

NASAA BULLETIN

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Control measures for powdery and downy mildew in grapevines

At this time of year many of our operators are in contact to enquire about allowed methods for control of diseases in grapevines, with powdery and downy mildew topping the list. With humid early summer conditions in many areas, these diseases have been particularly problematic in the past couple of years.

For successful organic control of these diseases it is imperative that growers employ an integrated strategy from the start, aimed at preventing or minimizing the development of disease in your crop.

An integrated, preventive strategy could include such measures as:

- Sanitation (removal of any sources of disease inoculum)
- Early warning system e.g. indicator plants or monitoring of local weather data
- Frequent and regular applications, from flowering, of substances which change the pH to make the environment less conducive to mildew, such as potassium carbonate (primarily aimed at powdery mildew but may have some efficacy for downy mildew too) or washing soda (sodium carbonate) and soft soap
- Application of seaweed extract or other fertilizer to boost plant health
- Tipping to remove further inoculum and to improve air circulation
- Judicious use of other approved fungicides as specified in the attached table "Allowed Fungicides for Plant Disease Control"

NASAA Organic Standard
Allowed Fungicides for Plant Disease Control
December 2011

Trade name	Active Ingredient	Notes
Amgrow Lime Sulphur	Sulphur	For the control of certain insects, mites and fungus diseases on apples, pears, stone fruit, grapes, citrus, tomatoes and ornamentals
Ausoil 23EC (Ausoil Pty Ltd, 386 North Creek Rd, Lennox Head, NSW Tel. + 61 2 6687 4182)	Tea tree oil	Natural fungicide
Barmac Wettable Sulphur	Sulphur	Registered for the control of certain insects, mites and fungus diseases on apples, pears, stone fruit, grapes, citrus, tomatoes and ornamentals, including powdery mildew on grapes
Bluestone copper sulphate pentahydrate powder	Copper sulphate	Copper sulphate pentahydrate (powder) 100% Monitor bio accumulation, strategy for reduction in soil, not in aquatic systems
Bordeaux mixture, Burgundy mixture	Copper	Hydroxide is the preferred form. Use only on dormant tissue. Mix 90g of copper sulphate (bluestone) with 4.5 litres of hot water in a non metallic container and leave overnight. Next day mix 125g slaked lime with 4.5 litres of cold water in a non metallic container. Combine both mixtures by stirring vigorously. Use immediately. An oil can be added. Monitor bio accumulation of copper, strategy for reduction in soil, not in aquatic systems
Colonizer (Biocontrol Australia Pty Ltd)	<i>Trichoderma</i> spp. <i>Td67</i> (fungus)	Biocontrol agent for control of grey mould (<i>Botrytis cinerea</i>)
Copper octanoate	Copper octanoate	Monitor bio accumulation, strategy for reduction in soil, not in aquatic systems
Dusting sulphur	Elemental sulphur	Natural extraction, no prohibited inputs
Ecocarb	Potassium bicarbonate	Registered for control of powdery mildew in grapes and roses
Eco-Fungicide	Potassium bicarbonate	Registered for management of fungus diseases in roses, grapevines, vegetables and strawberries in the home garden
Gauntlet (Biocontrol Australia Pty Ltd)	<i>Trichoderma koningii</i> Td22 (fungus)	Biocontrol agent for control of white rot fungus (<i>Sclerotinia</i> spp.)
Granusulf 800WG fungicide and miticide	Sulphur	Registered for control of powdery mildew, rusts and mites in pome and stone fruit, citrus, kiwifruit, grapevines, mangosteens, rambutans, strawberries, tomatoes, ornamentals and some vegetables
Hydrogen peroxide		By derogation ¹ only. When allowable preventative measures are insufficient to prevent or control crop disease(s), hydrogen peroxide may be applied to suppress or control disease(s), provided that the practices used for controlling the disease(s) are documented in the organic management plan.
Kocide Blue	Copper hydroxide	For control of various (bacterial and fungal) diseases on fruit and vegetables, including black rot, downy mildew, phomopsis and powdery mildew on grapevines. May be no longer available.
Kocide DF	Copper hydroxide	For control of various (bacterial and fungal) diseases on fruit and vegetables, including black rot, downy mildew, phomopsis and powdery mildew on grapevines. May be no longer available.
Leafcoat copper barrier.	Copper	BFA-registered
Leafcoat sulphur barrier.	Sulphur	BFA-registered
Microsul WG Elite (Melpat International Pty Ltd)	Sulphur	For control of powdery mildew, rust and mites in various fruit and vegetable crops including table and wine grapes

¹ Products that are allowed by derogation must be approved by NASAA Certified Organic prior to use - the application for derogation must include a copy of spray records and preventative measures to date.

Microthiol Disperss Wettable Sulphur Fungicide, Miticide & Insecticide	Sulphur	Registered for control of various pests and disease on fruit and vegetables, including powdery mildew on grapevines
Milk		For control of powdery mildew in crops including grapevines, roses, tomatoes and zucchinis. 1:5 and 1:10 milk to water applied at 7 to 10 day intervals, or fortnightly in hot weather. Must not lead to soil contamination. Non GMO or GMO-derived
Mineral oils (summer/winter/paraffin)		Light petroleum derivatives allowed as suffocating oils on foliage, dormant summer oils. Direct application to harvested crop prohibited For control of a range of pests, including aphids, scale, mealy bug, caterpillars, young grasshoppers, mites, and their eggs. Can also be effective against powdery mildew.
Neem oil	Neem oil	Natural extraction, no prohibited inputs
Norshield WG Copper Fungicide	Cuprous oxide	Registered for control of certain (bacterial and fungal) diseases on fruit and vegetables, including downy mildew on grapevines. Monitor bio accumulation, strategy for reduction in soil, not in aquatic systems
Peratec Fungicide	Hydrogen peroxide, peroxy acids	By derogation ¹ only for a strictly limited period. When allowable preventative measures are insufficient to prevent or control crop disease(s), Peratec Fungicide may be applied to suppress or control disease(s), provided that the practices used for controlling the disease(s) are documented in the organic management plan. Hydrogen peroxide preferred over Peratec.
Potassium bicarbonate		Powdery mildew
Seaweed, seaweed meal and extracts		Non-synthetic, non-fortified sources only. Addition of formaldehyde prohibited. Must fall within heavy metal limits (NASAA Organic Standard Annex 7)
Sodium Bicarbonate (baking soda, bicarbonate of soda)	Sodium bicarbonate	
Sodium carbonate (washing soda)	Sodium carbonate	

Refer to NASAA Organic Standard Annex 2: Products for Control of Plant Pest & Disease for restrictions and specifications prior to selecting your product.

Operators are reminded that it is their responsibility to ensure that the use of permitted products does not contravene legislated requirements.

Please be aware that NASAA makes no claim in relation to the efficacy of the list of allowed fungicides, or other measures suggested in this Bulletin.

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