

Phosic® 600

SYSTEMIC FUNGICIDE

ACTIVE CONSTITUENT
600 g/L PHOSPHOROUS (PHOSPHONIC) ACID
PRESENT AS MONO & DI POTASSIUM PHOSPHONATE

GROUP	33	FUNGICIDE
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EFFECTIVE AGAINST
PHYTOPHTHORA DISEASES & DOWNY MILDEW
IN VARIOUS SITUATIONS AS PER DIRECTIONS FOR USE TABLE.

- ✓ Effective & safe control of phytophthora and downy mildew
- ✓ Systemic fungicide that is moved right throughout the plant
- ✓ Neutral pH (7.2) provides optimum tank mixing, chemical compatibility & crop safety
- ✓ Excellent compatibility with SJB foliar chelates (eg. **LIG-ZINC®**)
- ✓ Australian made & manufactured product
- ✓ Easy to use liquid formulation

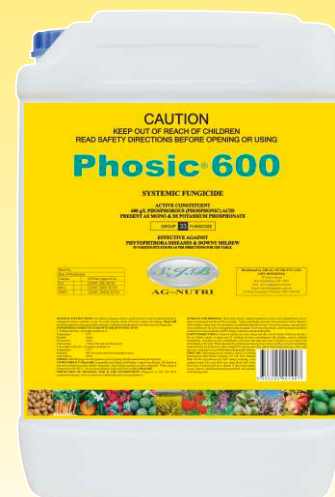
MODE OF ACTION

Phosphonic or phosphorous acid (H_3PO_3) releases phosphite ions upon dissociation which have been shown to control diseases caused by oomycetes (technically distinct from fungi) such as root rot, downy mildew, late blight & phytophthora. Its primary mode of action is inhibition of oxidative phosphorylation (energy production) in the disease organism itself. A secondary mode of action is thought to be the stimulation of the plants own pathogen defence mechanisms (eg. the production of phytoalexins).

It should be noted that phosphonic acid is not readily metabolized by plants and therefore is **not** a source of available phosphate or nutrient. Similarly, phosphate fertilizers do not provide disease control like phosphites do.



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Phosic[®] 600

DIRECTIONS FOR USE: RESTRAINTS: Do not apply Phosic 600 at volumes that cause excessive runoff.

CROP	DISEASES		STATES	TREATMENT METHOD	RATES	CRITICAL COMMENTS
	COMMON NAME	LATIN NAME				
Avocado	Phytophthora Root Rot	Phytophthora Cinnamomi	ACT, QLD, NSW, SA, VIC, WA	Injection	Trunk injection, skeletal trees: 1" year 5 mL undiluted product per metre of canopy diameter. Other situations: 2.5 mL product diluted with 7.5 mL water per metre canopy diameter.	Inject trees at spring flush maturity – repeat treatment in February or March. Drill holes 5mm in diameter and 25mm to 50mm deep with slight downward angle of the trunk. Syringes should be placed in the main trunk of the tree and spaced evenly around the circumference of the trunk. Suitable for use with Chemjet tree injectors, Ag-murf gun or hydraulic tree injections. Do not prune trees back before injections process as burning of the new growth may occur. Do not inject trees in winter months. Do not cut back the canopy of injected trees. Do not add anything other than water to Phosic 600 for trunk injection. Do not inject more liquid in a lesser number of syringes than directed. Solution concentrate: 165-200 mL/100 L. Amount per unit: Spray to run off – 7.5-10 L per adult tree. 1. Curative: apply every 3 weeks until disease is under control. 2. Preventative: apply every 5-6 weeks.
				Foliar Spray	3.3-4.0 L/ha	
Young or Small Citrus	Phytophthora Root Rot	Phytophthora Nicotianae	All States	Foliar Spray	170-330 mL/100 L To leaf wetness (by boom or similar high volume sprayer)	Two applications: 1. Later winter prior to flowering. 2. Autumn applied to mature fruit. Repeat application annually to maintain protection for the plant. Depending on condition at the time of application use a non-ionic wetting agent in conjunction with Phosic 600.
Mature Citrus	Collar Rot	Phytophthora Citrophthora	All States	Foliar Spray	13.3 L/ha in 3000-4000 L water 53 mL/12 L/tree 8.3 L/ha in 2000-5000 L water 33 mL/12 L/tree	Where Disease Incidence is High or Well Established: For effective control apply as protectant before above ground symptoms of decline and collar rot become evident, spray trees for even coverage. Do not apply under high temperatures (above 35°C) particularly if humidity is low or to moisture stressed trees. Low Phytophthora Pressure, Well Drained Soil: Removal of fruit from affected plants will enhance recovery. WARNING: Young container grown mandarin trees may develop leaf burn and growth retardation following foliar application or soil drench of potassium phosphonate at rates recommended for established trees.
Cucurbits	Downy Mildew	Pseudoperonospora Cubensis	All States	Foliar Spray	3 L/ha in minimum 800-1000 L water	Use weekly spray intervals when conditions favour disease development. To avoid phytotoxicity with some plant species, it is recommended that the product be tested on a few plants of each species prior to the main application.
Grapes	Downy Mildew	Plasmopara Viticola	All States	Foliar Spray	2 L/ha Early season (small canopies) 2.7-4 L/ha Mid-late season (large canopies)	It is essential that the rate of Phosic 600 is adjusted for a vine-row volume (ie. the volume of vine foliage per hectare). An application volume of 500 L/ha is suggested at the start of the season, increasing to 2000 L/ha in a vigorous crop at full canopy. Spray timing is critical. For best results apply Phosic 600 as a tank mix with protectant fungicides such as Mancozeb/Dithane, Copper Oxochloride etc. to ensure both pre- and post-infection activity. Phosic 600 should be applied at times of high disease risk, especially between the time that conditions are conducive to Downy Mildew infection and the appearance of oil spots. Ensure spray coverage is adequate and that the appropriate rate of Phosic 600 is applied to match vine growth, particularly from mid season onwards, and especially where grapes are grown on root stock.
Ornamentals	Phytophthora Root & Crown Rot	Phytophthora spp.	ACT, QLD, NSW, NT, TAS, VIC, WA	Foliar Spray	170 mL/100 L boom or knapsack 330 mL/100 L air blast	Apply at 4-6 weekly intervals when conditions favour disease development. To avoid phytotoxicity with some plant species, it is recommended that the product be tested on a few plants of each species prior to the main application. DO NOT apply when ornamental plants are dormant or stressed. DO NOT apply to ornamental plants under extremes of temperature.
Pineapple	Phytophthora Root Rot Heart Rot	Phytophthora Cinnamomi Phytophthora Parasitica	QLD, WA	Foliar Spray	4 L/ha 1:200-1:500 water	Apply to tops, two (2) weeks prior to harvest of planting material.
Poppies	Downy Mildew	Peronospora Cristata	TAS	Foliar Spray	2 L/ha	Commence application from 10-12 leaf stage up to row cover. Use in combination with mancozeb products at registered rate. Repeat 7-10 days later. Apply no more than 2 sprays per crop per season. Note: Crop toxicity problems may occur when application is made with low water volumes. Users should determine an appropriate water volume on a small area prior to large scale field use. Consult your field officer for assistance.
Subterranean Clover	Phytophthora Root Rot	Phytophthora Clandestina	NSW, SA, VIC TAS, ACT, WA	Foliar Spray	500 mL/ha approx. 200 L water/ha	Apply 8-9 days after first irrigation but before second irrigation. Apply in autumn when subterranean clover is at the cotyledon to unifoliate leaf growth stage.

WITHHOLDING PERIOD: Avocado, Citrus, Cucurbits, Grapes, Pineapples: Not required when used as directed. **Poppies:** Do not harvest for 6 weeks after application. **Subterranean Clover:** Do not graze or cut for stock food for 14 days after application.

FUNGICIDE RESISTANCE WARNING: Long term repeated use of Phosic 600 and/or other Group 33 fungicides can result in a build up of resistant disease organisms and reduced efficacy of Group 33 fungicides. It is recommended that Group 33 fungicides be alternated with other non-33 Group fungicides to avoid fungicide resistance in crops.



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QLD/NT: 0439 520 744
VIC/MIA: 0407 040 820
SA/TAS/WA: 0408 633 661
Tech Support: 0407 040 820
info@sjbagnutri.com.au



Downy Mildew in cucumber



Avocado with shoot dieback caused by phytophthora root rot.

