A QUIET REVOLUTION IN GRAPE GROWING

POWDERY MILDEW

Protector[hml]®

henry manufacturing limited

Technical Notes 2010 – Powdery Mildew

For Non-Residual Powdery Mildew Control with Sulphur

Protector[hml] 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[hml]

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

Powdery Mildew field trial, Hawkes Bay			
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

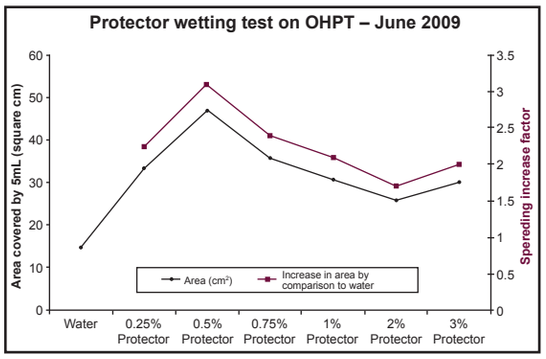
2007/08 Powdery Mildew Trial

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.

Powdery Mildew field trial, Hawkes Bay				
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[hml]	2kg/ha S	0	1	8
	3kg/ha S	0	0	0
	4kg/ha S	0	0	1
High water With 0.5% Protector[hml]	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



CERTIFIED biogro NEW ZEALAND CERT TM ORGANIC

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 for personal assistance.

Protector[hml] is available through major distributors

Better for you, better for our land, better for our reputation.

A QUIET REVOLUTION IN GRAPE GROWING

BOTRYTIS

Protector[hml]®

henry manufacturing limited

Technical Notes 2010 – Botrytis

For 'Low Cost' Non-Residual Botrytis Control

Demonstrated Efficacy against Botrytis

Seven consecutive HortResearch field studies compared full season Protector[hml] and standard fungicide programmes against bunch botrytis, assessed at harvest.

In 6 out of the 7 years, the efficacy achieved by Protector[hml] 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[hml] (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[hml] significantly different from Nil	Yes	Yes	No	Yes	Yes	Yes	*
Protector[hml] 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[hml] against late season Botrytis

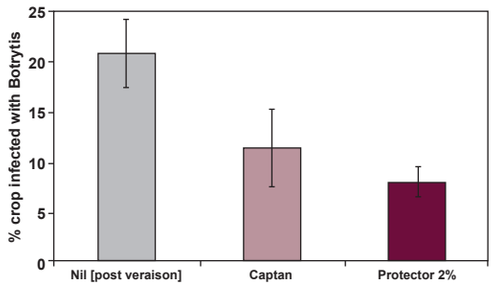
Hawkes Bay (Plant and Food Research) 2009–2010
Grower applied trials on Chardonnay under the auspices of Grape Futures.

Trial 1: Each of the tested products (Armour-Zen®, Serenade Max® and Protector[hml]®) performed equal to each other and were significantly better than the Unsprayed (% crop loss)

Trial 2: Each of the tested products (Armour-Zen®, Serenade Max® and Protector[hml]®) performed equal to each other and were equal to Captan® (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[hml] from veraison to harvest.



Protector[hml] has an excellent history of plant safety and does not inhibit plant function.
Protector[hml] is genuinely safe and environmentally benign.

Consider using Protector[hml] as a full program or as part of a strategically planned, non residual botrytis management program this season.

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