando and Colliss, especially when low spray volumes are used.”

Both products should only be applied by ground-rig and not by aircraft.

Protecting the new chemistry

Mr Wilson said Vivando and Colliss showed excellent activity against powdery mildew, but growers needed to balance this against the high risk of powdery mildew developing resistance to fungicides.

He emphasised that to maintain effectiveness for future seasons - and to avoid resistance to these powerful new products - both Vivando and Colliss should be used as protectant fungicides, and not used on cucurbit crops already showing powdery mildew symptoms.

“Both products should be used in a spray program involving other fungicides from different chemical groups.

“Vivando can be used before and after Colliss to provide a program of six sprays – two of Colliss and four of Vivando – over the period leading up to and during the critical fruiting stages.

“It is important not to apply more than four applications of Vivando per crop, and to restrict Vivando to one-third of the total powdery mildew spray program.”

NOTE: Vivando is also registered for the control of powdery mildew in grapevines. Extensive field trials have shown that Vivando provides excellent control of powdery mildew in grapevines, which tends to occur in hot, drier weather in late spring/early summer, and is at its worst around flowering. Control at this crop stage is critical.

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For More Information:



Kerrie Mackay

National Horticulture and suSCon Business Manager
Crop Care Australia Pty Ltd
Ph: 07 3909 2008
Mob: 0413 458 069
Email: kerrie.mackay@cropcare.com.au



Doug Wilson

R&D Projects Coordinator
Nufarm Australia Limited
Ph: 03 9282 1427
Mob: 0427 806 386
Email: doug.wilson@au.nufarm.com



Healthy zucchini crop at Ayr Research Station, north Queensland in 2010, protected with two applications of Vivando and two applications of Colliss.

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