Nufarm Phostrol 500

approved: 11 July 2014

Label page

CAUTION
KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

Nufarm

Phostrol 500®
Systemic Fungicide

ACTIVE CONSTITUENT: 500 g/L PHOSPHOROUS (Phosphonic) Acid present as mono and di Ammonium, Potassium, and Sodium Phosphonates

GROUP 33 FUNGICIDE

Effective against Phytophthora diseases and downy mildew in various situations as specified in the Directions for Use Table.

READ COMPLETE DIRECTIONS FOR USE BEFORE USING THIS PRODUCT.

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DIRECTIONS FOR USE

RESTRANNT: DO NOT apply Nufarm Phostrol 500 at volumes which cause excessive run-off

TREES AND VINE CROPS

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| Avocado           | Phytophthora Root Rot        | QLD, NSW, SA, VIC, WA, ACT | INJECTION Trunk injection, skeletal trees: 1st year 6mL, undiluted product per metre of canopy diameter. Other situations: 3 mL product diluted with 5mL water per metre canopy diameter | 4.0-4.8L/ha      | Inject trees at spring flush maturity- repeat treatment in February on March. Drill holes 5mm 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 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 Nufarm Phostrol 500 for trunk injection. DO NOT inject more liquid in a lesser number of syringes than directed.
|                   | (Phytophthora cinnamomi)     |              |                                  |                  | Solution concentrate: 200-240mL/100L
|                   |                             |              | Foliar Spray                     |                  | Amount per unit: Spray to run off -7.5 to 10L per adult tree
|                   |                             |              |                                  |                  | 1. Curative: apply every 3 weeks until disease is under control
|                   |                             |              |                                  |                  | 2. Preventive: apply every 5-6 weeks
| Young or Small    | Phytophthora Root Rot and    | ALL STATES   | FOLIAR SPRAY                     | 200-400mL/100L   | Two Applications:
| Citrus            | Collar Rot                  |              |                                  |                  | 1. Late winter prior to flowering.
|                   | (Phytophthora nicotiana,     |              |                                  |                  | 2. Autumn applied to mature fruit. Repeat application annually to maintain protection for the plant. Depending on condition at time of application use a non-ionic wetting agent in conjunction with Nufarm Phostrol 500
|                   | Phytophthora citrophthora)   |              |                                  |                  |                                      |
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| Mature Citrus               | Phytophthora Root Rot and Collar Rot (Phytophthora nicotianae Phytophthora citrophthora) | ALL STATES                   | FOLIAR SPRAY | 16L/ha in 3000-4000L of water 50mL/12L/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:**  
1. Foliar application to fruit may cause damage to fruit.  
2. Soft skinned citrus trees may develop leaf burn and growth retardation following foliar application or soil drench.  
Before applying this product for the first time, a small test area should be sprayed and observed for at least 1 week. |
| Grapes                      | Downy Mildew (Plasmopara viticola)                                     | ALL STATES                   | FOLIAR SPRAY | 2.4L/ha early season, small canopies 3.25-4.8L/ha Mid-late season, large canopies | It is essential that the rate of Nufarm Phostrol 500 be adjusted for a vine –row volume (i.e. the volume of vine foliage per hectare). An application volume of 600L/ha is suggested at the start of the season, increasing to 2400L/ha in a vigorous crop at full canopy.  
Spray timing is critical. For best results apply Nufarm Phostrol 500 as a tank mix with protectant fungicide such as Mancozeb/Dithane, Copper Oxichloride, etc. To ensure both pre- and post-infection activity, Nufarm Phostrol 500 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 Nufarm Phostrol 500 is applied to match vine growth, particularly from mid season onwards, and especially where grapes are grown on root stock. |
| Cucurbits                   | Downy Mildew (Pseudoperonospora cubensis)                              | ALL STATES                   | FOLIAR SPRAY | 3.6L/ha in min 800-1000L of 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 |
| Ornamentals                 | Phytophthora Root and Crown Rot                                       | QLD, NSW, VIC, WA, TAS, NT, ACT | FOLIAR SPRAY | 200mL/100L boom or knapsack 400mL/100L air blast | Apply at 4-6 weekly intervals when condition 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 to ornamental plants are dormant or stressed.  
DO NOT apply to ornamentals plants under extremes of temperature. |
| Pineapple                   | Phytophthora Root and Heart Rot                                       | QLD, WA                      | FOLIAR SPRAY | 4.8L/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 | 2.4L/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, VIC, WA, TAS, ACT       | FOLIAR SPRAY | 600mL/ha approx 200L water/ha  | Apply 8 to 9 days after first irrigation but before second irrigation. Apply in Autumn when Subterranean Clover is at the cotyledon to unifoliate leaf growth stage |
NOT TO BE USED FOR ANY PURPOSE OR IN ANY MANNER CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION

WITHHOLDING PERIODS:
G = grazing
Citrus, Cucurbits, Avocados, 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

GROUP 33 FUNGICIDE

Resistance management recommendation
Nufarm Phostrol 500 is a Group 33 fungicide. Some naturally occurring individual fungi resistant to the product and other Group 33 fungicides may exist through normal genetic variability in any fungal population. The resistant individuals can be eventually dominate the fungal population if these fungicides are used repeatedly. The resistant fungi will not be controlled by this product or other Group 33 fungicides. Thus, resulting in a reduction in efficacy and possible yield loss. Since the occurrence of resistance fungi is difficult to detect, Nufarm Australia Limited accepts no liability for any losses that may result from failure of this product to control resistant fungi.

For effective disease control a good leaf cover must be achieved before a widespread disease outbreak occurs.

CONDITIONS CONDUCIVE TO DOWNY MILDEW INFECTION
1. PRIMARY INFECTION- Overnight condition of:
   - Temperature: 10°C
   - Rainfall: 10mm
   - Soil Wetness: 24hrs
   - Leaf Wetness: 3-4 hrs at the end of a 24 hr period
2. SECONDARY INFECTION- Overnight condition of:
   - Temperature: 11°C
   - Humidity: 98% for at least 4 hours from midnight to dawn
   - Leaf Wetness: 24 hrs

TO AVOID RESISTANCE STRAINS OF DOWNY MILDEW DEVELOPING, NUFAILM PHOSTROL SHOULD BE APPLIED AS CLOSE AS POSSIBLE TO THE DAY OF INFECTION AND ALTERNATED WITH OTHER SYSTEMIC FUNGICIDES.

MIXING
Half fill spray vat and with agitation system running, add the required amount of product.

COMPATIBILITY
Compatible with mancozeb, Copper Oxychloride and most common powdery mildew fungicides. Most foliage nutrients are also compatible. When using in conjunction with "EC'S" always form emulsion with water prior to adding Nufarm Phostrol 500.

Export of treated produce
Growers should note that MRLs or import tolerances DO NOT exist in all markets for edible produce treated with Nufarm Phostrol 500. If you are growing edible produce for export, please check with Nufarm Australia Limited for the latest information on MRLs and import tolerances before using Nufarm Phostrol 500.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT
This product is harmful to fish. DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

STORAGE AND DISPOSAL
Store in the closed, original container in a cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight. DO NOT store at temperatures less than 4°C. Spillage should not be directed to drains but absorbed in sawdust and the absorbent material disposed of in a sealed container at an approved disposal site. Triple or preferably pressure rinse container at an approved disposal site. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. For refillable containers: empty contents fully into application equipment. Close all valves and return to collection point for refill or storage. If not recycling, break, crush or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available bury the containers 500mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

STORAGE AND DISPOSAL (Refillable container 1000L)
Store in the closed, original container in a cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight. Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

SAFETY DIRECTIONS
May irritate eyes and skin. Avoid contact with eyes and skin. DO NOT inhale spray mist. When preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat and elbow length PVC gloves, goggles and disposable face mask. If clothing becomes contaminated with product or wet with spray, remove clothing immediately. If product on skin, immediately wash area with soap and water. If product in eyes, wash it out immediately with water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves and contaminated clothing.

FIRST AID
If poisoning occurs, contact a Doctor or Poisons Information Centre Phone 13 11 26.
MATERIAL SAFETY DATA SHEET (MSDS)
For further information refer to the Material Safety Data Sheet, which can be obtained from your supplier or from the Nufarm website- www.nufarm.com.au

In case of emergency: Phone 1800 033 498 Ask for shift supervisor. Toll free 24 hours.

CONDITIONS OF SALE
"Any provisions or rights under the Competition and Consumer Act 2010 or relevant state legislation which cannot be excluded by those statutes or by law are not intended to be excluded by these conditions of sale. Subject to the foregoing, all warranties, conditions, rights and remedies, expressed or implied under common law, statute or otherwise, in relation to the sale, supply, use or application of this product, are excluded. Nufarm Australia Limited and/or its affiliates ("Nufarm") shall not accept any liability whatsoever (including consequential loss), howsoever arising (including negligence) for any damage, injury or death connected with the sale, supply, use or application of this product except for liability which cannot be excluded by statute."

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