

## TREATMENT PROGRESS REPORT

**STUDY #:** 1157

**SPONSORS:** Focus Vineyards Hawke's Bay; Contributing product suppliers.

**STUDY DESCRIPTION:** To evaluate a range of biological and other products for their effectiveness in controlling Botrytis Grey Mould (*Botrytis cinerea*) to enable a residue-free vintage to be obtained and to determine if any adverse effects occur on the crop.

### STUDY DETAILS:

**Location:** Mission Estate Vineyard, Meeanee Road, Taradale, Napier.

**Crop:** Grapes cv Chardonnay.

**Study Design and Plot Size:** Randomised complete block design, replicated (4x). Each plot one panel (five vines) long and one row wide.

### APPLICATION DETAILS:

	<b>Appln # 1</b> 5% Flowering 17 <sup>th</sup> Nov '05	<b>Appln # 2</b> 80% Flowering 30 <sup>th</sup> Nov '05	<b>Appln # 3</b> Pea Size Berries 16 <sup>th</sup> Dec '05	<b>Appln # 4</b> Pre-Bunch Closure 29 <sup>th</sup> Dec '05	<b>Appln # 4</b> Bunch Closure 11 <sup>th</sup> Jan '06 Rate / ha
1.	Untreated Control	Untreated Control	Untreated Control	Untreated Control	Untreated Control
2.	Untreated Control	Untreated Control	Untreated Control	Untreated Control	Untreated Control
3.	Euparen Multi	Teldor	-	Switch	Untreated Control
4.	Euparen Multi	Teldor	-	Switch	Captan 80WG 1.25kg
5.	Euparen Multi	Teldor	-	Switch	Serenade Max 2kg
6.	Euparen Multi	Teldor	-	Switch	Serenade Max 4kg
7.	Euparen Multi	Teldor	-	Switch	Elliott Protector 2%
8.	Euparen Multi	Teldor	-	Switch	JMS Stylet Oil 2%
9.	Euparen Multi	Teldor	-	Switch	T-102 100g
10.	Euparen Multi	Teldor	-	Switch	Serenade WP 6kg
11.	Euparen Multi	Teldor	-	Switch	Foliacin 1.75L
12.	Euparen Multi	Teldor	-	Switch	Sentinel 200g + NuFilm
13.	Euparen Multi	Teldor	-	Switch	BZ-II 1L + NuFilm
14.	Euparen Multi	Teldor	-	Switch	Superzyme 1kg
15.	BotryZen + NuFilm	BotryZen + NuFilm	BotryZen + NuFilm	BotryZen + NuFilm	BZ-II 1L + NuFilm
16.	Sentinel + NuFilm	Sentinel + NuFilm	-	Sentinel + NuFilm	Sentinel 200g + NuFilm

**Spray Volume:** All treatments were applied at 500 litres per hectare on Applications 1-3 and at 700 litres per hectare for Applications 4 and 5. Further sprays to be applied at 700 litres per hectare.

**Equipment:** All treatments were applied by handgun operating at 1200 kPa with a single 1.2 ceramic disc nozzle on Applications 1-4. Application 5 was applied by motorised knapsack with twin TXVK-10 hollow cone nozzles operating at 700 kPa. Further sprays to be made by motorised knapsack.

**CONTINUING TREATMENTS:** Treatments to be re-applied at sponsor specified intervals through until harvest.

A standard powdery mildew programme has been applied over the whole trial block prior to bunch closure.

### **ASSESSMENTS:**

**Efficacy** - The incidence and severity of Botrytis to be assessed on 100 bunches per plot as soon as the disease is first evident and then repeated at 7-14 day intervals until harvest. This enables both the percent of bunches with disease and the total crop severity to be determined and to also track disease development as the crop matures. At harvest all bunches from the centre vines in each plot to be individually evaluated.

**Phytotoxicity** - Phytotoxic effects on the crop to be assessed by evaluating foliage injury, berry russet and crop maturity (through brix testing). Any growth regulatory effect to be noted.

**Micro-Vinification** - Should there be obvious differences between treatments then samples to be taken and checks on fermentation, acidity, maleic acid levels and any other key wine making aspects to be undertaken.

**Residues** - To be decided at harvest.

### **COMMENTS:**

1. No mixing or application problems occurred with any treatments except Sentinel plus NuFilm, which resulted in a gluey deposit on the surface of the spray mixture, spray tank and filters. This was very hard to clean out, requiring scrubbing with hot soapy water.
2. Water sensitive paper was used to evaluate spray coverage on Applications 1 and 4 which indicated good coverage was obtained around the bunches and also the upper and lower canopy.
3. A sample of bunches was collected after Application 4 and sent to Plantwise Services Ltd, Lincoln, for Botrytis testing. Samples were collected from the following treatments: Untreated Control, BotryZen, Sentinel, the standard programme (Euparen Multit/Teldor/Switch) and also from Guard rows – one lot sprayed with Shirlan and the other with Scala. Results from this test will be available soon.



*General view of study block at 5<sup>th</sup> Application*



*Crop growth stage at 5<sup>th</sup> Application*

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11<sup>th</sup> January 2006