# CAUTION

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



# Marvel<sup>®</sup> Ultra

**Plant Growth Regulator** 

ACTIVE CONSTITUENT: 120 g/L TRINEXAPAC-ETHYL

For the regulation of leaf and stem growth of grass species and as an aid in turf management, as per the Directions for Use





adama.com CONTENTS: 1 - 20 L

## **DIRECTIONS FOR USE**

#### **RESTRAINTS**

DO NOT apply to turf recovering from wear, renovation or turf affected by disease, waterlogging or other stresses.

DO NOT use where growth regulatory effects are likely following the application of fungicide or any other material.

DO NOT apply to turf going into or coming out of dormancy.

DO NOT apply if rainfall is expected within 1 hour, and DO NOT irrigate turf for at least 1 hour after application.

DO NOT apply to Kentucky Bluegrass as damage may occur.



# **Turf Growth Management**

| SITUATION                                                                                                   | GRASSES                                                       | RATE         |                        | ODITION COMMENTS                                                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|--------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                             |                                                               | Per ha       | Per 100 m <sup>2</sup> | CRITICAL COMMENTS                                                                                                                                                                                                               |
| Golf course and bowling greens                                                                              | Bent grass                                                    | 1 - 2 L      | 10 - 20 mL             | Apply QUALI-PRO® MARVEL® ULTRA at least 6                                                                                                                                                                                       |
|                                                                                                             | Hybrid Couch                                                  | 0.15 - 0.6 L | 1.5 - 6 mL             | hours before or after mowing and when turf is actively growing.                                                                                                                                                                 |
| Golf course fairways                                                                                        | Carpet Grass, Kikuyu                                          | 1.6 - 4 L    | 16 - 40 mL             | Use the lower rates on turf with moderate growth rates where a lower level of growth                                                                                                                                            |
|                                                                                                             | Common Couch                                                  | 0.8 - 1.6 L  | 8 - 16 mL              | regulation is required, or when used in a                                                                                                                                                                                       |
|                                                                                                             | Couch varieties:<br>Greenless Park, Santa<br>Ana, Wintergreen | 0.6 - 1.2 L  | 6 - 12 mL              | program.  Apply rates towards the highest end of the rate range when growth is vigorous or when longer periods of 4 - 6 weeks regulation are required.                                                                          |
|                                                                                                             | Fescue,<br>Perennial Ryegrass                                 | 1.6 - 3 L    | 16 - 30 mL             | Application made to turf growing under cool conditions or to turf with low nutrient levels                                                                                                                                      |
| Golf course short<br>roughs, well<br>maintained lawns,<br>general turf surfaces                             | Bahia Grass,<br>Bent Grass, Fescue,<br>Perennial Ryegrass     | 2 - 4 L      | 20 - 40 mL             | or where growth rates are low may result in discolouration.  Well maintained turf surfaces are those which receive at least weekly mowing and good levels                                                                       |
|                                                                                                             | Buffalo Grass,<br>Common Couch,<br>Hybrid Couch               | 1 - 2 L      | 10 - 20 mL             | of water and fertility are maintained.  Refer to Application section for detailed information.                                                                                                                                  |
|                                                                                                             | Kikuyu                                                        | 1.6 - 6 L    | 16 - 60 mL             |                                                                                                                                                                                                                                 |
| Golf courses long<br>roughs, parks, ovals,<br>lawns, general grassed<br>areas                               | Bent Grass, Fescue,<br>Perennial Ryegrass                     | 2 - 6 L      | 20 - 60 mL             |                                                                                                                                                                                                                                 |
|                                                                                                             | Buffalo Grass,<br>Common Couch,<br>Hybrid Couch               | 1 - 4 L      | 10 - 40 mL             |                                                                                                                                                                                                                                 |
|                                                                                                             | Kikuyu                                                        | 2 - 8 L      | 20 - 80 mL             |                                                                                                                                                                                                                                 |
| Bunker facing, path<br>and garden edging,<br>Footpath and curb side<br>edging, Fence lines,<br>around trees | Bent grass,<br>Common Couch,<br>Perennial Ryegrass            | 4 - 6 L      | 40 - 60 mL             | Apply QUALI-PRO® MARVEL® ULTRA at least 6 hours before or after mowing and when turf is actively growing.                                                                                                                       |
|                                                                                                             | Buffalo Grass                                                 | 4 L          | 40 mL                  | On difficult to mow areas apply QUALI-PRO® MARVEL® ULTRA to actively growing turf and mow 3 - 4 days after application.  Apply in a strip approximately 25 - 50 cm wide. Use the lower rates of QUALI-PRO® MARVEL®              |
|                                                                                                             | Couch varieties:<br>Greenless Park, Santa<br>Ana, Wintergreen |              |                        |                                                                                                                                                                                                                                 |
|                                                                                                             | Kikuyu                                                        | 6 - 8 L      | 60 - 80 mL             | ULTRA around bunker edges and the higher rates in the other situations.  Application made to turf growing under cool conditions or to turf with low nutrient levels or where growth rates are low may result in discolouration. |

# Winter grass (Poa annua) Management

| SITUATION                                   | GRASSES                     | RATE      |                        | - CRITICAL COMMENTS                                                                                                                                                                          |
|---------------------------------------------|-----------------------------|-----------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                             |                             | Per ha    | Per 100 m <sup>2</sup> | CRITICAL COMMENTS                                                                                                                                                                            |
| Golf course fairways,<br>Golf course greens | Winter grass<br>(Poa annua) | 0.4 - 1 L | 4 - 10 mL              | See instructions under Winter Grass (Poa annua) Management for reduction of Poa annua swards in Bent Grass golf greens. See Golf course greens section above for application recommendations |

# Bahia grass (Paspalum notatum) Suppression and Seedhead Control

| SITUATION                                                                                                                                                              | GRASSES                                                                  | RATE                                                                                                                                   |                                                                                                                                      | CRITICAL COMMENTS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                        |                                                                          | Per ha                                                                                                                                 | Per 100 m <sup>2</sup>                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Common Couch, Durban Grass, Hybrid Couch, Old Blue Couch, Zoysia only In golf courses long roughs, lawns, median strips, ovals, parks, roadsides, general grassed area | Bahia grass<br>(Paspalum notatum)<br>suppression and<br>seedhead control | 2 - 4 L<br>Plus<br>75 mL/ha Monument*<br>Liquid Turf Herbicide<br>Plus<br>0.25 v/v non-ionic<br>surfactant (such as<br>Wetspray* 1000) | 20 - 40 mL<br>Plus<br>0.75 mL/ 100 m² of<br>Monument* Liquid<br>Plus<br>0.25 v/v non-ionic<br>surfactant (such as<br>Wetspray® 1000) | Apply during summer when Bahia Grass produces seedheads.  DO NOT apply more than 2 consecutive applications of Monument Liquid per season. See instructions under Bahia Grass ( <i>Paspalum notatum</i> ) Management. For control of Bahia Grass seedheads in established couch areas. Refer to Application section for detailed information.  Important: Refer to the Monument Liquid label for specific directions on mixing, avoiding spray drift, sprayer clean-up and protection of nontarget crops and the environment. |

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.



#### WITHHOLDING PERIOD

#### DO NOT GRAZE TREATED TURF/LAWN, OR FEED TURF/LAWN CLIPPINGS FROM ANY TREATED AREA TO POULTRY OR LIVESTOCK.

#### **GENERAL INSTRUCTIONS**

QUALI-PRO® MARVEL® ULTRA should be applied to actively growing turf, at least 6 hours before or after mowing. Good mowing management leading up to application is required to achieve a good quality turf surface and to obtain the best results from QUALI-PRO® MARVEL® ULTRA.

#### **GROWTH REGULATION**

The recommended use rates are designed to give approximately a 20 to 50% reduction in clippings over a 2 to 6 week period. Full growth regulation by QUALI-PRO® MARVEL® ULTRA begins about 3 to 5 days after application. In practice the amount of growth regulation achieved will vary between situations due to environmental conditions and management practices. To some extent, therefore, application rates will need to be adjusted to match growing conditions, management practices and the amount of growth regulation required by the turf manager.

Repeat applications can be made as soon as the turf resumes growth or more suppression is required. Areas treated with QUALI-PRO® MARVEL® ULTRA should continue to receive regular maintenance practices, including irrigation, fertilisation, and weed, disease and insect control when necessary, as recommended for quality turf.

#### Winter Grass (Poa annua) Management

Different grasses vary in their sensitivity to QUALI-PRO® MARVEL® ULTRA. Since *Poa annua* is more sensitive to QUALI-PRO® MARVEL® ULTRA than Bent Grass, QUALI-PRO® MARVEL® ULTRA can be used to reduce the competitiveness of *Poa annua* in Bent Grass golf greens. QUALI-PRO® MARVEL® ULTRA can be integrated into existing *Poa annua* control programs. Low rates of QUALI-PRO® MARVEL® ULTRA (that provide growth suppression of *Poa annua*, but not Bent Grass) applied during peak periods may enable a slow transition in the golf green sward composition away from *Poa annua* and towards a higher percentage of Bent Grass.

#### Bahia Grass (Paspalum notatum) Management

Different grasses vary in their sensitivity to QUALI-PRO® MARVEL® ULTRA and Monument\* Liquid. Bahia Grass is very sensitive to the combination resulting in control of seedheads as well as vegetative growth suppression. Apply the combination as soon as seedheads start to form or when it becomes a regular mowing intervention issue, normally during October to January. Apply at 4 week intervals after mowing.

#### **Couch Overseeding**

An application of QUALI-PRO® MARVEL® ULTRA to couch will enhance the establishment of cool season turf grasses. QUALI-PRO® MARVEL® ULTRA is foliarly absorbed, so germination and seeding growth is not affected. Apply QUALI-PRO® MARVEL® ULTRA before verticutting, scalping, spiking or other similar operations to the couch. Apply QUALI-PRO® MARVEL® ULTRA 1 to 5 days before seeding.

#### MIXING

QUALI-PRO® MARVEL® ULTRA is a micro emulsion concentrate (ME) with minimal odour as the product does not contain petroleum solvents. QUALI-PRO® MARVEL® ULTRA mixes completely with water and may be tank mixed with many commonly used fungicides and liquid fertilizers. Add the required quantity of QUALI-PRO® MARVEL® ULTRA directly to the spray tank containing 2/3 of the required spray volume. Add the rest of the water and ensure the mix is thoroughly agitated before application.

#### APPLICATION

Ensure even application in order to achieve even growth reduction. Avoid overlapping sprays.

**Application volume:** Apply in 100 to 500 L/ha water, using suitable flat fan nozzles. Application volume should be adequate to ensure thorough and even coverage, or the turf leaves and penetration to the crowns. In higher cut turf (>15 mm) a significant spray shielding effect can occur, impacting negatively on spray penetration and even coverage at low application volumes.

**Knapsack:** It is important to apply the correct quantity of QUALI-PR0° MARVEL® ULTRA to a known area of turf. Apply between 2 and 10 L water/100 m² turf. Preferably use flat fan nozzles and ensure even coverage is achieved.

Golf Courses and Bowling Greens: Ensure product placement as uniformly as possible onto leaves and into crowns. Ideal application volume should be 350 - 500 L/ha. For best results use medium [XR Teejet\* (11004 or 11005)] to coarse [Turbo Teejet\* or AIXR Teejet\* (11004 or 11005)] nozzles, at 5 km/h and 3 bar pressure. Boom height should not exceed 50 cm above the ground.

**All Other Turf Areas:** Ensure product placement as uniformally as possible onto leaves and into crowns. Ideal application volume should be 200 - 500 L/ha. For best results use medium [XR Teejet\* (11004 to 11008)] to coarse [Turbo Teejet\* or AIXR Teejet\* (11004 or 11005)] nozzles, at 8 km/h and 3 bar pressure. Boom height should not exceed 50 cm above the ground.

Bahia Grass Suppression and Seedhead Control: Ensure product placement as uniformly as possible onto leaves and into crowns. Ideal application volume should be 200 to 500 L/ha. For best results use coarse [Turbo Teejet\* or AIXR Teejet\* (11004 or 11005)] nozzles, at 8 km/h and 3 bar pressure. Boom height should not exceed 50 cm above the ground.

Non-ionic Surfactants: For Bahia Grass suppression and seedhead control when tank mixing with Monument Liquid, use surfactants like Wetspray® 1000 (1000 g ai/L formulations) at 0.25% v/v or 250 mL/100 L spray mix.

Application Near and Around Monuments and Hardscape Materials: QUALI-PRO® MARVEL® ULTRA, at normal dilution rates, will not stain brass, bronze, concrete, granite, marble or other types of stone. Before using QUALI-PRO® MARVEL® ULTRA around other materials, test on a small-scale basis first.

#### **COMPATIBILITY**

For Common Couch, Hybrid Couch and Kikuyu turf grasses only QUALI-PRO® MARVEL® ULTRA is compatible with some formulations of products containing the following chemicals: 2,4-D amine, bromoxynil, MCPA/bromoxynil/ dicamba, MCPA ester/bromoxynil/, MCPA ester/bromoxynil/dicamba, MCPP/2,4-D amine/dicamba or MCPP/ dicamba. However, some transient discolouration of the treated turf may occur after application of a tank mix.

For the treatment of broadleaf weeds in turf with herbicides other than those indicated above, it is recommended to apply QUALI-PRO® MARVEL® ULTRA and the broadleaf weed herbicides separately, allowing at least 10 days between an application of QUALI-PRO® MARVEL® ULTRA and the broadleaf weed herbicides.

#### **RE-ENTRY PERIOD**

DO NOT enter treated areas without protective clothing until spray has dried. DO NOT allow the public to enter treated areas until spray has dried

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT Dangerous to fish larvae and oysters. DO NOT contaminate dams, rivers, streams or storm water drains with concentrate or used container. Wash out spraying equipment and mixing and measuring utensils with water onto grass.

#### STORAGE AND DISPOSAL

Store in the closed, original container in a dry, cool, well ventilated area. DO NOT store for prolonged periods in direct sunlight. This container can be recycled if it is clean, dry, free of visible residues and has the drumMuster logo visible. Triple-rinse container for disposal. Dispose of rinsate by adding it to the spray tank. DO NOT dispose of undiluted chemicals on site. Wash outside of the container and the cap. Store cleaned container in a sheltered place with cap removed. It will then be acceptable for recycling at any drumMuster collection or similar container management program site. The cap should not be replaced, but may be taken separately. 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 empty packaging 500 mm 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.

## **SAFETY DIRECTIONS**

Harmful if inhaled. May irritate eyes and skin. Avoid contact with eyes and skin. DO NOT inhale spray mist. When opening the container, preparing the spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing) and elbow-length PVC gloves. Wash hands after use. After each day's use, wash contaminated clothing.

## **FIRST AID**

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26.



#### SDS

If additional hazard information is required refer to the Safety Data Sheet (SDS). A Safety Data Sheet for QUALI-PRO® MARVEL® ULTRA is available at adama.com or Call Customer Service on 1800 423 262.

CONDITIONS OF SALE: The use of QUALI-PRO® MARVEL® ULTRA Plant Growth Regulator being beyond the control of the manufacturer, no warranty expressed or implied is given by Adama Australia regarding its suitability, fitness or efficiency for any purposes for which it is used by the buyer, whether in accordance with the Directions for Use or not. Adama Australia accepts no responsibility for any consequence whatsoever resulting from the use of this product.

- <sup>®</sup> Registered trademark of an Adama Group Company
- \* Other trademarks

09/2023 24023

