



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

September 28, 2022

Jordan Moseley  
Regulatory Specialist  
Syngenta Crop Protection, LLC  
P.O. Box 18300  
Greensboro, NC 27419

Subject: Label Amendment –Adding use against goosegrass in Florida and incorporating Mesotrione Interim Decision Registration Review changes  
Product Name: Tenacity  
EPA Registration Number: 100-1267  
Application Date: October 7, 2019; March 30, 2022  
Decision Number: 556047; 582918

Dear Jordan Moseley:

The Agency, in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, has completed reviewing all of the information submitted with your application to support the Registration Review of the above referenced product in connection with the Mesotrione Interim Decision, and has concluded that your submission is acceptable. The amended label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims

Page 2 of 2  
EPA Reg. No. 100-1267  
Decision No. 556047; 582918

substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Derek Corbin by phone at 202-566-2571, or via email at [Corbin.Derek@epa.gov](mailto:Corbin.Derek@epa.gov).

Sincerely,

A handwritten signature in cursive script that reads "Paul Di Salvo".

Paul Di Salvo, MPS, CWB®  
Senior Regulatory Specialist  
Registration Division (7505M)  
Office of Pesticide Programs

Enclosure: Stamped Label

[Master Label]

MESOTRIONE	GROUP	27	HERBICIDE
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Tenacity®

An herbicide for the selective contact and residual control of weeds in ornamental turfgrasses

Active Ingredient:	
Mesotrione* .....	40.0%
Other Ingredients:	60.0%
Total:	100.0%

Tenacity is formulated as a suspension concentrate and contains 4 lbs. of mesotrione per gallon.

\*CAS No. 104206-82-8

**KEEP OUT OF REACH OF CHILDREN.**

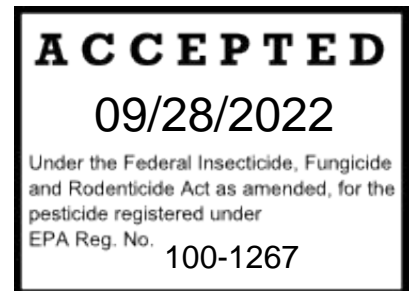
## **CAUTION**

See additional precautionary statements and directions for use inside attached booklet.

EPA Reg. No. 100-1267

EPA Est.

Net Contents



<b>FIRST AID</b>	
<b>If on skin or clothing</b>	<ul style="list-style-type: none"><li>• Take off contaminated clothing.</li><li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If in eyes</b>	<ul style="list-style-type: none"><li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li><li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li><li>• Call a poison control center or doctor for treatment advice.</li></ul>
<b>If inhaled</b>	<ul style="list-style-type: none"><li>• Move person to fresh air.</li><li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li><li>• Call a poison control center or doctor for further treatment advice.</li></ul>
<b>If swallowed</b>	<ul style="list-style-type: none"><li>• Call a poison control center or doctor immediately for treatment advice.</li><li>• Have person sip a glass of water if able to swallow.</li><li>• <b>DO NOT</b> induce vomiting unless told to do so by the poison control center or doctor.</li><li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li></ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
<b>HOTLINE NUMBER</b> For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident), Call <b>1-800-888-8372</b>	

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## **PRECAUTIONARY STATEMENTS**

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### **Hazards to Humans and Domestic Animals**

#### **CAUTION**

Harmful if absorbed through skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly with soap and water before eating, drinking, chewing gum, using tobacco, or using toilet.

### **Personal Protective Equipment (PPE)**

#### **Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants

- Shoes plus socks
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥ 14mils, nitrile rubber ≥ 14mils, neoprene rubber ≥ 14mils, natural rubber ≥ 14mils, polyethylene, polyvinyl chloride (PVC) ≥ 14mils, or Viton™ ≥ 14mils

### **User Safety Requirements**

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

### **Engineering Control Statements**

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR 170.240(d)(4-6)), the handler PPE requirements may be reduced or modified as specified in the WPS.

### **User Safety Recommendations**

#### **Users should:**

- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing
- Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### **Environmental Hazards**

**DO NOT** apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment wash water or rinsate.

### **Non-Target Organism Advisory**

This product is toxic to plants and may adversely impact the forage habitat of non-target organisms, including pollinators, in areas adjacent to the treated site. Protect the forage and habitat of non-target organisms by following label directions intended to minimize spray drift.

### **Groundwater Advisory**

Mesotrione is known to leach through soil into groundwater under certain conditions as a result of label use. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

### Surface Water Advisory

This product may impact surface water quality due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a high potential for reaching surface water via runoff for several months or more after application.

A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading for mesotrione from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

### Physical and Chemical Hazards

**DO NOT** use or store near heat or open flame.

## DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with labeling.

**DO NOT** apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**DO NOT enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.** Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Shoes plus socks
- Chemical-resistant gloves made of barrier laminate, butyl rubber ≥14mils, nitrile rubber ≥14mils, neoprene rubber ≥14mils, natural rubber ≥14mils, polyethylene, polyvinyl chloride (PVC) ≥14mils, or Viton ≥14mils

### **NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**DO NOT** enter treated areas without protective clothing until sprays have dried.

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### **USE INFORMATION**

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Tenacity is a systemic preemergence and postemergence herbicide for the selective contact and residual control of weeds in turfgrasses. When applied preemergence, weeds absorb Tenacity during emergence from the soil. Dry conditions following application may reduce the preemergence activity. If rainfall (0.15 inches) has not occurred within 10 days after a preemergence application, activate with 0.15 inches of irrigation. When used postemergence, susceptible weeds absorb Tenacity through foliar contact and soil absorption. Foliage of treated weeds cease growth after application, then turn white (loss of chlorophyll) and death may take up to three weeks. A repeat application is required after two to three weeks for improved postemergence weed control. For best results, add a non-ionic surfactant for postemergence applications.

Tenacity may cause temporary whitening of turfgrass foliage. Symptoms appear five to seven days after application and last for several weeks. A repeat application to the same site causes less whitening of the plant tissue.

Tenacity is an effective herbicide for weed control prior to or during seeding of certain turfgrasses during turf renovation (see section on use in **New Seedings**). If used preemergence in established turf, tank mixtures with preemergence herbicides including such as Barricade® 65WG Herbicide (proflaminate; EPA Reg No. 100-834) are advised for longer residual and broad spectrum weed control.

### **USE PRECAUTIONS**

- Bentgrass, *Poa annua*, kikuyugrass, zoysiagrass, seashore paspalum and bermudagrass are sensitive to Tenacity applications. Avoid spraying these turf types unless control and/or injury can be tolerated. Maintain a five foot buffer between treated areas and bentgrass or *Poa annua* greens.
- Clean sprayer thoroughly after an application of Tenacity if same equipment is used to apply products to bentgrass and bentgrass/*Poa annua* turf areas.
- To reduce movement into sensitive species (e.g. bentgrass), keep people and pets off treated areas until spray has dried and irrigate lightly to move product from turf foliage before resuming normal irrigation.
- Avoid over-spray or drift of spray applications onto ornamentals or flower beds and gardens. Roses and daylilies are sensitive plant species.
- Avoid applications over the top of exposed roots of trees and ornamentals.

## USE RESTRICTIONS

- **DO NOT** apply more than 8 fl oz (0.25 lb mesotrione) of Tenacity per acre in a single application
- **DO NOT** apply more than 16 fl oz (0.50 lb mesotrione) of Tenacity per acre per year (i.e. 2 applications at the maximum single application rate)
- Wait a minimum of 14 days before retreating
- **DO NOT** plant any crop other than turfgrass species for 18 months after the last application of Tenacity or injury may occur.
- **DO NOT** apply an organophosphate or carbamate insecticide within seven days of a Tenacity application as turf injury may occur.
- **DO NOT** apply through any type of irrigation system.
- **DO NOT** apply aerially.
- **DO NOT** use grass clippings from treated turf as mulch around trees or in vegetable/flower gardens.
- **DO NOT** use on golf course putting greens and maintain a five foot buffer between treated areas and putting greens.

## TANK MIXTURES



**It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations, and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.**

Tenacity has been tested in tank mixtures with Barricade 65WG Herbicide (proflaminate, EPA Reg. No. 100-834), dicamba, Turflon® Ester (triclopyr, EPA Reg. No. 62719-258), Quicksilver™ Herbicide (carfentrazone, EPA Reg. No. 279-3301), Basagran® (bentazon, EPA Reg. No. 66330-413), Princep® (simazine, EPA Reg. No. 100-526), AAtrex® (atrazine, EPA Reg. No. 100-497 and 100-585) and metribuzin for safety and efficacy on turfgrasses. Other tank mixture partners may be safe but have not been tested. Turf managers wanting to tank mix Tenacity with other herbicides are advised to test on a small basis for compatibility, safety and efficacy before treating large areas.

### **MANDATORY SPRAY DRIFT MANAGEMENT**

#### **Groundboom Applications:**

- Do not release spray at a height greater than 3 feet above the ground or crop canopy.
- Applicators must select nozzle and pressure that deliver medium or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASABE S572.1).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

#### **Boomless Ground Applications:**

- Applicators must select nozzle and pressure that deliver medium or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASABE S572).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

### **SPRAY DRIFT ADVISORIES**

**THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.**

## **IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

### **Controlling Droplet Size – Ground Boom**

- Volume – Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

### **BOOM HEIGHT – Ground Boom**

For ground equipment, the boom should remain level with the turf and have minimal bounce.

### **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

### **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

### **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

## WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.

Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

## Handheld Technology Applications

- Take precautions to minimize spray drift.

## USE SITES

Tenacity may be used for weed control in turfgrass species listed on this label in commercial and residential sites. Use sites include non-crop areas: golf courses, sod farms, athletic fields, parks, residential and commercial properties, cemeteries, airports, and lawns.

## TURFGRASS SPECIES

Tenacity has been tested on these species and found to be safe under trial conditions.

Species		Rate per Acre	Rate (lb ai/A)
Kentucky bluegrass	<i>Poa pratensis</i>	5-8 fl oz	0.156-0.25
Centipedegrass	<i>Eremochloa ophiuroides</i>	5-8 fl oz	0.156-0.25
Buffalograss	<i>Buchloe dactyloides</i>	5-8 fl oz	0.156-0.25
Tall fescue	<i>Festuca arundinacea</i>	5-8 fl oz	0.156-0.25
Perennial ryegrass*	<i>Lolium perenne</i>	5 fl oz	0.156
Fine fescue* (creeping red, chewings and hard)	<i>Festuca</i> spp.	5 fl oz	0.156
St. Augustinegrass* (grown for sod)	<i>Stenotaphrum secundatum</i>	4 fl oz	0.125

\*See additional rate instructions below.

## WEED RESISTANCE MANAGEMENT

MESOTRIONE	GROUP	27	HERBICIDE
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Tenacity is a Group 27 Herbicide (active ingredient is mesotrione, a HPPD inhibitor). Naturally occurring biotypes of certain broadleaf weed species with resistance to triazines, glyphosate, PPO, HPPD and ALS inhibiting herbicides are known to exist.

To help prevent the development of resistance, **DO NOT** apply less than the label specifies and rotate to an herbicide with a different mode of action if the maximum number of applications or rate of product has been met or weeds are not being controlled.

### Principles of Herbicide Resistant Weed Management

#### Scout and know your turf

- Know weed species present in the field to be treated through scouting and field history. An understanding of weed biology is useful in designing a resistance management strategy. Ensure the weed management program will control all weeds present.
- Turf should be scouted prior to application to determine species present and growth stage. Always apply this herbicide at the labelled rate and correct timing for the weeds present in the turf.

#### Use good agronomic practices, start clean and stay clean

- Use good agronomic practices that enhance turf competitiveness.
- Plant into weed-free fields utilizing tillage or an effective burndown herbicide for control of emerged weeds.
- Sanitize equipment to avoid spreading seed or vegetative propagules prior to leaving fields.

#### Difficult to control weeds

- Difficult to control weeds may require sequential applications, such as a broad spectrum preemergence herbicide followed by one or more postemergence herbicide applications. Utilize herbicides containing different modes of action effective on the target weeds in sequential applications.

#### Do not overuse the technology

- Do not use more than two applications of this or any other herbicide with the same mode of action in a single growing season unless mixed with an herbicide with a different mode of action which provides overlapping spectrum for difficult to control weeds.

## Scout and inspect turf following application

- Prevent an influx of weeds into the field by controlling weeds in areas surrounding turf.
- Scout fields after application to verify that the treatment was effective.
- Suspected herbicide resistant weeds may be identified by these indicators
  - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds.
  - A spreading patch of non-controlled plants of a particular weed species; and
  - Surviving plants mixed with controlled individuals of the same species.
  - Report non-performance of this product to your Syngenta retailer, Syngenta representative, or call 1-866-Syngent(a) (866-796-4368). If resistance is suspected ensure weed escapes are controlled using an herbicide with an effective mode of action and/or use non-chemical means to prevent further seed production.

## Prevent weed escapes

- Do not allow weed escapes to produce seed or vegetative structures such as tubers or stolons which contribute to spread and survival.

## Resistant Weeds

- Contact your local Syngenta representative, retailer, crop advisor or extension agent to determine if weeds resistant to modes of action contained in this product are present in your area.
- Do not assume that each listed weed is being controlled by multiple modes of action. Premixes are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredients in this product.
- If resistant biotypes have been reported, use the full labeled rate of this product, apply at the labeled timing, and tank-mix with an additional different mode of action product so there are multiple effective modes of application for each suspected resistant weed.

## WEEDS CONTROLLED

Common Name	Scientific Name	Preemergence <sup>1</sup>	Postemergence <sup>2</sup>
Barnyardgrass	<i>Echinochloa crusgalli</i>	Y	Y
Bentgrass, Creeping	<i>Agrostis stolonifera</i>	Y	Y
Bluegrass, Annual	<i>Poa annua</i>	Suppression	N
Buckhorn Plantain	<i>Plantago lanceolata</i>	Y	Y

<b>Common Name</b>	<b>Scientific Name</b>	<b>Preemergence<sup>1</sup></b>	<b>Postemergence<sup>2</sup></b>
Buttercup	<i>Ranunculus sardous</i>	- <sup>3</sup>	Y
Carpetweed	<i>Mollugo verticillata</i>	Y	Y
Chickweed, Common	<i>Stellaria media</i>	Y	Y
Chickweed, Mouseear	<i>Cerastium vulgatum</i>	Y	Y
Clover, Large Hop	<i>Trifolium aureum</i>	Y	Y
Clover, White	<i>Trifolium repens</i>	Y	Y
Crabgrass, Large	<i>Digitaria sanguinalis</i>	Y	Y <sup>4</sup>
Crabgrass, Smooth	<i>Digitaria ischaemum</i>	Y	Y <sup>4</sup>
Crabgrass, Southern	<i>Digitaria ciliaris</i>	Y	Y <sup>4</sup>
Curly dock	<i>Rumex crispus</i>	-	Y
Dandelion, Catsear	<i>Hypochoeris radicata</i>	-	Y
Dandelion, Common	<i>Taraxacum officinale</i>	-	Y
Florida Betony	<i>Stachys floridana</i>	-	Y
Florida Pusley	<i>Richardia scabra</i>	-	Y
Foxtail, Yellow	<i>Setaria glauca</i>	Y	Y
Galinsoga	<i>Galinsoga ciliata</i>	Y	Y
Goosegrass	<i>Eleusine indica</i>	-	Y <sup>4</sup>
Ground Ivy	<i>Glechoma hederacea</i>	-	Y
Healall	<i>Prunella vulgaris</i>	-	Y
Henbit	<i>Lamium amplexicaule</i>	-	Y

Lambsquarters, Common	<i>Chenopodium album</i>	Y	Y
Lawn Burweed	<i>Soliva sessilis</i>	-	Y
Lovegrass, Tufted	<i>Eragrostis pectinacea</i>	-	Y
Marestail	<i>Conyza canadensis</i>	-	Y
Nimblewill	<i>Muhlenbergia schreberi</i>	-	Y
Nutsedge, Yellow	<i>Cyperus esculentus</i>	-	Y
Oxalis	<i>Oxalis stricta</i>	-	Y
Pigweed, Redroot	<i>Amaranthus retroflexus</i>	Y	Y
Pigweed, Smooth	<i>Amaranthus hybridus</i>	Y	Y
Purslane, Common	<i>Portulaca oleracea</i>	Y	Y
Shepherd's purse	<i>Capsella bursa-pastoris</i>	Y	Y
Smartweed, Pale	<i>Polygonum lapathifolium</i>	Y	Y
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>	Y	Y
Speedwell, Persian	<i>Veronica persica</i>	Y	-
Speedwell, Purslane	<i>Veronica peregrina</i>	Y	-
Sowthistle	<i>Sonchus oleraceus</i>	-	Y
Swinecress	<i>Coronopus didymus</i>	-	Y
Thistle, Canada	<i>Cirsium arvense</i>	-	Y
Verbena	<i>Verbena hastata</i>	-	Y
Wild Carrot	<i>Daucus carota</i>	Y	Y
Wild Violet	<i>Viola pratincola</i>	-	Y
Windmillgrass	<i>Chloris verticillata</i>	-	Y

<sup>1</sup>For broad spectrum preemergence activity apply with a grass preemergence herbicide such as Barricade 65WG Herbicide (prodiamine, EPA Reg. No. 100-834), except when used for weed control in new seedings.

<sup>2</sup>Weed control with postemergence applications require a second application after 2 to 3 weeks. Apply to young, actively growing weeds with a NIS type surfactant.

<sup>3</sup>– “ Not tested.

<sup>4</sup>For best postemergence control, apply to less than 4 tiller crabgrass and goosegrass.

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## **APPLICATION INFORMATION**

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**Please read and understand the USE PRECAUTIONS AND RESTRICTIONS under the USE INFORMATION section above prior to making applications.**

**Preemergence Application** - Apply Tenacity at 4-8 fl. oz. per acre (0.125-0.25 lb ai/A) in at least 30 gallons of water per acre prior to weed seed germination. **DO NOT** exceed 5 fl. oz. per acre (0.156 lb ai/A) per application to perennial ryegrass or fine fescues or mixed stands that contain greater than 50% perennial ryegrass and/or fine fescue. **DO NOT** exceed 4 fl. oz. per acre (0.125 lb ai/A) to St. Augustinegrass sod. Make application close to anticipated weed seed germination. Tenacity should be combined with a preemergence herbicide such as Barricade 65WG Herbicide (proflaminate, EPA Reg. No. 100-834), for extended control of key annual monocot weeds including crabgrass and foxtail.

**New Seedings/New Lawn Establishment** – Apply Tenacity at 5-8 fl oz per acre (0.156-0.25 lb ai/A) in at least 30 gallons of water per acre prior to seeding or post seeding of tolerant turfgrass species listed on this label, **except fine fescue**. Tenacity may reduce density of fine fescue seedings. Tenacity can be used on grass seed blends that contain less than 20% by weight of hard or fine fescue. Tenacity will control many monocot and dicot weeds that compete with and slow the establishment of the turfgrass stands. Apply at grass seeding or close to seeding for best performance. Avoid spraying on newly germinated turfgrass plants. Wait until the newly germinated turf has been mowed two times or four weeks after emergence (whichever is longer) before making a postemergence application.

**Postemergence Application** – Apply Tenacity at 4-8 fl oz per acre (0.125-0.25 lb ai/A) in at least 30 gallons of water per acre. Apply with a NIS type surfactant. A repeat application at two to three weeks may be required for adequate weed control. Weed control is most effective on young, actively growing weeds. Efficacy will be reduced under moisture stress or from applications to mature weeds.

**Control of bentgrass (*Agrostis* spp.) and nimblewill (*Muhlenbergia schreberi*)** – Apply Tenacity at 5 fl oz per acre (0.156 lb ai/A) in at least 30 gallons of water per acre at two to three week interval for up to three applications. Apply with a NIS surfactant. Bentgrass control may be more effective in the late summer/early fall just prior to onset of renewed bentgrass growth, than spring/early summer applications.

St. Augustinegrass (sod uses only) and Centipedegrass, if Tenacity is tank mixed with AAtrex (atrazine) or Princep (simazine) **DO NOT** exceed 4 fl. oz. of Tenacity and 0.5 lb. active ingredient per acre of atrazine or simazine. Apply combination to established turf only. See AAtrex and Princep labels for restrictions.



**Dormant bermudagrass applications only** – Apply Tenacity at 5 fl. oz./A (0.156 lb ai/A) to control winter weeds (listed in the **WEEDS CONTROLLED** Table) on dormant bermudagrass. Repeat application in 2 to 3 weeks. Applications made to semi-dormant turf will cause whitening of the bermudagrass.

**For Use Only in the State of Florida** - For control of goosegrass on bermudagrass athletic fields and golf courses (except greens), apply Tenacity (mesotrione, EPA Reg. No. 100-1267; 5 to 8 fl oz/A (0.156 to 0.25 lb ai/A)) + Princep Liquid (simazine, EPA Reg. No. 100-526; 15 to 25 fl oz/A (0.47 to 0.78 lb ai/A)) followed two weeks later by Tenacity (5 to 8 fl oz/A) + Princep Liquid (15 to 25 fl oz/A) + Pennant Magnum® (s-metolachlor, EPA Reg. No. 100-950; 20.8 fl oz/A (1.24 lb ai/A)). Application may be applied during spring, mid-summer or early fall. Use higher rates on larger weeds or heavy infestation. Apply mixtures in 40 to 60 gallons of water per 1,000 sq ft with flat-fan nozzles producing medium to coarse droplets. Add a non-ionic surfactant at 0.25% v/v of final spray solution. These treatments induce mild to moderate phytotoxicity in 'Tifway 419' hybrid bermudagrass. Full recovery typically occurs within 7 to 14 days after application, but the severity and recovery time vary based on turf conditions and environmental factors. Certain common bermudagrass varieties (including Sahara, Vamont, Yukon, and Mohawk) and zoysiagrasses are very sensitive to the mixture of Tenacity + Princep. Before applying on a large scale, test the mixture in an inconspicuous location to determine the level of turf safety in your location. The safety of this mixture has not been tested on seashore paspalum or bermudagrass varieties other than those listed above.

Spot Application of Tenacity (apply at 1 gallon per 1000 sq. ft.)

Spray Mix	Rate of Tenacity (teaspoons)	NIS adjuvant (teaspoons)
2 gal	1	3

**DO NOT** apply more than 16 oz of Tenacity per acre per year (equivalent to a maximum of 0.50 lb of mesotrione per acre per year).

**Tenacity Rate Conversion Table**

fl oz product/1000 sq ft	fl oz product/A	lb ai/A
0.092	4	0.125
0.115	5	0.156
0.184	8	0.25

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## **STORAGE AND DISPOSAL**

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**DO NOT** contaminate water, food, or feed by storage and disposal.

### **Pesticide Storage**

Keep container tightly closed when not in use. **DO NOT** store near seed, fertilizers, or foodstuffs. Can be stored at temperatures as low as -20°F. Keep away from heat and flame.

### **Pesticide Disposal**

Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

### **Container Handling**

Non-refillable container. **DO NOT** reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or mix tank or store rinsate for later use and disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

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**CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY**

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**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of SYNGENTA CROP PROTECTION, LLC or Seller. To the extent permitted by applicable law, Buyer and User agree to hold SYNGENTA and Seller harmless for any claims relating to such factors.

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