



## Technical Notes 2010 – Powdery Mildew

### For Non-Residual Powdery Mildew Control with Sulphur

#### Protector<sup>hmi</sup> provides:

- **High efficacy** against powdery mildew when combined with low to medium rates of sulphur – in both high and low water rates when used in a program (refer to tables).
- Very useful **adjuvant activity** at low rates (graph shows maximum improved spread of water (3x) achieved at 0.5% solution).
- **Another mode of action** (the combination is more effective than each separately).
- **A Cost effective solution** – similar costs as a sulphur and DMI program.
- **Residue free** (MRL exempt) powdery mildew control.
- **Genuinely safe** to use and environmentally benign – both products Biogro registered.

#### Other benefits from the use of Protector<sup>hmi</sup>

- **Improved activity** against erinose mite.
- **A potential reduction in botrytis levels** (1998 HortResearch study shows 0.5% Protector<sup>hmi</sup> produces approximately 60% of the efficacy of 2% Protector<sup>hmi</sup> against botrytis in a program).
- **NZ made** - field tested and used in different parts of New Zealand.

Date of Application	Low water rate	High water rate	Spray interval (days)
26 Oct 07	150 l/ha	200 l/ha	
13 Nov 07	150 l/ha	300 l/ha	18
23 Nov 07	200 l/ha	400 l/ha	10
11 Dec 07	300 l/ha	600 l/ha	18
3 Jan 08	300 l/ha	600 l/ha	23

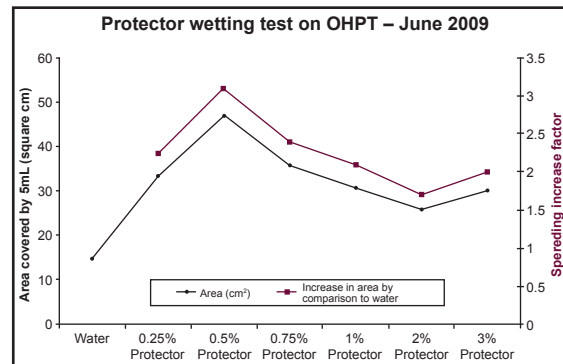
#### 2007/08 Powdery Mildew Trial

The charts summarise the protocols and the results of the 2007/08 trial in Hawkes Bay.

The variety of grape used was Verdelho, which is highly susceptible to powdery mildew. The block is 2.4ha, planted in 2 metre rows. A Sylvan G2 applied treatments.

Treatment		Number of bunches affected by Powdery Mildew Sample size = 400 bunches*		
		Assessment dates		
		27 Dec 07	8 Jan 08	23 Jan 08
Low water With 0.5% Protector <sup>hmi</sup>	2kg/ha S	0	1	8
	3kg/ha S	0	0	0
	4kg/ha S	0	0	1
High water With 0.5% Protector <sup>hmi</sup>	1.5kg/ha S	0	0	1
	2kg/ha S	0	0	0
	3kg/ha S	0	0	0

Note \* - SWNZ methodology - 20 random bunches in 20 bays



5079  
(adjuvant use only)

www.henrymanufacturing.co.nz provides trial reports and data for viewing and downloads on powdery mildew, botrytis, sour rots and other diseases - email through website or [chrishenry@actrix.co.nz](mailto:chrishenry@actrix.co.nz) for personal assistance.

Protector<sup>hmi</sup> is available through major distributors

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better for our reputation.



## Technical Notes 2010 – Botrytis

### For 'Low Cost' Non-Residual Botrytis Control

#### Demonstrated Efficacy against Botrytis

Seven consecutive HortResearch field studies compared full season Protector<sup>hmi</sup> and standard fungicide programmes against bunch botrytis, assessed at harvest.

In 6 out of the 7 years, the efficacy achieved by Protector<sup>hmi</sup> was statistically equivalent to standard programs.

Treatment	1996 -'97	1997 -'98	1998 -'99	1999 -'00	2000 -'01	2001 -'02	2002 -'03
Nil botryticides	27	13	6	5	32	4	9
Standard botryticides	6 (5)	1 (8)	3 (3)	0.2 (6)	3 (8)	2 (8)	1 (6)
Protector <sup>hmi</sup> (20 l/ha)**	4 (10)	1 (10)	3 (4)	2 (10)	14 (9)	1 (10)	2 (8)
Infection periods (Feb-Mar)	8	1	7	5	11	6	8
Protector <sup>hmi</sup> significantly different from Nil	Yes	Yes	No	Yes	Yes	Yes	*
Protector <sup>hmi</sup> significantly different from standard botryticides	No	No	No	No	Yes	No	*

Numbers shown are total percentage crop loss at harvest.

\* Not statistically analysed.

\*\* Full field rate applied at 750-1000 l/ha (high volume). Figures in parenthesis are the number of applications.

#### Efficacy of Protector<sup>hmi</sup> against late season Botrytis

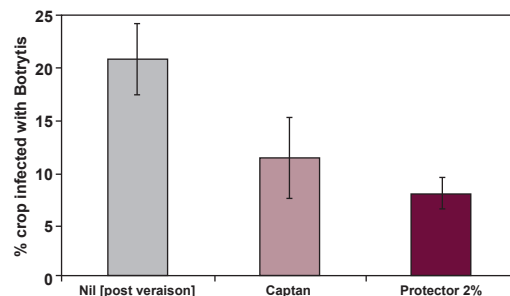
Hawkes Bay (Plant and Food Research) 2009–2010  
Grower applied trials on Chardonnay under the auspices of Grape Futures.

**Trial 1:** Each of the tested products (Armour-Zen<sup>®</sup>, Serenade Max<sup>®</sup> and Protector<sup>hmi</sup>) performed equal to each other and were significantly better than the Unsprayed (% crop loss)

**Trial 2:** Each of the tested products (Armour-Zen<sup>®</sup>, Serenade Max<sup>®</sup> and Protector<sup>hmi</sup>) performed equal to each other and were equal to Captan<sup>®</sup> (no unsprayed due to risk of crop loss)

2009–2010 was regarded as a low disease pressure season.

Hawkes Bay (HortResearch) 2002-2003  
Four sprays of 2% Protector<sup>hmi</sup> from veraison to harvest.



Protector<sup>hmi</sup> has an excellent history of plant safety and does not inhibit plant function.  
Protector<sup>hmi</sup> is genuinely safe and environmentally benign.

Consider using Protector<sup>hmi</sup> as a full program or as part of a strategically planned, non residual botrytis management program this season.

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