

Turf protection & soil moisture





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• Not available in NZ



Introduction to turf protection

Turf protection

Scotts are experts in developing useful combinations of plant protection products and fertilisers. Using unique coating and impregnation technology, Scotts combine slow release fertilisers with active ingredients to produce dual purpose products, specifically designed to improve chemical performance with simultaneous delivery of slow release nutrition.

A key benefit associated with Scotts combination products is that they are dry and granular formulations, making them safe and easy to handle. Combination products reduce exposure risk after application and spills are easily isolated. Additionally, since application rates of the fertiliser and chemical are matched by Scotts at formulation, each granule carries only a dilute concentration of chemical. This means the products are not classified as dangerous goods and no special arrangements need to be made for transport and storage.

Soil moisture

Hydraflo wetting agents correct hydrophobic soils and enable quick relief from within the soil and thatch area, creating an even wetting front through the profile. An even wetting front enhances effectiveness and uniformity of both fertiliser and pesticide applications.

► Useful links:

Plant protection registration bodies

Australian Pesticides & Veterinary Medicines Authority – www.apvma.gov.au

The Agricultural Compounds & Veterinary Medicines (ACVM) Group New Zealand – www.nzfsa.govt.nz/acvm/

► Scotts Environmental Tip – Plant protection

- Avoid calendar spraying, only apply when needed or the need is predicted (e.g. according to seasonal conditions)
- Always follow all label directions, from application to safety and disposal
- Try to use non-chemical measures in combination with pesticides (e.g. choose resistant turf varieties, use biological controls, use other IPM compatible options)
- Look at safe granule formulations which reduce the risk of non-target damage due to spray drift

These tips will not only save you money, but help to prolong the life of the pesticide (i.e. delay resistance) and benefit the environment.

► Scotts Tip

For a complete product label with detailed application rates and correct use refer to the Scotts web link at www.scottsasiapacific.com/labels/

Dicot® III

Combination broadleaf weed control and NPK fertiliser



How it works

The active ingredients 2,4-D, Mecoprop and Dicamba produce a powerful herbicide in a unique granular form. The guaranteed fertiliser analysis contains nitrogen, potassium, phosphorus and sulphur (as sulphate). As the granules settle on foliage and sink through to the soil, the herbicide action affects both the foliage and roots of 17 common broadleaf weeds, while the slow release fertiliser provides nitrogen as methylene urea for 6 to 10 weeks feeding.



What it controls

Scotts Dicot III has been used in extensive international trials and has been proven effective in the control of many broadleaf weeds. It selectively controls dicot weeds leaving monocot grasses unaffected. This product is not for use on dichondra, lippia, buffalo or carpet grass.

How to apply

The objective is to distribute the granules as evenly as possible. To do this, use the Scotts AccuPro® 2000 professional spreader (or equivalent) which can be calibrated for even output to ensure even application. To optimise particle penetration and reduce unwanted drift, apply only in calm conditions.

Technical information

Product	Analysis	Herbicide	Application rate	Nitrogen/ha	Herbicide/ha
Dicot III	21+1+16	10.3g/kg 2, 4-D Acid 10.3g/kg Mecoprop Acid 0.7g/kg Dicamba Acid	160kg/ha (1.6kg/100m ²)	33.6kg/ha	3.4kg/ha

Ideal applications

In trials, Scotts Dicot III aroused the interest of municipal parks managers for controlling unsightly and problematic broadleaf turf weeds. It is also recommended for weed control in schools, playing fields, golf courses – wherever weeds provide disruptive elements to turf.

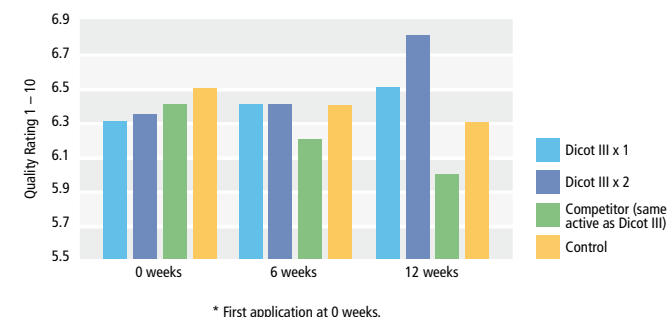
Benefits

This exclusive technology developed by Scotts has produced the most user-friendly 'weed 'n' feed' on the market. Dicot III is not classified as a dangerous good, therefore there are no restrictions regarding transport, handling and storage. Because the granules settle in the foliage, the active ingredients are quickly removed from direct contact with people. However, heavy traffic is not recommended for 24 hours. Best results are obtained by application to wet foliage (dewy grass). Once dry, normal activity can resume.

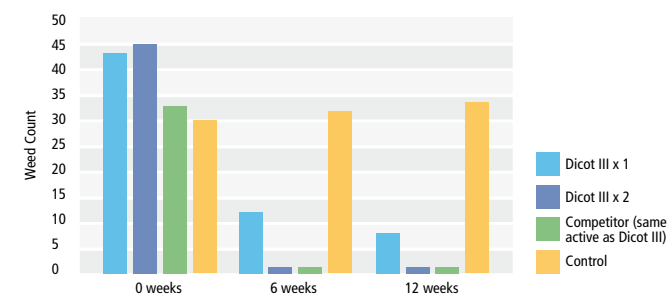
When to apply

Best results have been obtained when weeds are actively growing. Do not apply when daily temperatures are expected to be above 32°C.

Turf quality



Weed control



▶ Scotts Fact

Apply Dicot III to moist foliage. If foliage is not moist from dew or recent rain, irrigate the area to be treated.

Premax[®]

Pre-emergent herbicide with a proven track record



For over a decade, on thousands of courses worldwide, Scotts pre-emergent combination products have set the industry standard for broad-spectrum weed control, effectiveness and season long performance.



Formulation is the key

No one has more formulation experience in fertiliser with pre-emergent weed control products than Scotts, and no other pre-emergent can offer better, more cost effective particle coverage. With Scotts, pre-emergent active ingredients are distributed evenly over every particle for more consistent pre-emergent coverage. Constant particle size provides fewer application breaks and more effective control of annual grassy and broadleaf weeds.

Scotts makes it your way

Two Pendimethalin products, Premax Hi N and Premax Hi K provide the toughest, most cost effective control of annual grassy weeds in established turf areas.

No other pre-emergent comes with Poly-S

Only Scotts can provide the superior performance of patented Poly-S technology for controlled nutrient release with flexible release rates, higher nitrogen efficiency and a more predictable response. The result? You get greater value from the fertiliser you apply, with overall improvement in turf quality while controlling weeds.

Premax Hi N & Hi K – versatility and reliability

The toughest, most cost effective control of annual grassy weeds in established turf areas.

When irrigated after application, Pendimethalin is washed from the Poly-S fertiliser granule and allowed to flow into the soil surface. Once there, it binds tightly to the soil surface and acts as a barrier against annual germination of weed seedlings. As weed seeds germinate, Premax pre-emergent herbicide is taken up through the roots to kill weeds before they establish.

Scotts Premax products stop weed germination for 8 to 10 weeks depending upon application rate. By applying at the high rate first up, then reapplying after 8 to 10 weeks at the low rate, season long control is guaranteed. Poly-S fertiliser grows healthy turf during the control period, which helps to block light from weed seeds at the soil surface.

Premax Hi N

Premax Hi N delivers nitrogen in controlled release form, along with a reliable dose of pre-emergent herbicide. This is ideal for the seasons' initial application.

Premax Hi K

Premax Hi K delivers a lower level of controlled release nitrogen with the same reliable dose of pre-emergent herbicide. This is ideal for follow up application, or for situations where high levels of nitrogen fertiliser are not required.

Technical information

Product	Analysis	Herbicide	Application rate	Nitrogen/ha	Herbicide/ha
Premax Hi N	22+0+5	7.5g/kg pendimethalin	160-260 kg/ha	35.2-57.2 kg/ha	1.2-1.95 kg/ha
Premax Hi K	14+0+12	10.7g/kg pendimethalin	110-180 kg/ha	15.4-25.2 kg/ha	1.18-1.93 kg/ha

Refer to product label for detailed application rates

► Scotts Fact

Pendimethalin is a pre-emergent weed control active which provides excellent pre-emergent control of summer grass, crab grass, winter grass and other annual weeds.

Do not use on bent grass greens, buffalo grass, carpet grass or dichondra as damage may occur.

• Premax Hi K is not available in NZ

MaxGuard®

Fast acting, contact insecticide in a choice of granular and liquid formulations or granular combined with slow release fertiliser

The most advanced weapon in the fight against surface feeding insects

MaxGuard delivers fast acting, contact pyrethroid insecticide for immediate control of problem insects, such as Lawn armyworm, Sod webworm, Argentine stem weevil adults, African black beetle adults*, Billbug adults, Cutworms and Ants, including Stinging ants. MaxGuard is completely safe for use on all turf areas including greens, fairways, sports and amenity turf.

MaxGuard is a cost effective alternative to preventative systemic insecticides that enables you to monitor pest populations, identify a damage threshold and deliver a targeted treatment that works immediately. Always keep MaxGuard handy when emergency treatment is required to act quickly.

Safer to apply

MaxGuard 2G and MaxGuard NPK are not scheduled poisons. With minimal contact when applying the granular formulations, they are safe for users. Additionally, there are no restrictions on transport and storage as MaxGuard products are not classified as dangerous goods.

Smarter chemistry

MaxGuard uses an advanced pyrethroid chemistry that is uniquely light stable. This provides significantly longer residual control (dependant on application rate) than conventional pyrethroids. MaxGuard is very effective even at low application rates.

*MaxGuard 2G and 80SC only



Flexible delivery

The tables opposite provide a guide to using MaxGuard and will assist in selecting the right product for your needs. Granular, liquid or MaxGuard NPK, combined slow release fertiliser and granular insecticide.

Faster to act

MaxGuard chemistry has more insecticidal activity than other classes of insecticides such as organophosphates and carbamates, therefore requiring less active ingredient to control pest problems. MaxGuard acts faster to combat target insects at low rates.

Key features and benefits of MaxGuard NPK

- Single application delivers fertiliser and insect control
- Stimulates post-recovery of damage from insects, which assists in the repair of damage to leaves, stolons and rhizomes
- The application method is easy using a spreader
- High safety margin/low toxicity
- Quicker turf recovery
- Requires less active ingredient to control pest problems than other classes of insecticides

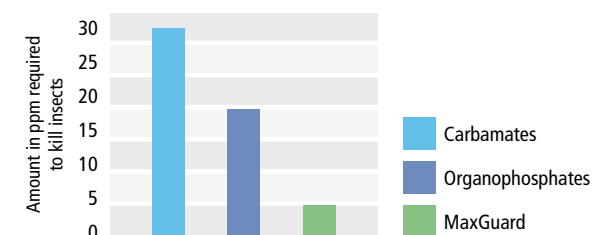


▶ Did you know...

MaxGuard NPK provides the convenience of a granular turf insecticide combined with a slow release 28+1.3+6.6 fertiliser, making it ideal for post damage recovery and insect control.

It is not a scheduled poison and with minimal contact when applying, is extremely safe for users. With a chemistry that has more insecticidal activity than other classes of insecticides such as organophosphates and carbamates, MaxGuard requires less active ingredient to control pests – acting faster to combat target insects at a lower rate of 140kg/ha.

MaxGuard requires less active ingredient to control pest problems than other classes of insecticides



MaxGuard® 2G. Ready to use granular turf insecticide.

Target	Application rate	Critical comments
Lawn armyworm (<i>Spodoptera mauritia</i>)	60 kg/ha (0.6 kg/100m ²)	Broadcast MaxGuard 2G with suitable application equipment to ensure uniform coverage over the treated area. To ensure optimum control, irrigate the treated area with up to 4 mm of water soon after application. Inspect the treated areas for continuing activity. Reapply as required. Where a rate range is indicated use lower rates under lower insect pressure and higher rates under higher insect pressure.
Sod webworm (<i>Herpetogramma licarsialis</i>)	60 kg/ha (0.6 kg/100m ²)	
Cutworm (<i>Agrotis</i> sp.)	60 kg/ha (0.6 kg/100m ²)	
Argentine stem weevil adults (<i>Listronotus bonariensis</i>)	60-120 kg/ha (0.6-1.2 kg/100m ²)	
African black beetle adults (<i>Heteronychus arator</i>)	120-180 kg/ha (1.2-1.8 kg/100m ²)	
Billbug adults (<i>Sphenophorus brunnipennis</i>)	60-120 kg/ha (0.6-1.2 kg/100m ²)	
Black ant, Coastal brown ant, Funnel ant, Meat ant, Sugar ant and Stinging ant only	60-220 kg/ha (0.6-2.2 kg/100m ²)	Apply granules to areas where ants are active. Where possible, apply granules directly to the nest. Use the low rate for maintenance treatments or to control light infestations and the high rate for heavy infestations and for maximum residual control. The elimination of Funnel ants from a particular site will generally require more than one application. Initial applications should be broadcast over affected areas. As the initial numbers of active colonies is reduced, application should shift to targeting active mounds. Apply granules directly to the mound and in the area immediately surrounding active mounds (300 mm radius).

MaxGuard® 80SC. Liquid turf insecticide.

Target	Application rate	Critical comments
Lawn armyworm (<i>Spodoptera mauritia</i>)	1.5L/ha (15 mL/100m ²)	Mix MaxGuard 80SC in water and apply evenly over the area to be treated using spray application equipment. Use a minimum total volume of at least 200L/ha (2L/100m ²). To ensure optimum control, irrigate the treated area with up to 4mm of water soon after application. Inspect the treated areas for continuing activity. Reapply as required. Where a rate range is indicated use lower rates under lower insect pressure and higher rates under higher insect pressure. Apply after mowing to minimise loss of insecticide in clippings.
Sod webworm (<i>Herpetogramma licarsialis</i>)	1.5L/ha (15 mL/100m ²)	
Cutworm (<i>Agrotis</i> sp.)	1.5L/ha (15 mL/100m ²)	
Argentine stem weevil adults (<i>Listronotus bonariensis</i>)	1.5-3.0L/ha (15-30 mL/100m ²)	
African black beetle adults (<i>Heteronychus arator</i>)	3.0-4.5L/ha (30-45 mL/100m ²)	
Billbug adults (<i>Sphenophorus brunnipennis</i>)	1.5-3.0L/ha (15-30 mL/100m ²)	
Black ant, Coastal brown ant, Funnel ant, Meat ant, Sugar ant and Stinging ant only	1.5-5.5L/ha (15-55 mL/100m ²)	Mix MaxGuard 80SC in water and apply over the area to be treated using spray application equipment. Apply to areas where ants are active. Where possible, spray directly into the nests. Use the low rate for maintenance treatments or to control light infestations and the high rate for heavy infestations and for maximum residual control. The elimination of Funnel ants from a particular site will generally require more than one application. Initial applications should be broadcast over affected areas. As the initial numbers of active colonies is reduced, application should shift to targeting active mounds. Apply spray directly to the mound and in the area immediately surrounding active mounds (300 mm radius).

MaxGuard® NPK. The convenience of a granular turf insecticide combined with a slow release fertiliser.

Target	Application rate	Critical comments
Lawn armyworm (<i>Spodoptera mauritia</i>)	140 kg/ha (1.4 kg/100m ²)	Use this product in situations where a fertiliser application is required and where insect pests are either present or expected. Apply every 2-3 months in a regular maintenance program. Broadcast MaxGuard NPK with suitable application equipment to ensure uniform coverage over the treated area. To ensure optimum control, irrigate the treated area with up to 4 mm of water immediately after application. Inspect treated areas for continuing activity. High populations of Argentine stem weevil and Billbug may require follow up treatment with MaxGuard 2G Granular Insecticide.
Sod webworm (<i>Herpetogramma licarsialis</i>)	140 kg/ha (1.4 kg/100m ²)	
Cutworm (<i>Agrotis</i> sp.)	140 kg/ha (1.4 kg/100m ²)	
Argentine stem weevil adults (<i>Listronotus bonariensis</i>)	140 kg/ha (1.4 kg/100m ²)	
Billbug adults (<i>Sphenophorus brunnipennis</i>)	140 kg/ha (1.4 kg/100m ²)	
Black ant, Coastal brown ant, Funnel ant, Meat ant, Sugar ant and Stinging ant only	140 kg/ha (1.4 kg/100m ²)	Effective control of Funnel ants may require follow-up spot treatment of nests with MaxGuard 2G Granular Insecticide.
Turf nutrition NPK 28+1.3+6.6	140 kg/ha (1.4 kg/100m ²)	Scotts unique Poly-S technology provides slow release nitrogen for 6-10 weeks feeding as well as potassium, phosphorus and sulphur. Ideal for post damage recovery and insect control.

Refer to product label for detailed application rates • MaxGuard is not available in NZ

Hydraflo® II

Granular soil wetting agent to aid soil absorption, enhance water retention and promote free drainage



For immediate and long term response

The improved dual-action formulation of Hydraflo II and the easy-to-use granules deliver immediate action as well as sustained effectiveness.



The ideal summer rewetter

Hydraflo II effectively decreases water surface tension and aids in the successful rewetting of soils in summer and dry periods. Hydraflo II allows for better water penetration and absorption which encourages deeper, stronger roots and healthier turf.

The ideal winter drainer

Hydraflo II encourages free drainage from waterlogged soils in winter and during heavy rainfall. This inhibits surface moss, algae growth and soil borne pathogens. When waterlogged soils drain, air is allowed into the rootzone enabling the grass plant to take up valuable nutrients.

Made in Australia for varied conditions

Hydraflo II can offer real help for overcoming extremes in weather, as well as hydrophobic soil conditions.

Guaranteed analysis

Blended Non-ionic Surfactants	15%
Inert Carrier	85%

Turf and landscape application method

Hydraflo II is a convenient, ready to use, formulation for the prevention of dry patch in turf and for improving percolation in waterlogged soils. Apply using a granule spreader that can be calibrated for even output, such as the Scotts AccuPro® 2000 professional spreader. For best results apply to dry foliage and water immediately with 4 to 6mm of irrigation.

Turf and amenity application rates

Situation	Application rate	Application frequency
Greens and tees	1.5kg/100m ²	Reapply at 1kg/100m ² every 6-12 weeks
Fairways and sports fields	2kg/100m ²	Reapply at 1kg/100m ² every 8-12 weeks

Product information

Hydraflo II	Description	Scotts code
Hydraflo II	Granular soil wetting agent	3638A

Key features and benefits

Features	Benefits
Granular product	<ul style="list-style-type: none"> • Easy to apply accurately by spreader • Safe to use, will not burn turf when used as directed • Spills are easily swept up
Complete formula	<ul style="list-style-type: none"> • No mixing required, minimises risk of application mistakes
Improved active ingredient	<ul style="list-style-type: none"> • Prevents turf dry patch • Facilitates free drainage from wet areas • Can increase water retention without decreasing air filled porosity • Encourages a healthier, deeper root system • Improves efficiency of pesticides and fertilisers



Graphical Representation

Left – Not treated by Hydraflo. Application of coloured water demonstrates uneven water distribution and lack of moisture and nutrient retention in the root zone.

Right – Treated with Hydraflo. Treatment with Scotts Hydraflo ensures an even matrix flow retaining moisture and nutrients in the root zone.



Hydraflo® L

A new generation wetting agent for all types of sports and amenity turf without any adverse effect on soil structure

- Uniform wetting to avoid summer dry patch
- Long term performance enables rewetting of dry soils
- Aids infiltration and drainage for deeper stronger roots
- Safe for use on all turf and ornamentals
- Available in 5L, 20L and 200L containers



General information

Hydraflo L is a liquid wetting agent that is completely safe for use on turfgrass greens, sports fields and lawns. Hydraflo L effectively decreases water surface tension aiding the successful rewetting of soils in dry summer periods, eliminating localised dry spots and increasing the uniformity of wetting throughout the soil profile. By allowing for better water penetration and absorption, Hydraflo L helps grow deeper stronger roots. Hydraflo L encourages free drainage from water logged soils in winter and during heavy rainfall. This inhibits surface moss, algae growth and soil borne pathogens. When water logged soils drain, air is allowed into the root zone enabling the turf to take up valuable nutrients.

Turf and amenity application

Situation	Application rate	Application Frequency
Greens and fine turf, lawns and landscapes.	0.125-0.375L/100m ²	3 months or as required
Fairways, sports turf, lawn turf and landscapes.	0.375-0.625L/100m ²	6 months or as required

Apply in advance of expected dry patch formation. Hydraflo L is a polymeric wetting agent that rewets readily after treated soil has been dry for extended periods.

Application through boom spray should use a minimum dilution of 1 part Hydraflo L to 200 parts water (1 litre Hydraflo L in 200 litres of water). Additional irrigation (3-6 mm) should be applied to ensure the Hydraflo L is thoroughly watered into the soil profile.

Product information

Hydraflo L	Description	Scotts code
Hydraflo L (5L)	Liquid soil wetting agent	8910
Hydraflo L (20L)	Liquid soil wetting agent	8915
Hydraflo L (200L)	Liquid soil wetting agent	8920

► Did you know...

Wetting agents are primarily used before the onset of hot weather to pre-condition the turf to accept irrigation. The wetting agent stops soil particles from becoming water repellent (hydrophobic) and changes the surface tension. This allows water to move freely through the soil and thatch to form an even wetting front. This also assists in the even uptake of nutrients.

Scotts Hydraflo is a new generation wetting agent that can be used on all types of sports and amenity turf. Besides promoting uniform water penetration, Hydraflo reduces water run-off on uneven ground through deep water penetration.

Hydraflo® NPK

A unique combination of slow release fertiliser and wetting agent in one convenient application



Uses

- Hydraflo NPK combines Scotts slow release methylene urea fertiliser (19+1+2) technology with a unique soil wetting agent Hydraflo, in a ready to use dry granular formulation
- Hydraflo NPK feeds turf for 6 to 8 weeks while simultaneously preventing formation of dry patch, aiding in the re-wetting of dried soils and also facilitating free drainage from wet areas
- Hydraflo NPK is ideal for renovation or maintenance feeding of greens, sports turf, landscape situations and amenity turf areas.



NPK – slow release fertiliser

- Methylene urea guarantees measured release of nutrients
- Provides stronger growth and better turf colour
- Safe for use on turfgrass when used as directed
- Reduces leaching of Nitrogen hence protecting the environment
- Particle size 1.7-4.0mm

Directions for use

Apply Hydraflo NPK to wet or dry foliage. Safe in use, no need to irrigate immediately after application except on bent grass. Irrigate the treated area with 4 to 6mm within 24 hours. Do not apply when day time temperatures are expected to exceed 32°C.

Technical information

Spreader settings AccuPro 2000	Low rate	High rate
Application rate	200 kg/ha	250 kg/ha
Ground speed	5 km/h	5 km/h
Width between passes of spreader	1.75m	1.75m
Cone setting	7	7
Setting	M	M½

NB: Always apply using a double application technique. The spreader listed will distribute granules in a 3.5m swathe which is twice the recommended pass width of 1.75m. Given spreader settings are recommendations only – exact rates using the settings given in this table cannot be guaranteed as rates are dependant on the spreader itself and the accuracy of the person operating it. Calibrate the spreader at regular intervals to provide proper distribution.