

Tower Herbicide—New Herbicide Chemistry for Ornamentals

Todd Burkdoll, Turf and Ornamentals Market Development Specialist, BASF Corporation
James.burkdoll@basf.com Email: 559-906-4641

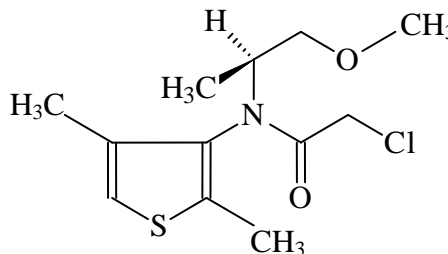
Product Information

Pending registration in CA - Expected mid to late summer 2011

- New active ingredient, broad-spectrum preemergence herbicide, for ornamentals - *dimethenamid-p*.
- Spectrum of activity---
- Controls small-seeded broadleaf weeds, including emerging problem weed species like doveweed, eclipsta, groundsel and liverwort
- Controls numerous grassy weeds and several sedges including yellow nutsedge
- Applied as a directed spray in field-grown nursery stock, landscapes and non-crop areas.
- Can be tank-mixed with Pendulum® AquaCap™ or other DNA herbicides for broader preemergence weed control

Dimethenamid-P: BAS 656H an Introduction

- **Toxicological Properties:** tech
 - Oral LD 50 rat: 1570 mg/kg
 - Dermal LD 50 rabbit: > 2000 mg/kg
 - Skin irritation (rabbit): slight
 - Eye irritation (rabbit): moderate
 - Teratogenicity: negative
 - Mutagenicity: Ames test negative
 - Reproductive: no adverse effects



Product Chemistry

- **Active Ingredient:** dimethenamid-p
- **Chemical Family:** chloroacetamide (Group 15)
- **Mode of Action:** Interferes with cell development
- **Behavior in Plants:** Inhibits seedling shoots, does not move readily in the plant
- **Control Symptoms:** Coleoptile growth is inhibited and emerged shoots are deformed
- **Half life** in soil 21-28 days

Tower Standard Information

- **Formulation:** 6.0 lb ai/gal EC (liquid)
- **Tank Mixing:** Can be tank mixed with Pendulum® AquaCap™, simazine, glyphosate, and other pre- and post-emergence herbicides (consult specific labels for uses and restrictions)
- **Reentry Interval:** 12 hours for agricultural workers
- **Caution Signal Word:** Warning

Application Timing

- Apply as a directed spray-application to the base of ornamental plants as pre emergent to weeds
- Do not apply to newly transplanted seedlings until plants have been watered and soil has settled and packed around root system
- Do not make applications at bud break, bud swell or at the first flush of new growth

Weeds Controlled by Tower Herbicide

Annual bluegrass	Hairy bittercress	Pigweeds
Barnyardgrass	Henbit	Ryegrass
Carpetweed	Fall panicum	Sedges, annual & Yellow
Chickweed	Florida pusley	Shepherdspurse
Crabgrass	Field sandbur	Spurge spp.
Dogfennel	Fireweed (Am burnweed)	Willowherb
Doveweed	Foxtails	Woodsorrel (Oxalis spp.)
Eclipta	Kyllinga spp.	
Goosegrass	Nightshades	

Use Sites

- Field Grown Nurseries
- Christmas Tree Plantations
- Landscape or Grounds Maintenance
- Mulch beds
- Ornamental Bulb production
- Noncrop Areas
- Jogging and Bike Trails
- Parking Lots
- Fence Lines
- Highway Rights-of-Way
- Golf Course Turf

Ornamental Crops Tolerant to Tower Directed Sprays

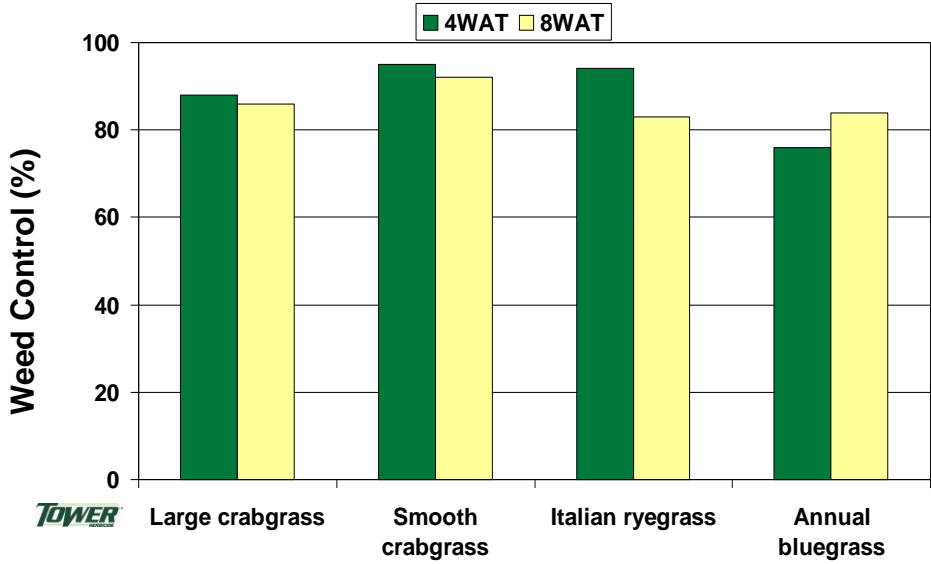
- | | | |
|---------------------|--------------------|----------------|
| ■ Red ash | ■ Red maple | ■ Juniper |
| ■ White cedar | ■ Western redcedar | ■ Rhododendron |
| ■ Crape myrtle | ■ Azalea | ■ RoseSpirea |
| ■ Douglas Fir* | ■ Boxwood | ■ Yew |
| ■ Fraser Fir | ■ Holly spp. | |
| ■ Southern Magnolia | ■ Hydrangea | |

Key Features

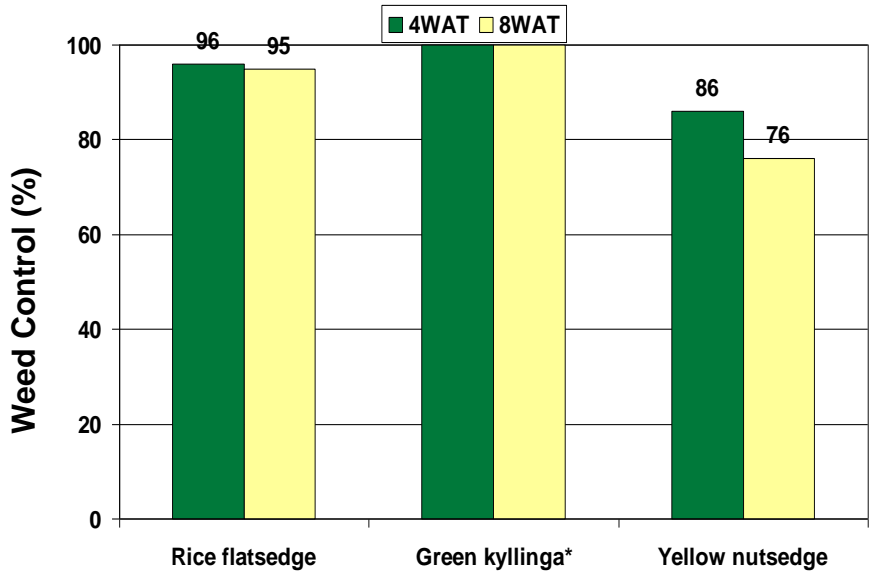
- Excellent control of small seeded broadleaf weeds, including troublesome, new weed problems
- Controls yellow nutsedge more effectively than any available product
- Provides unsurpassed weed control when tank mixed with Pendulum AquaCap

Tower Herbicide for broader spectrum Weed Control in Ornamentals and GC turf.
Pending registration in CA (*Expected mid to late summer 2011*)

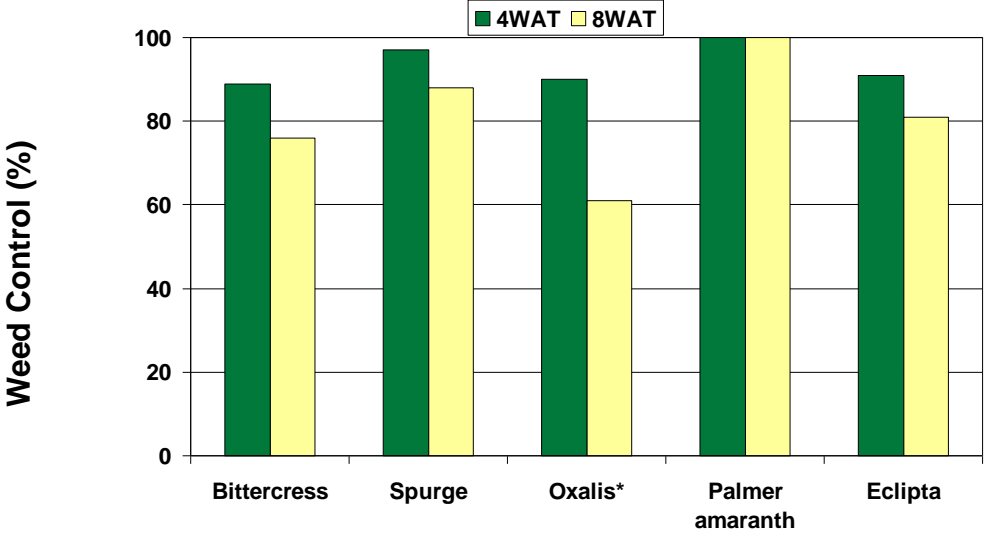
Grass Weed Control App. Rates 21 to 32 fl oz/A



Sedge Weed Control (cont.) App. Rates 32 fl oz/A



Broadleaf Weed Control App. Rates 21 to 32 fl oz/A



Broadleaf Weed Control (cont.) App. Rates 21 to 32 fl oz/A

