

# HML spray programme 2022-23

The road to resilience. Without residues. Without toxicity. Without resistance issues.

## Bud burst to pre-flowering (10-14 day interval)

Growth stage		Prebud to budburst	First leaf separated from shoot tip	First leaf separated - 2-3 leaf shoots 2-4cm long	4 leaf	6-7 leaf		8-10 leaf single flower	12 leaf, in flor. Well developed, single flower sep.
EL		1-4	7	7-9	11	12-14	14-15	15-16	17
Product	Rate / 100L								
Sulphur	label rate			Sulphur	Sulphur	Sulphur	Sulphur	Sulphur	Sulphur
Protector	0.5L / 1L / 2L			Protector 1L	Protector 0.5L	Protector 1L	Protector 0.5L	Protector 1L	
HML32	1.25L								HML32
Copper Fungicide	label rate								Copper
Nordox (in Protector premix)	30g/litre of Protector (see note 4)			Nordox 30g/litre of Protector (see note 4)		Nordox 30g/litre of Protector (see note 4)		Nordox 30g/litre of Protector (see note 4)	
HML Silco (see note 5)	250ml-500ml potassium silicate liquid			Silco	Silco	Silco	Silco		Silco
Nutrients	label rate			Seaweed Magnesium Sulphate (see note 13)		Seaweed Magnesium Sulphate		Tr. elements other than Mg (see note 14)	
Lime Sulphur	3.5-7%	(see note 1)							

## Pre-flowering to PBC (7-10 day interval)

Growth stage		14 leaf, cap colour fading	16 leaf, beg. flowering	50% capfall (see note 7)	80% - 100% capfall	Fruitset-Pea	Pea size 4mm	Pea size 7mm	PBC
EL		18	19	23	25-26	27	29	31	32
Product	Rate / 100L								
Sulphur	label rate	Sulphur		Sulphur	Sulphur	Sulphur	Sulphur	Sulphur	Sulphur
Protector	0.5L / 1L / 2L			Protector 2L		Protector 1L		Protector 1L	
HML32 (see note 6+8)	1.25L	HML32			HML32		HML32		HML32
Copper fungicide	label rate	Copper							
Nordox (in Protector premix)	30g/litre of Protector (see note 4)					Nordox 30g/litre of Protector (see note 4)		Nordox 30g/litre of Protector (see note 4)	
HML Silco (see note 5)	250ml-500ml potassium silicate liquid	Silco		Silco	Silco (see note 9)	Silco	Silco (see note 9)	Silco	Silco (see note 9)
Nutrients	label rate	Seaweed		Seaweed	Seaweed	Seaweed Magnesium Sulphate	Seaweed	Seaweed Magnesium Sulphate	Seaweed

## Post PBC to veraison (10-14 day interval)

Growth stage		Berries still hard and green		Early Veraison	Veraison and Post Veraison
EL		33	34	35	36-38
Product	Rate / 100L				
Sulphur	label rate	Sulphur	Sulphur	Sulphur	
Protector	0.5L / 1L / 2L	Protector 1L		Protector 2L (Botrytis control as alternative to HML32)	(see note 11)
HML32	1.25L		HML32	HML32	(see note 11)
Copper Fungicide	label rate		Copper	Copper	
Nordox (in Protector Premix)	30g/litre of Protector (see note 4)	Nordox 30g/litre of Protector (see note 4)			
HML Silco (see note 5)	250ml-500ml potassium silicate liquid	Silco			
Nutrients	label rate	Seaweed			

- Lime sulphur only needs to be applied if the previous season had significant levels of erinose mite infestation and/or significant levels of wet weather diseases such as downy mildew, black spot, phomopsis.
- Recover after rain.
- Applications of Protector and cuprous oxide fungicide as a premix provides downy mildew and powdery mildew control. Use Protector at 2L/100L with copper fungicide where there is high downy mildew pressure.
- For Nordox 75WG, 30g is required per 1L Protector, therefore 30g/100L for 1L/100L Protector mix. 60g Nordox is required for 2L/100L Protector mix.
- If using all season use 250ml rate, a couple of times a season use the 250ml-500ml rate, or for eradication of powdery mildew always use 500ml. Always optional. Early applications of HML Silco helps build plant strength and crop resilience. Potassium

- silicate in many situations assists the efficacy of fatty acid products.
- HML32 mix at EL 18 and EL 25 are important applications that brackets flowering. Provides powdery mildew prevention and eradication control as well as botrytis control.
- If the flowering period becomes unusually protracted, cool or wet, apply Protector mix to maintain powdery mildew cover.
- For a month after Fruitset EL27 (when plant is still susceptible to powdery mildew), cover at 7 day intervals (10 day maximum) with HML32 mix alternating with Protector mix. If under pressure, use HML32 mix instead of Protector mix.
- The HML32, sulphur and Silco mix prevents and eradicates powdery mildew. Use higher Silco rate of 500ml/100L when eradicating existing infection.
- For existing powdery mildew infection, an alternative mix is

**grochem**



Disclaimer: Henry Manufacturing Limited has prepared this programme to assist grape growers using its products. Liability whether in tort (including negligence), contract or otherwise, for any loss, crop injury or crop failure, resulting from the application of this spray programme is excluded. Any user of this spray programme accepts this disclaimer.

- HML32, copper and HML Potum (potassium bicarbonate).
- At EL35-36, the application of HML32 can provide botrytis resilience and enhanced maturity. See notes on website for accurate timings for white and red grapes. Protector at 2L/100L is also an alternative botrytis control but does not provide enhanced maturity.
- All HML products are alkaline. Take care when selecting copper and nutrient products to avoid tank mix incompatibility and plant damage. Read the label of HML products.
- Magnesium sulphate is in most cases compatible with the Protector, HML Silco, copper and sulphur mix. Jar test recommended. Not compatible with HML32.
- If other trace element applications are required, an extra application round will be required or alternatively drop Protector out of the mix.

Contact Chris Henry at [chris@henrymanufacturing.co.nz](mailto:chris@henrymanufacturing.co.nz) or call 06 874 2921 or 027 294 1490 Visit [www.henrymanufacturing.co.nz](http://www.henrymanufacturing.co.nz)  
Products now supplied by Grochem. Visit [www.nz.grochem.com](http://www.nz.grochem.com)