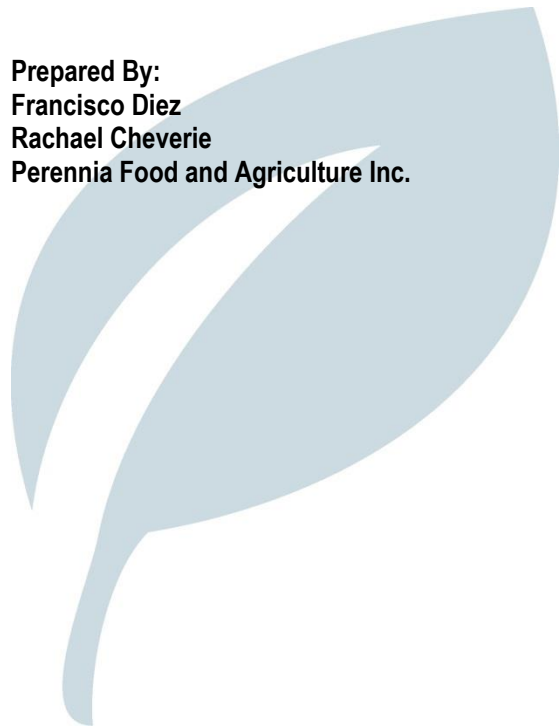


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**Organic Disease Management Schedule  
Prepared for Johnston Vineyards**

**May 25<sup>th</sup>, 2017**

**Prepared By:  
Francisco Diez  
Rachael Cheverie  
Perennia Food and Agriculture Inc.**



**“ORGANIC” Grape Disease Management Calendar for Johnston Vineyards – 2017**

									
	Budburst	First Leaf Expanded	3 leaves, length of 10-15cm	Length of 20-25 cm	Trace Bloom	Bloom and Fruit set	Berries, Pea sized	Cluster Closure	Veraison to Harvest
<b>Black Rot Critical Timing for Management</b>									
			X	X	X	X			
<b>Powdery Mildew Critical Timing for Management</b>									
		X	X	X	X	X	X	X	
<b>Downy Mildew Critical Timing for Management</b>									
			X	X	X	X	X	X	X
<b>Botrytis Critical Timing for Management</b>									
						X	X	X	X

Products listed below by disease are registered for use in Grapes in Canada. **ALWAYS read the product label for rates, and use instructions including protective equipment, re-entry intervals, and days to harvest. The LABEL is the Law, this document is for guidance purposes only.**

Always check the allowable products list on the OMRI website <https://www.omri.org/omri-lists> for the most up to date information about which products are allowable for use in organic production systems in Canada.

If you wish to reduce the number of copper/sulphur applications during the season we recommend you alternate with some of the other registered products listed below when disease levels are low or conditions are less conducive to disease development. As listed, most other products are registered for ‘suppression’ of disease not ‘control’.

## **Powdery Mildew Products:**

### **Microscopic Sulphur/Kumulus DF**

This product is used against Powdery Mildew.

Rate: 12.6 Kg/Ha (it is possible to use lower rates early in the season before canopy is filled in)

It should be applied every 10 days to ensure coverage on new growth. It is required to be applied only until cluster closure.

After a 10 mm rainfall it is necessary to reapply.

Do not use in Foch or DeChaunac.

### **Double Nickel 55**

Suppression only against Botrytis and Powdery Mildew.

Powdery Mildew Rates: 1-2 Kg/Ha

Start applications when new shoots are 1-3 cm long. Repeat at 6-10 cm, 18-20 cm, and then at 7- 10 day intervals as long as disease conditions persist.

Under moderate to high disease pressure, or when environmental conditions and plant stage are conducive to rapid disease development, use higher label rates (1 to 2 kilograms per hectare), apply more frequently (every 3 to 7 days) or rotate DOUBLE NICKEL 55™ with other fungicides for improved performance.

Lower rates (0.5 to 1 kilogram per hectare) may be applied under low disease pressure or to smaller (e.g. newly-emerged) plants.

### **Regalia Maxx**

Suppression only against Powdery Mildew.

Rates for Botrytis Suppression: concentration of 0.25% v/v in 500-1500 litres water per hectare.

Begin applications after shoot emergence and new shoots are approximately 1-3 cm in length. Repeat applications at 7- to 14 day intervals depending upon crop growth and disease pressure. When environmental conditions and plant stage are conducive to rapid disease development,

use Regalia® Maxx Biofungicide Liquid Concentrate in a rotational program with other registered fungicides.

### **Serenade OPTI**

Suppression only.

Rates: 1.7 – 3.3 Kg/Ha

Make the first application at bloom, then repeat at bunch closure, at veraison and pre-harvest.

\*Note that sour rot disease is caused by various yeast, fungal and bacterial pathogens, and that Serenade Opti has not been tested for control of all of these agents.

### **Milstop or Sirocco**

Powdery Mildew *eradicator only*. Will not prevent disease outbreaks.

### **Downy Mildew Products:**

**Copper Spray/Copper 53W/Guardsman Copper Oxychloride (check OMRI lists and labels for each product for use rates and precautions for use)**

After a 10 mm rainfall it is recommended to reapply.

Rate: 3Kg/1000L water + 6Kg Lime (lower rates can be used).

After cluster closure, Copper may only need to be applied on the top part of the canopy, it is necessary to monitor weather conditions for humidity and rainfall to determine application intervals.

### **Black Rot Products:**

Black Rot can be very difficult to control in organic production systems - you may wish to use a conventional fungicide if organic certification is not a requirement. Copper sprays used for downy mildew control *may* provide some suppression of black rot.

## **Botrytis Products:**

### **Double Nickel 55**

Suppression only.

Rates for Botrytis Suppression: 1.25 – 5Kg/ha

Repeat application every 3 to 10 days for as long as conditions favor disease development.

Under moderate to high disease pressure, or when environmental conditions and plant stage are conducive to rapid disease development, use higher label rates (1.25 to 5 kilograms per hectare), apply more frequently (every 3 to 7 days), or rotate DOUBLE NICKEL 55™ with other fungicides for improved performance.

### **Regalia Maxx**

Suppression only.

Rate: concentration of 0.25% v/v in 500-1500 litres water per hectare.

Begin applications at bloom and repeat at bunch closure, veraison and preharvest. When environmental conditions and plant stage are conducive to rapid disease development, use Regalia® Maxx Biofungicide Liquid Concentrate in a rotational program with other registered fungicides.

### **Serenade OPTI**

Suppression only.

Rates: 1.7 – 3.3 Kg/Ha

Make the first application at bloom, then repeat at bunch closure, at veraison and pre-harvest.

### **Other products:**

\*There is anecdotal evidence that use of Potassium bicarbonate in the vineyard as a foliar spray may reduce botrytis bunch rot development, but this use is not registered as a fungicide in Canada and therefore cannot be recommended by Perennia.