

**Efficacy of TRI-D25™ and other biological products compared with Industry chemical norm represented as the control against *Botrytis Cinerea* on grape vines.**

**Report Date: 6/3/08**

**Aim:** To determine the efficacy of TRI-D25™ compared to other commonly used products in the viticultural industry on *Botrytis Cinerea* compared to the normal industry standard chemical controls.

Demand for cleaner and safer alternative options from chemical controls are being sought by the consumer, as well growers are looking for alternative options since there are stand down periods prior to harvest when chemicals must not be applied and during this time there can be huge pressure with *Botrytis Cinerea* effecting quality production and yield.

TRI-D25™ is a biological product with **no** with holding periods; it may be applied at any time even under rainfall conditions when the onset of *Botrytis Cinerea* can be great. It is completely safe for humans and the environment.

**Method:** A vineyard block of chardonnay vines was selected in the Hawkes Bay region to conduct the trial which was split into 8 rows for each product trialed. All applications of product were applied with a water rate of 500 L / Ha except for the chemical control which was applied at a lesser water rate of 250 L/ Ha

All products were applied according to the protocols of each particular product; applications were made on the same day when applied, however TRI-D25™ had fewer applications than other products trialed. TRI-D25™ was applied by 3 applications, whilst the other products were applied at 4, and 6 applications. TRI-D25™ was not applied as a pre closure spray nor was it applied at early veraison as per table 1).

**Results:** Crop monitoring was carried out by TracIt on all four blocks with a sample size taken from the 4 areas concerned of 400 bunches for analysis purposes. Even with fewer applications of TRI-D25™ than other products, TRI-D25™ was shown to have the greatest efficacy against the disease *Botrytis Cinerea* even better than chemical products used by the industry as the Control.

**Note:** Biomin Calcium was applied at 1kg / Ha on two blocks - Control and Foliacin on 21/2/08 but not on the TRI-D25™ block.

The use of Biomin Calcium has proven under trial situation to also lessen risk and severity of *Botrytis Cinerea*.

If a Biomin Calcium application had been applied across the board including the TRI-D25™ block this may have added further significance to results.

Table 1) Chardonnay – All applications at 500L/ Ha except control @250L/ Ha

<b>Treatment</b>	<b>Spray 1 5% Flowering</b>	<b>Spray 2 80 % Flowering</b>	<b>Spray 3 Pre Bunch Closure</b>	<b>Spray 4 Early Veraison</b>	<b>Spray 5 100% + Veraison</b>	<b>Spray 6</b>
<b>Date</b>	<b>15/11/07</b>	<b>29/11/07</b>	<b>18/12/2007</b>	<b>29/1/2008</b>	<b>21/2/2008</b>	<b>28/2/08</b>
<b>Control</b>	Eup Multi	Switch	Switch		Biomin Calcium 1kg / Ha	
<b>Foliacin</b>	Foliacin 1L/ Ha	Foliacin 1L/ Ha	Folacin 1 L/ Ha	Foliacin 250ml/ HA	Foliacin 250 ml/ Ha Biomin Calcium 1kg / Ha	Foliacin TX
<b>TRI-D25</b>	TRI-D25 1kg / Ha	TRI-D25 1kg / Ha			TRI-D25 1kg / Ha	
<b>Botryzen</b>	Botryzen 4kg / Ha	Botryzen 4kg / Ha	Botryzen 4kg / Ha		Armozen (5L/ Ha 1L/100)	

Table 2) Results Scale:

**Light** < 10 berries affected in bunch    **Moderate** > 10 berries but less than 30% of bunch infected    **Severe** > 30 % of the bunch infected

	<b>Date Sampled</b>	<b>Light</b>	<b>Medium</b>	<b>Severe</b>	<b>Total found % of bunch</b>
	6/3/2008				
<b>Control 1-8</b>	400 bunches	4	7	3	<b>3.5%</b>
<b>Foliacin 9-16</b>	400 bunches	17	11	14	<b>10.5%</b>
<b>TRI-D25 17-24</b>	400 bunches	4	5	2	<b>2.75%</b>
<b>Botryzen 25-36</b>	400 bunches	8	7	3	<b>4.5%</b>