

# QUALI-PRO<sup>®</sup>

# DITHIOPYR 40WSB

## Specialty Herbicide



For control of listed annual grasses and broadleaf weeds in the following sites:

- established lawns
- commercial sod farms
- noncropland and industrial sites
- ornamental turf (including golf course fairways, roughs, tee boxes)
- landscape, field-grown and container ornamentals

In New York State, this product may only be used by commercial applicators at no more than 0.625 pounds per acre per year (10 ounces) or (2) 5 oz. water soluble pouches per acre per year (0.25 pounds active ingredient).

### ACTIVE INGREDIENTS: % BY WT.

Dithiopyr: 3,5-pyridinedicarbothioic acid, 2-(difluoromethyl)-4-(2-methylpropyl)-6-(trifluoromethyl)-S,S-dimethyl ester.....40.0%

OTHER INGREDIENTS: .....60.0%

TOTAL: .....100.0%

Each 5 ounce water-soluble pouch contains 0.125 lb of active ingredient.

(4 X 5 Ounce Water-Soluble Bags)

## CONTENTS: 20 OUNCES



EPA 030810

**KEEP OUT OF  
REACH OF CHILDREN  
CAUTION**

For additional precautionary, handling, and use statements, see inside of this booklet.

EPA Reg. No.: 53883-374

EPA Est. No.: 65387-AR-001



ADAMA

Manufactured for:

## Control Solutions Inc.

5903 Genoa-Red Bluff, Pasadena, TX 77507

A member of Adama  
Consumer and Professional Solutions

FIRST AID	
<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 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 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>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</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>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact SafetyCall® at (866) 897-8050 for emergency medical treatment information.	

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS  
CAUTION**

Causes eye irritation. Harmful if absorbed through the skin. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. Avoid breathing dust. Remove contaminated clothing and wash clothing before reuse.

**PERSONAL PROTECTIVE EQUIPMENT (PPE):**

**Applicators and other handlers (other than mixer loaders) must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

**Mixer and Loaders must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meet the requirements listed in the Worker Protection Standards (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
<p><b>User should:</b></p> <ul style="list-style-type: none"> <li>• Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.</li> <li>• Remove PPE immediately after handling this product.</li> <li>• Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.</li> </ul>

**ENVIRONMENTAL HAZARDS**

This product is toxic to fish and highly toxic to other aquatic organisms including oysters and shrimp. Use with care when applying to turf areas adjacent to any body of water. Drift and runoff from treated turf may adversely affect aquatic organisms in adjacent aquatic sites. 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 apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all **Directions for Use** carefully before applying. Reformulation or repackaging of this product is prohibited.

Do not apply this product in a way that will contact workers or other person, 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 equipments (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.

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
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

**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.

- Keep unprotected persons out of treated area until sprays have dried.

## GENERAL INFORMATION

This product is not recommended for use by homeowners.

**Note:** In the state of New York, this product may be applied only by commercial applicators.

For control of crabgrass and other annual grasses and broadleaf weeds, use Quali-Pro® Dithiopyr 40 WSB specialty herbicide in the following sites:

- established lawns
- commercial sod farms
- noncropland and industrial sites
- ornamental turf (including golf course fairways, roughs, tee boxes)
- landscape ornamentals, field-grown and container nursery ornamentals.

Quali-Pro Dithiopyr 40 WSB only controls crabgrass up to initiation of tillering, that is, when seedlings are first visible in established turfgrasses. Quali-Pro Dithiopyr 40 WSB will not control emerged weeds. For optimum effectiveness, apply Quali-Pro Dithiopyr 40 WSB prior to initiation of tillering, and make all other applications before germination of target weeds.

Quali-Pro Dithiopyr 40 WSB must be activated to be effective. Activation is achieved by watering-in from rainfall or irrigation (1/2 inch or more). Time applications to ensure that activation occurs before the tillering stage of crabgrass development or prior to germination of all other weeds.

### Mixing Instructions

**Handling of Water-Soluble Pouches:** The enclosed pouches are made of water-soluble materials. Do not allow pouches to become wet before the pouches are placed in the spray tank. Do not handle the pouches with wet hands or wet gloves. Unused pouches can be protected by resealing the over-wrap bag and keeping unused pouches stored in this bag until ready to add to the spray tank.

### For Use of Quali-Pro Dithiopyr 40 WSB Alone with Water as the Carrier:

Do not use spray equipment unless it is clean from other pesticides before use. Follow these steps to mix Quali-Pro Dithiopyr 40 WSB with water:

1. Add 1/2 to 3/4 the amount of clean water needed in the mixing tank.
2. Begin agitation and check that the system works properly by ensuring the liquid surface shows rolling or rippling.
3. Place the required number of unopened water-soluble pouches into the tank. Before adding any other component to the tank, check that the pouches are dissolved and the product is completely mixed. Water temperature and vigorosity of agitation will determine how long the water-soluble pouches require to dissolve, but complete dissolution usually occurs within 10 minutes after addition to the spray tank. Add the rest of the required amount of water and then remove the hose from the mixing tank immediately after filling to avoid siphoning back into the water surface.
4. Continue agitation during application to ensure uniformity of the spray mixture and to prevent settling out of the product.

### For Use of Quali-Pro Dithiopyr 40 WSB Alone with Fluid Fertilizer as the Carrier:

First, the compatibility of Quali-Pro Dithiopyr 40 WSB with the desired fluid fertilizer must be determined. Follow the directions below in the section "Test for Physical Compatibility." If compatibility is acceptable, follow the mixing procedure listed below in the "Tank Mixture" section.

## Tank Mixtures

Follow the directions for "Test for Physical Compatibility" to ensure that Quali-Pro Dithiopyr 40 WSB is compatible with the desired tank mixture partner product(s) in the appropriate carrier (water or fluid fertilizer). Then use the following steps to mix the components:

**Note:** Although Quali-Pro Dithiopyr 40 WSB is compatible with boron and spray oils, complete dissolution of the water-soluble pouches must occur before addition of spray oils or products containing boron to the spray tank.

### Mixing Procedures:

1. Cover the filling port with a 20- to 35-mesh screen or wetting basket.
2. Use clean spray equipment and fill with half the amount of carrier.
3. Begin agitation and continue agitation during the addition and mixing of components and during spray applications.
4. If a compatibility agent is needed, add it first. Read and follow the product label for the selected compatibility agent before using. Check to ensure that the agitation system is working properly.
5. Add Quali-Pro Dithiopyr 40 WSB to the tank. Allow sufficient time for the water-soluble pouches to dissolve and their contents to mix completely before adding other components.
6. Add wettable powders (WP) or dry flowables (DF). When mixing Quali-Pro Dithiopyr 40 WSB, WP or DF formulations with fluid fertilizer, form a pre-mix of these products with water. This slurry is then slowly added to the spray.
7. Similarly, make a pre-mix of flowable (F) pesticide formulations, if added, with one part water, and add slowly to tank.
8. Add emulsifiable concentrates (EC) to the mixing tank.
9. Add water-soluble liquid (SL) pesticide formulations, then any surfactants, marker dyes or foams, or drift control additives, and then complete the filling process by addition of the rest of the carrier.
10. To prevent siphoning of the tank mix into the carrier source, the hose from the mixing tank should be removed immediately after filling. Agitate the contents of the spray tank from the initial filling of the spray tank step through the application of the spray mixture. If the agitation is stopped and the spray mixture settles, ensure thorough agitation to re-suspend the spray mixture before continuing the application.

### Test for Physical Compatibility

To check the compatibility of the tank mixture, test by mixing a proportionate amount of each component (including Quali-Pro Dithiopyr 40 WSB, fluid fertilizers, and other pesticides) in a small glass jar. Follow the instructions below.

### Compatibility Test Mixing Instructions for 25 Gallons per Acre Spray Volumes

Type of Pesticide Formulation	If Rate per Acre is:	Amount of Pesticide Added to Test Jar: Level Teaspoons per Pint Jar of Carrier Solution
Dry	1 lb.	1 1/2
Liquid	1 qt.	1

**Use this compatibility test when spray volume is 25 gallons per acre.** Use the table above to determine the ratios of pesticides to be tank-mixed with this product. Refer to the pesticide label(s) for the approved use rate for the other pesticide(s) to be tank mixed with Quali-Pro Dithiopyr 40 WSB. Then, calculate the amount of each pesticide to add to the test jar. For example, for a use rate of 1 lb. per acre of a dry pesticide, add 1 1/2 teaspoons to the jar, while for a use rate of 1 quart

per acre of a liquid pesticide, add 1 teaspoon to the jar. The amount of Quali-Pro Dithiopyr 40 WSB added should be based on the use rate ratios for dry pesticides (that is, for a use rate of 1 lb. per acre, add 1 1/2 teaspoons to the jar). If the spray volume or herbicide rate changes, make the appropriate changes in the amount of ingredients for the jar test. Cap the jar and shake the mixture well to mix.

Compatibility of the tested components is determined if the jar mixture does not form crystals, flakes, sludge, gels, oily films or layers within 5 minutes after mixing.

A compatibility agent is recommended if the components are incompatible. Check that the selected agent is compatible with the mixture by repeating the jar test. Use one-half teaspoon of the compatibility agent per pint jar (equivalent to 2 pints per 100 gallons of spray solution). Do not use compatibility agents in mixtures that fail the jar test.

### Weed Control In Turf Grasses Use Precautions for Turf Use and Turfgrass Safety

Before making the first application of Quali-Pro Dithiopyr 40 WSB, ensure that turfgrasses have developed a good root system and a uniform stand, and have been mowed at least two times following seeding, sodding, or sprigging. Turf injury may result if Quali-Pro Dithiopyr 40 WSB is applied to turf that is not well-established, or has been weakened by weather-, pest-, disease-, chemical-, mechanical or other factors which lead to turf stress.

Quali-Pro Dithiopyr 40 WSB should only be applied as directed to established turfgrass species that have been determined to be tolerant to applications of this product. The following tables list tolerant turfgrass species.

#### Cool-Season Grasses

Bentgrass, Creeping (a)  
(*Agrostis palustris*)  
Bluegrass, Kentucky  
(*Poa pratensis*)  
Fescue, fine (b)  
(*Festuca rubra*)  
Fescue, tall (*Festuca arundinacea*)  
Ryegrass, perennial  
(*Lolium perenne*)

#### Warm-Season Grasses

Bahiagrass  
(*Paspalum notatum*)  
Bermudagrass (c)  
(*Cynodon dactylon*)  
Buffalograss (d)  
(*Buchloe dactyloides*)  
Carpetgrass (*Axonopus affinis*)  
Centipedegrass (*Eremochloa ophiuroides*)  
Kikuyugrass (*Pennisetum clandestinum*)  
Seashore paspalum (*Paspalum vaginatum*)  
St. Augustinegrass  
(*Stenotaphrum secundatum*)  
Zoysiagrass (*Zoysia japonica*)

- (a) Do not use Quali-Pro Dithiopyr 40 WSB on golf course putting greens consisting of creeping bentgrass.
- (b) If Quali-Pro Dithiopyr 40 WSB is used on certain varieties of creeping bentgrass, such as 'Cohansey', 'Carmen', 'Seaside', and 'Washington', undesirable turfgrass injury may result. Since all varieties of creeping bentgrass have not been tested, use of Quali-Pro Dithiopyr 40 WSB is not recommended on all varieties. Do not apply this product to colonial bentgrass (*Agrostis tenuis*) varieties.
- (c) If Quali-Pro Dithiopyr 40 WSB is used on certain varieties of fine fescue, undesirable turf injury may result. Since not all varieties of fine fescue have been tested, use of Quali-Pro Dithiopyr 40 WSB is not recommended for use on certain varieties. Some fine fescue vari-

eties have been found to be sensitive to this product including 'Atlanta', 'Banner', 'Beauty', 'Bilgart', 'CF-2', 'Enjoy', 'HF-93', 'Highlight', 'Ivala', 'Jamestown', 'Koket', 'Majenta', 'Mary', 'Pennlawn', 'Tamara', 'Tatjana', 'Waldorf', and 'Waldina'.

- (d) Turfgrass injury may result if this product is used on the 'Tifgreen' (328) hybrid of bermudagrass, and use of Quali-Pro Dithiopyr 40 WSB on this species is not recommended.
- (e) For seeding Buffalograss, use this product only after the spring of the first year of turfgrass establishment and once the turfgrass is fully green and has established new roots.

#### Reseeding, Overseeding, or Sprigging

To ensure establishment of desirable turfgrasses, wait 10 weeks after a single application of Quali-Pro Dithiopyr 40 WSB, or 4 months after a split application program totaling more than 0.46 oz/1000 sq ft (1.25 lb/acre) before reseeding, overseeding, or sprigging of treated areas. EXCEPTIONS: In cases where slight injury to perennial ryegrass can be tolerated, overseeding of bermudagrass with perennial ryegrass may be carried out as early as 6 weeks after application. To prevent injury to perennial ryegrass, overseed bermudagrass 8 weeks after the Quali-Pro Dithiopyr 40 WSB application.

Follow normal cultural practices when reseeding or overseeding (soil cultivation, irrigation, and fertilization). Best results are achieved using mechanical or power seeding equipment (slit seeders) which give good seed-to-soil contact.

#### Sod Production

- For best results, establish sod for at least six (6) months before a Quali-Pro Dithiopyr 40 WSB application is made.
- Do not apply this product within three (3) months of harvest.

#### Other Use Precautions

Crabgrass is controlled by early postemergence applications of Quali-Pro Dithiopyr 40 WSB only if applied prior to the fifth leaf (first tiller) stage of growth of crabgrass.

Perform activities that disturb the soil (such as core-, spike-, or hydro-aeration, and verticutting) before application of this product.

- Do not apply this product until the grass has recovered from these cultural practices.
- Do not use clippings from treated turf for mulching around vegetables or fruit trees.
- Do not graze livestock or feed foliage cut from areas treated with this product.

#### Application Directions

**Application Equipment and Instructions:** Quali-Pro Dithiopyr 40 WSB can be applied using conventional liquid application equipment. Use a sufficient volume of carrier solution to ensure a thorough and uniform spray application. Use of hand-held spray guns are permitted. Because of the variability in application use rates and spray patterns, do not apply Quali-Pro Dithiopyr 40 WSB using liquid application equipment with cluster spray nozzles or other boomless spray equipment. Calibrate application equipment prior to usage. Avoid streaking, skips, or excess overlaps during application. Use marker dyes or foams to assist in making more accurate applications.

**Chemigation: Do not apply this product through any type of irrigation system.**

### Control of Crabgrass

#### Preemergence and Early Postemergence Control

Quali-Pro Dithiopyr 40 WSB controls crabgrass, including the large, smooth, and southern species, when applied *preemergence* (prior to the emergence of crabgrass) in established lawns and ornamental turfs. Some *early postemergence* control of crabgrass is obtained from applications of Quali-Pro Dithiopyr 40 WSB but only in the early stages of crabgrass growth after the crabgrass has emerged. Because of the difficulty in detecting the very small, early stages of crabgrass in well-established lawns and ornamental turfs, apply Quali-Pro Dithiopyr 40 WSB for *early post-emergence* crabgrass control only before the tillering of crabgrass. This phase of crabgrass growth is typically the time when you can first easily see the crabgrass in the lawn turf. This *early post-emergence* activity of Quali-Pro Dithiopyr 40 WSB gives the user an additional 2-8 weeks longer period of time to make applications while still controlling crabgrass. The exact amount of additional time will depend on the weather and how fast the crabgrass grows.

#### Application Frequency and Timing

Use Quali-Pro Dithiopyr 40 WSB as a single application, as a split application, or as a sequential application for crabgrass control in the spring, summer, or fall.

#### Spring Applications

Apply Quali-Pro Dithiopyr 40 WSB in the spring or early summer at the appropriate rate from one of the three control programs listed in the table "Programs for Crabgrass Control." The program selected will depend on the user's location, the mowing height of the turfgrass, and whether the

application is considered to be preemergence or early postemergence. The total rate applied will impact the duration of residual weed control. This length of control may vary somewhat and is dependent on a number of factors such as weather, weed pressure, turfgrass competitiveness, and the user's location within a region.

**Program 1 can be used** for *preemergence* control at sites where turfgrass is cut relatively high such as homeowner lawns and will provide 3-5 months of preemergence crabgrass control. Early postemergence control of crabgrass up to the 3-leaf stage can be expected at sites where turfgrass is cut relatively high such as homeowner lawns.

**Program 2 can be used** for *preemergence* control at sites where turfgrass is cut relatively low such as golf fairways and when turfgrass maintenance or weed control has been conducted during the previous year. Preemergence crabgrass control can last 4-6 months. Use this program for *early postemergence* control up to crabgrass tillering at sites where turfgrass is cut relatively high such as in residential lawns.

**Program 3 can be used** for *preemergence* control at sites where turfgrass is cut relatively low such as golf fairways and when turf maintenance or weed control has not been conducted during the previous year. Preemergence crabgrass control can last 4-6 months. Early postemergence control up to crabgrass tillering is provided at sites where turfgrass is relatively low such as golf fairways. If longer periods of control are needed, apply using subsequent, sequential pre- and/or postemergence applications. Improved weed control may be obtained if split applications are made. Use the rates in the table "Programs for Crabgrass Control" for split applications by making two applications 5-10 weeks apart.

**Programs for Crabgrass Control\***

Region	Application Rates	Program 1	Program 2	Program 3
All states* and parts of state not listed in Transition, South, Coastal South or West.	sq ft per water-soluble pouch per treatment	29,040	21,780	14,520
	Number of pouches per acre	1.5 <sup>b</sup>	2	3
	lbs. per acre	0.47	0.625	0.95
	lbs. ai/per acre	0.188	0.25	0.38
Transition States (includes DE, KS, KY, MD, MO, NJ, VA, Southeastern PA, southern areas of IL, IN, OH, & coastal areas of CT, & RI)	sq ft per water-soluble pouch per treatment	21,780	14,520	10,900
	Number of pouches per treated acre	2	3	4
	lbs. per acre	0.625	0.95	1.25
	lbs. ai/per acre	0.25	0.38	0.5
South (includes AL, AR, GA, LA, MS, NC, NM, OK, SC, TN, & TX)	sq ft per water-soluble pouch per treatment	14,520	21,780	17,424
	Number of pouches per acre	3	2+2 <sup>c</sup>	2.5+2.5 <sup>bc</sup>
	lbs. per acre	0.95	0.625+0.625	0.78+0.78
	lbs. ai/per acre	0.38	0.25+0.25	0.31+0.31
Coastal South (includes HI, FL, & southern coastal areas of AL, GA, LA, MS, NC, SC, & TX)	sq ft per water-soluble pouch per treatment	21,780	17,424	14,520
	Number of pouches per acre	2+2 <sup>c</sup>	2.5+2.5 <sup>bc</sup>	3+3 <sup>c</sup>
	lbs. per acre	0.625+0.625	0.78+0.78	0.95+0.95
	lbs. ai/per acre	0.25+0.25	0.31+0.31	0.38+0.38

Region	Application Rates	Program 1	Program 2	Program 3
West (includes AZ, CA, & NV). In this climatically diverse region, use the higher rates in local areas with longer crabgrass seasons.	sq ft per water-soluble pouch per treatment	29,040-21,780	21,780-14,520	21,780
	Number of pouches per acre	1.5+2*	2-3	2+2*
	lbs. per acre	0.47-0.625	0.625-0.95	0.625+0.625
	lbs. ai/per acre	0.18-0.25	0.25-0.38	0.25+0.25

- a) In New York State, do not apply more than 2 water-soluble pouches per acre or 0.23 oz/1000 sq ft (0.625 lb/acre) per year.
- b) Do not open the water-soluble bag. The entire water-soluble bag must be used and not measured out or broken open. Prepare tank mixes using whole numbers of bags to treat the appropriate number of acres.
- c) Preemergence applications totaling more than 0.5 lb ai/acre (greater than 1.25 lb/acre of Quali-Pro Dithiopyr 40 WSB) must be applied as a split application made at 5- to 10-week intervals. A maximum of 0.5 lb ai/acre (1.25 lb of Quali-Pro Dithiopyr 40 WSB) per application is allowed for early postemergence control.

#### Maximum Use Rates (All Turf Uses)

- Do not apply more than 0.5 lb ai/ acre per application or more than 1.5 lb ai/acre per year using split or sequential applications. These maximum use rates are equivalent to 4 water-soluble pouches per acre or 0.46 oz/1000 sq ft (1.25 lb/acre of product) per application, and 12 water-soluble pouches per acre or 1.38 oz/1000 sq ft (3.75 lb/acre of product) per year, respectively.
- In New York State, do not apply more than 0.25 lb ai per year. This is equivalent to 2 water-soluble pouches (0.625 lb/acre) per acre or 0.23 oz/1000 sq ft of Quali-Pro Dithiopyr 40 WSB.

#### Fall Applications

For late summer or early fall (late August through November) applications, follow the "Program 3" use rates listed in the table "Programs for Crabgrass Control" for control of crabgrass through the early part of the next spring. Do not exceed maximum use rates as specified in the table "Programs for Crabgrass Control."

A spring application may follow this fall application to provide season-long weed control but in no case must the maximum use rate per year be exceeded.

#### Tank Mixtures of Postemergence Control of Crabgrass

Quali-Pro Dithiopyr 40 WSB alone will provide early postemergence control of crabgrass when treated prior to the tillering stage of growth. Using tank mixes of Quali-Pro Dithiopyr 40 WSB with either MSMA or Acclaim® provides postemergence control of tillered crabgrass up to 3 tillers.

If preemergence herbicides have been applied prior to a postemergence application, use the applicable Program 1 or Program 2 use rate of Quali-Pro Dithiopyr 40 WSB for your area; otherwise, apply the Program 3 use rate.

Test all combinations using the jar test in the "Test for Physical Compatibility" described above before using Quali-Pro Dithiopyr 40 WSB with fluid fertilizers and/or either MSMA or Acclaim® herbicide.

Observe all limitations, precautionary statements, and use restrictions on the tank mix products' labels before using with Quali-Pro Dithiopyr 40 WSB. Check the labels for MSMA or Acclaim® for information on toler-

ance of specific turfgrass species. Improved control may be seen by the addition of a nonionic surfactant. Read and follow the surfactant manufacturer's label recommendations.

#### Control of Other Grass and Broadleaf Weeds

##### Weeds Controlled

Quali-Pro Dithiopyr 40 WSB will control or suppress the following annual grass and broadleaf weeds when applied according to the directions on this label and prior to weed emergence.

Note: Except for crabgrass up to tillering stage of development, other emerged broadleaf weed or grasses are not controlled by Quali-Pro Dithiopyr 40 WSB. For optimum control of crabgrass, ensure that the treated area is free of weeds before application.

##### Grasses

Barley	<i>Hordeum</i> spp.
Barnyardgrass	<i>Echinochloa crus-galli</i>
Bluegrass, annual (1)	<i>Poa annua</i>
Brome	<i>Bromus</i> spp.
Crabgrass, large	<i>Digitaria sanguinalis</i>
Crabgrass, smooth	<i>Digitaria ischaemum</i>
Crabgrass, Southern	<i>Digitaria ciliaris</i>
Crowfootgrass	<i>Dactyloctenium aegyptium</i>
Dallisgrass (seedling)	<i>Paspalum dilatatum</i>
Goosegrass	<i>Eleusine indica</i>
Foxtail, giant	<i>Setaria faberi</i>
Foxtail, green	<i>Setaria verti</i>
Foxtail, yellow	<i>Pennisetum dandestinum</i>
Kikuyugrass	<i>Pennisetum clandestinum</i>
Mary's grass	<i>Microstegium vimineum</i>
Oat, wild	<i>Avena fatua</i>
Ryegrass (annual & perennial)	<i>Lolium</i> spp.
Sandbur	<i>Cenchrus</i> spp.
Smutgrass	<i>Sporobolus indicus</i>

- (1) Annual Poa (*Poa annua*) in South and coastal South Regions is controlled for longer periods of time if Quali-Pro Dithiopyr 40 WSB is applied at 1.25 lb/acre (0.5 lb ai) 6 weeks before overseeding and then applied a second time at a rate of 0.625 to 1.25 lb/acre (0.25 to 0.5 lb ai) 120 days after overseeding. Overseeded perennial ryegrass may be injured (See "Reseeding, Overseeding, or Sprigging" precautions above).

##### Broadleaf Weeds

Bittercress	<i>Cardamine</i> spp.
Carpetweed	<i>Mollugo verticillata</i>
Chickweed	<i>Stellaria</i> spp.
Coneflower, purple	<i>Rudbeckia purpurea</i>
Geranium, Carolina	<i>Geranium carolinianum</i>
Henbit	<i>Lamium</i> spp.

Knotweed, prostrate  
 Lespedeza, common  
 Maretail  
 Medic, black  
 Mustard  
 Oxalis, buttercup  
 Pineappleweed  
 Pigweed, redroot  
 Parsley-piert  
 Purslane, common  
 Rocket, London  
 Shepherdspurse  
 Speedwell, corn  
 Spurge, garden  
 Spurge, prostrate  
 Spurge, spotted  
 Woodsorrel, creeping  
 Woodsorrel, yellow

*Polygonum aviculare*  
*Lespedeza striata*  
*Coryza canadensis*  
*Medicago lupulina*  
*Brassica* spp.  
*Oxalis pes-caprae*  
*Matricaria matricarioides*  
*Amaranthus retroflexus*  
*Alchemilla arvensis*  
*Portulaca oleracea*  
*Sisymbrium irio*  
*Capsella bursa-pastoris*  
*Veronica arvensis*  
*Euphorbia hirta*  
*Euphorbia humistrata*  
*Euphorbia maculate*  
*Oxalis corniculata*  
*Oxalis stricta*

#### Use Directions for Ornamental Plantings – Field and Container Grown

Quali-Pro Dithiopyr 40 WSB provides preemergence control of listed annual grass and broadleaf weeds in areas planted with tolerant ornamental plants (see table below) being grown for aesthetic purposes in containers or in landscaped areas.

#### Treatment of Turf or Ornamental Species not listed on the Label for Quali-Pro Dithiopyr 40 WSB

The ornamentals listed in the table below have shown tolerance to Quali-Pro Dithiopyr 40 WSB in field trials when Quali-Pro Dithiopyr 40 WSB is applied under the conditions described on this label. However, not all cultivars of each species found in nursery or landscape settings have been tested with this product or under all possible growing conditions. Before using Quali-Pro Dithiopyr 40 WSB on a large scale, the user should test the product on a small scale or with only a few plants and under the growing conditions of the region where applied. Use the recommended rate and observe signs of injury for 30-60 days after application. The user assumes all responsibilities for plant injury or other liability for use of Quali-Pro Dithiopyr 40 WSB on species not recommended on this label.

#### Chemigation: Do not apply through any type of irrigation system.

##### Use Rates

Apply Quali-Pro Dithiopyr 40 WSB in the spring, summer, or fall before germination of target weed species. To maintain weed control, make split or sequential applications at 3- to 4-month intervals but do not exceed the maximum use rates per year (see table below).

Use calibrated sprayers to apply Quali-Pro Dithiopyr 40 WSB in order to ensure an accurate, uniform spray distribution. Mix Quali-Pro Dithiopyr 40 WSB with clean water at the rate of 4 water-soluble pouches per acre (0.46 oz of product per 1000 sq ft (1.25 lb/acre)) per application. Use a minimum of one gallon of water per 1000 sq ft and apply at pressures between 20 and 40 PSI.

#### Application Rates:

Quali-Pro Dithiopyr 40 WSB Application Rates	Use Directions and Precautions for Ornamentals
Rate per Acre	20 oz
Rate per 1000 sq ft	0.46 oz
Sq ft per one 5 ounce water-soluble pouch	10,890
Timing of Application	Make sequential applications 3 to 4 months apart to extend preemergence weed control
Maximum Use Rate	<p>Do not apply more than 0.5 lb ai/a per application (equivalent to 4 water-soluble pouches per A or 0.46 oz/1000 sq ft per application).</p> <p>Do not apply more than 1.5 lb ai/a per year using split or sequential applications (equivalent to 12 water-soluble pouches per A or 1.375 oz/1000 sq ft per year). In New York State, do not apply more than 0.25 lb ai per year (equivalent to 2 water-soluble pouches (0.625 lb/acre) per acre or 0.23 oz/1000 sq ft of Quali-Pro Dithiopyr 40 WSB).</p>
Use Precautions	<p>Do not apply when weather conditions favor drift to non-target areas. This product may injure foliage of non-target plants.</p> <p>Do not graze livestock or feed forage cut from areas treated with this product.</p> <p>To avoid injury to ornamentals within non-crop areas, apply only after transplanting when soil around roots has been thoroughly settled by rainfall or irrigation.</p>

#### Application Timing and Recommendations

Established, tolerant ornamentals may be treated with Quali-Pro Dithiopyr 40 WSB as an over-the-top spray or as a directed spray. Tolerant ornamentals are listed in the following table. Be sure that directed sprays are made to the soil at the base of the ornamentals to avoid contact or drift to foliage.

Quali-Pro Dithiopyr 40 WSB is a preemergence herbicide and controls weeds as they germinate; it will not control established weeds. For optimum weed control, apply Quali-Pro Dithiopyr 40 WSB before weeds germinate or direct sprays to soil that is free of clods, weeds, and debris such as leaves. Prior to making an application, control existing vegetation by cultivation, hand weeding, or use of postemergence herbicide. Do not disturb (i.e., mix) the soil surface to expose untreated soil. Allow the soil or planting mixes to settle firmly after transplant to avoid cracks in the soil surface which could allow the product to contact and cause injury to the plant roots.

#### Precautions

- Before application, ensure that the ornamental plants are firmly established, that is, when the soil around the roots are thoroughly settled by rainfall or irrigation.
- Direct application of product to bare roots of ornamental plants may result in injury to the plant.
- Do not mix or incorporate this product into soil to avoid dilution of the product in the soil and possible injury to plant roots.
- Ornamental plants that have been weakened or are under stress (due

to drought, flooding, excessive fertilizer or soil salts, wind injury, hail, frost damage, winter injury, injury from previously applied pesticides or injury due to insects, nematodes, or diseases) may be injured if treated with this product.

- Non-target plant foliage may be injured from drift or direct sprays of this product. Do not apply this product when weather conditions favor drift to non-target areas.
- Do not apply this product on grasses grown for seed.
- Do not graze livestock or feed forage cut from areas treated with this product.
- Do not apply this product in enclosed structures and greenhouses.

#### Tolerant Ornamentals

The ornamentals listed in the table below have shown tolerance to Quali-Pro Dithiopyr 40 WSB in field trials when Quali-Pro Dithiopyr 40 WSB is applied under the conditions described on this label. However,

not all cultivars of each species have been tested with this product nor under all possible growing conditions. Before using Quali-Pro Dithiopyr 40 WSB on a large scale, the user should test the product on a small scale with only a few plants and under the growing conditions of the region where used. Evaluate the plants for tolerance evaluation following the directions given above.

Use the following table to determine which of the two recommended application methods should be utilized: over the top of the foliage, or directed (defined as spraying the product mixture to the soil that is located around and under the ornamental plant; the spray should not come in contact with the plant's foliage). Some cultivars may be treated when grown in containers.

+ Note that applications are to be made to Ornamental species only. DO NOT USE ON FOOD-PRODUCING TREES AND PLANTS.

**Ornamental Species and Varieties Tolerant to Quali-Pro Dithiopyr 40 WSB**

		Recommended Application Method Noted by a Check (✓)		Recommended Application to Field- or Container-Grown Ornamentals Noted by a Check (✓)	
Name	Tolerant Cultivars	Over the top	Directed	Container grown	Field Grown
Abelia, dwarf ( <i>Abelia X grandiflora</i> )	Nana		✓		✓
Abyssinian red banana ( <i>Ensete ventricosum</i> )	Maurelii	✓	✓	✓	✓
Ajuga ( <i>Ajuga reptans</i> <i>Ajuga genevensis</i> )	Bronze Bronze beauty		✓		✓
Almond flowering ( <i>Prunus gladiolosa</i> )			✓		✓
Apple* ( <i>Malus pumila</i> )			✓		✓
Arborvitae ( <i>Thuja occidentalis</i> )	Nigra Pyramidalis Smaragh Techny Woodwardii		✓		✓
Arborvitae, golden ( <i>Thuja orientalis</i> )	Aurea nana	✓	✓	✓	✓
Aster, Chinese ( <i>Callistephus chinensis</i> )	Dwarf queen		✓		✓
Ash, green ( <i>Fraxinus pennsylvanica</i> )			✓		✓
Ash, mountain ( <i>Sorbus aucuparia</i> )			✓		✓
Ash, purple ( <i>Fraxinus americana</i> )			✓		✓



		Recommended Application Method Noted by a Check (✓)		Recommended Application to Field- or Container-Grown Ornamentals Noted by a Check (✓)	
Name	Tolerant Cultivars	Over the top	Directed	Container grown	Field Grown
Azalea ( <i>Rhododendron</i> spp.)	Brilliant Buccaneer Carror Chimes (Belgian) Elsie lee Exbury Fashion Hardijzer beauty Hershey red Higasa Hinocrimson Holland (hybrid) Marion lee Northern lights Orange cup Orchid lights Snow Southern charm		✓		✓
Azalea, flame ( <i>Rhododendron calen- dulaceum</i> )			✓		✓
Azalea, kirishima			✓		✓
Bamboo, Heavenly			✓		✓
Barberry ( <i>Berberis thunbergii</i> )	Aurea Dwarf pigmy Green Kobold Pygmy red Rose glow		✓		✓
Barberry, purple	Atropurpurea		✓		✓
Basket flower ( <i>Gaillardia grandiflora</i> )			✓		✓
Beach grass ( <i>Ammophila breviligulata</i> )			✓		✓
Bearberry, common ( <i>Arctostaphylos uva-ursi</i> )	Massachusetts		✓		✓
Bee balm ( <i>Monarda didyma</i> )			✓		✓
Begonia ( <i>Begonia</i> spp.)			✓		✓
Birch, river ( <i>Betula nigra</i> )			✓		✓
Blackeyed susan ( <i>Rudbeckia hirta</i> )	Goldstrum		✓		✓
Blanket flower ( <i>Gaillardia</i> spp.)			✓		✓
Blueberry * ( <i>Vaccinium</i> spp.)	Bluecrop Blue jay Jersey North blue Northland		✓		✓

		Recommended Application Method Noted by a Check (✓)		Recommended Application to Field- or Container-Grown Ornamentals Noted by a Check (✓)	
Name	Tolerant Cultivars	Over the top	Directed	Container grown	Field Grown
Blue fescue ( <i>Festuca ovina</i> )			✓		✓
Bottlebrush ( <i>Callistemon citrinus</i> )			✓		✓
Boxwood, Japanese	Japonica		✓		✓
Boxwood,weller ( <i>Buxus sempervirens</i> )	Winter gem	✓	✓	✓	✓
Broom ( <i>Cytisus</i> spp., <i>Genista pilosa</i> )	Moonlight Vancouver gold		✓		✓
Bugle carpet			✓		✓
Camellia ( <i>Camellia japonica</i> , <i>Camellia sasanqua</i> )	Debutante Supreme Setsukgekka		✓		✓
	Chansonette Mathotiana	✓	✓	✓	✓
Candy tuft ( <i>Iberis</i> spp.)	Snow White		✓		✓
Carex, variegated ( <i>Carex</i> )			✓		✓
Cedar, red ( <i>Juniperus virginiana</i> )			✓		✓
Celosia ( <i>Celosia</i> spp.)			✓		✓
Centaurea ( <i>Centaurea montana</i> )			✓		✓
Cockscomb plumose ( <i>Celosia cristata</i> )	Scarlet plumose		✓		✓
Coleus ( <i>Coleus blumei</i> )	Red kewpie		✓		✓
Columbine ( <i>Aquilegia</i> spp.)			✓		✓
Coneflower, purple ( <i>Echinacea purpurea</i> )			✓		✓
Copper leaf ( <i>Acalypha wilkesiana</i> )			✓		✓
Coreopsis ( <i>Coreopsis</i> spp.)	Moonbeam		✓		✓
Corn flower ( <i>Centaurea</i> spp.)			✓		✓
Cotoneaster ( <i>Cotoneaster apiculatus</i> )			✓		✓
Coyotebrush ( <i>Baccharis pilularis</i> )			✓		✓
Cycads ( <i>Cycas revoluta</i> )			✓		✓
Cypress, bald ( <i>Taxodium distichum</i> )			✓		✓

		Recommended Application Method Noted by a Check (✓)		Recommended Application to Field- or Container-Grown Ornamentals Noted by a Check (✓)	
Name	Tolerant Cultivars	Over the top	Directed	Container grown	Field Grown
Cypress, Italian ( <i>Cupressus sempervirens</i> )	Glauca		✓		✓
Cypress, Japanese false ( <i>Chamaecyparis obtusa</i> )	Gracilis		✓		✓
Cypress Leyland ( <i>Cupressocyparis leylandii</i> )			✓		✓
Daffodil ( <i>Narcissus</i> spp.)	King Alfred		✓		✓
Daylily ( <i>Hemerocallis</i> spp.)	Spring glory	✓	✓	✓	✓
	Aztec gold				
	Bright yellow (hybrid)		✓		✓
	Single gold (evergreen) Wilson's yellow				
Dianthus (sweet William) ( <i>Dianthus barbatus</i> )			✓		✓
Delphinium ( <i>Delphinium elatum</i> )	Magic fountain		✓		✓
Dogwood ( <i>Cornus florida</i> )			✓		✓
Dogwood, American ( <i>Cornus sericea</i> )	<i>flavirimae</i>		✓		✓
Douglas fir ( <i>Pseudotsuga menziesii</i> )			✓		✓
Dusty miller ( <i>Senecio cineraria</i> )			✓		✓
Elm, drake ( <i>Ulmus parvifolia</i> )			✓		✓
Euryops ( <i>Euryops pectinatus</i> )	Viridis	✓	✓	✓	✓
Eulaliagrass ( <i>Miscanthus sinensis</i> )	Maiden grass gracillimus	✓	✓	✓	✓
Euonymus ( <i>Euonymus fortunei</i> )	Argenteo-variegated auereo-marginata Colorata Emerald gaiety Emerald 'n glad Gold edge Silver king Tricolor Vegetus		✓		✓
Fan palm, European ( <i>Chamaerops humilis</i> )			✓		✓
Fan palm, Mexican ( <i>Washingtonia robusta</i> )			✓		✓

		Recommended Application Method Noted by a Check (✓)		Recommended Application to Field- or Container-Grown Ornamentals Noted by a Check (✓)	
Name	Tolerant Cultivars	Over the top	Directed	Container grown	Field Grown
Fern, various ( <i>Asparagus</i> spp.)			✓		✓
Fescue ( <i>Festuca glauca</i> )			✓		✓
Fetterbush ( <i>Leucothoe fontanesiana</i> )	Rainbow		✓		✓
Ficus ( <i>Ficus retusa</i> )	Nitidia		✓		✓
Fir fraser ( <i>Abies fraseri</i> )			✓		✓
Forsythia ( <i>Forsythia X intermedia</i> )	Spring glory	✓	✓	✓	✓
	Arnold dwarf Bronxensis dwarf Lynwood gold Meadowlark Weeping		✓		✓
Fountain grass ( <i>Pennisetum setaceum</i> )	Rubrum	✓	✓	✓	✓
Fuchsia ( <i>Fuchsia</i> spp.)			✓		✓
Galium ( <i>Galium odoratum</i> )			✓		✓
Garlic, Variegated Society ( <i>Thulbaghia violacea</i> )	Variegata	✓	✓	✓	✓
Gardenia ( <i>Gardenia jasminoides</i> )	White gem	✓	✓	✓	✓
	Mystery Radicans		✓		✓
Geranium ( <i>Pelargonium X hortorum</i> )			✓		✓
Gum ( <i>Eucalyptus citriodora</i> )			✓		✓
Hawthorn ( <i>Crataegus</i> spp.)	Cockspur white Crimson cloud Enchantress Jack Evans Washington white		✓		✓
Heather, twisted ( <i>Erica cinerea</i> )	Mediterranean Pink		✓		✓
Hemlock, Canada ( <i>Tsuga canadensis</i> )			✓		✓
Hibiscus ( <i>Hibiscus</i> spp.)	Blue bird Brilliant Hula girl		✓		✓

		Recommended Application Method Noted by a Check (✓)		Recommended Application to Field- or Container-Grown Ornamentals Noted by a Check (✓)	
Name	Tolerant Cultivars	Over the top	Directed	Container grown	Field Grown
Holly ( <i>Ilex</i> spp., <i>Ilex X meserveae</i> , <i>Ilex X attenuate</i> )	Blue boy Blue girl Burfodii China girl Compacta Forsteri Hellerie Japanese northern Beauty Needlepoint Nellie r. Stevens Savannah		✓		✓
Holly, Chinese ( <i>Ilex cornuta</i> )			✓		✓
Holly, Japanese ( <i>Ilex crenata</i> )		✓	✓	✓	✓
Holly, yaupon ( <i>Ilex vomitoria</i> )			✓		✓
Honeysuckle ( <i>Lonicera japonica</i> )	Clavey's dwarf Halliana Tatarian Canadian White Zebelli red Hosta		✓		✓
Hosta ( <i>Hosta</i> spp., <i>Hosta lancifolia</i> )	Albo marginata		✓		✓
Ice plant Ice plant, white Trailing ( <i>Carpobrotus edulis</i> , <i>Delosperma alba CT</i> )		✓	✓	✓	✓
Impatiens ( <i>Impatiens</i> spp.)			✓		✓
Iris ( <i>Iris</i> spp.)	Dwarf blue Wedgewood		✓		✓
Ivy, English ( <i>Hedera helix</i> )	Bulgaria Thorndale		✓		✓
Jasmine, Asian ( <i>Trachelospermum asi- aticum</i> )			✓		✓
Jasmine, star ( <i>Trachelospermum jasminoides</i> )			✓		✓

		Recommended Application Method Noted by a Check (✓)		Recommended Application to Field- or Container-Grown Ornamentals Noted by a Check (✓)	
Name	Tolerant Cultivars	Over the top	Directed	Container grown	Field Grown
Juniper ( <i>Juniperus</i> spp.)	Arcadia Armstrong Bar harbor	✓	✓	✓	✓
<i>(Juniperus horizontalis)</i>	Blue chip Blue pacific Blue rug Blue star Broadmoor Buffalo Calgary carpet Emerald sea Emerald spreader Endora compacta Fruitlandi Green Gold tip Hetzi Hughes Manhattan blue Parsoni Pfitzeriana Plumose Prince of wales Procumbens dwarf San jose Sargent blue Sargent green Scandia Scopulorum moonglow Scopulorum skyrocket Spartan		✓		✓
<i>(Juniperus chinensis)</i>	Tortulosa	✓	✓	✓	✓
<i>(Juniperus chinensis)</i>	Tamariscifolia		✓		✓
<i>(Juniperus sabina)</i>	Weberi Youngstown Yukon belle		✓		✓
King palm ( <i>Archontophoenix cunninghamiana</i> )		✓	✓	✓	✓
Laurel, Australian ( <i>Pittosporum tobira</i> )		✓	✓	✓	✓
Laurel, Mountain ( <i>Kalmia latifolia</i> )			✓		✓
Leucothoe ( <i>Leucothoe fontanesiana</i> )			✓		✓
Ligustrum, Japanese ( <i>Ligustrum japonicum</i> )			✓		✓

		Recommended Application Method Noted by a Check (✓)		Recommended Application to Field- or Container-Grown Ornamentals Noted by a Check (✓)	
Name	Tolerant Cultivars	Over the top	Directed	Container grown	Field Grown
Lily, African ( <i>Agapanthus africanus</i> )	Streamline	✓	✓	✓	✓
	Albus Peter pan		✓		✓
Lily, African Blue			✓		✓
Lily of the valley ( <i>Pieris japonica</i> )	Mt. Fire		✓		✓
Lily turf ( <i>Liriope muscari</i> )	Majestic Silvery sunroof	✓	✓	✓	✓
	Evergreen giant Lilac beauty Monroe white Variegate		✓		✓
Liriope, green ( <i>Liriope spicata</i> )		✓	✓	✓	✓
Maple, amur ( <i>Acer ginnala</i> )	Emerald elf	✓	✓	✓	✓
Maple, Japanese ( <i>Acer japonicum</i> )			✓		✓
Maple, Norway ( <i>Acer platanoides</i> )			✓		✓
Maple, red * ( <i>Acer rubrum</i> )	Red sunset	✓	✓	✓	✓
Maple, silver ( <i>Acer saccharinum</i> )		✓	✓	✓	✓
Maple sugar * ( <i>Acer saccharum</i> )			✓		✓
Marigold ( <i>Tagetes patula</i> )	Honeycomb Variegate Wheeler's dwarf		✓		✓
Mock Orange * ( <i>Philadelphus</i> spp.)	Golden Snowflake double White		✓		✓
Mondo grass ( <i>Ophiopogon japonicus</i> )			✓		✓
Moss rose ( <i>Portulaca grandiflora</i> )	Sunnyside		✓		✓
Myrtle, crape ( <i>Lagerstroemia indica</i> )	Faufei Langer Muskogee Standard pink		✓		✓
Myrtle, wax ( <i>Myrica cerifer</i> )			✓		✓
Nandina ( <i>Nandina domestica</i> )	Compacta nana		✓		✓
Narcissus ( <i>Narcissus</i> spp.)			✓		✓
Oak, laurel ( <i>Quercus laurifolia</i> )			✓		✓

		Recommended Application Method Noted by a Check (✓)		Recommended Application to Field- or Container-Grown Ornamentals Noted by a Check (✓)	
Name	Tolerant Cultivars	Over the top	Directed	Container grown	Field Grown
Oak, pin ( <i>Quercus palustris</i> )			✓		✓
Oak, red ( <i>Quercus rubra</i> )			✓		✓
Oak, southern ( <i>Quercus virginiana</i> )			✓		✓
Oak, willow ( <i>Quercus phellos</i> )			✓		✓
Oleander ( <i>Nerium oleander</i> )	Hardy red Petite pink Sister agnes		✓		✓
Osteospermum ( <i>Osteospermum fruticosum</i> )	Wirligig		✓		✓
Pachysandra ( <i>Pachysandra terminalis</i> )			✓		✓
Palm, bungalow			✓		✓
Pampas grass ( <i>Cortaderia selloana</i> )			✓		✓
Pansy ( <i>Viola X wittrockiana</i> )			✓		✓
Paper flower ( <i>Bougainvillea glabra</i> )	Barbara karst James Walker	✓	✓	✓	✓
Peach ( <i>Prunus persica</i> )			✓		✓
Periwinkle, dwarf ( <i>Vinca minor</i> )			✓		✓
Petunia ( <i>Petunia X hybrida</i> )	Picoti		✓		✓
Photinia, red tip ( <i>Photinia X fraseri</i> )			✓		✓
Pieris ( <i>Pieris japonica</i> )			✓		✓
Pine, Afghan ( <i>Pinus eldarica</i> )		✓	✓	✓	✓
Pine, Australian ( <i>Pinus nigra</i> , <i>Pieris taiwanensis</i> )		✓	✓	✓	✓
Pine, Japanese Black ( <i>Pinus thunbergiana</i> )		✓	✓	✓	✓
Pine, loblolly ( <i>Pinus taeda</i> )			✓		✓
Pine, longleaf ( <i>Pinus palustris</i> )			✓		✓
Pine mugo ( <i>Pinus mugo</i> )			✓		✓



		Recommended Application Method Noted by a Check (✓)		Recommended Application to Field- or Container-Grown Ornamentals Noted by a Check (✓)	
Name	Tolerant Cultivars	Over the top	Directed	Container grown	Field Grown
Pine, Scotch ( <i>Pinus sylvestris</i> )			✓		✓
Pine, slash ( <i>Pinus elliottii</i> )			✓		✓
Pine, Swiss mt. ( <i>Pinus mugo</i> )			✓		✓
Pine, Virginia ( <i>Pinus virginiana</i> )			✓		✓
Pine, White ( <i>Pinus strobus</i> )		✓	✓	✓	✓
Pineapple, guava * ( <i>Feijoa sellowiana</i> )			✓		✓
Plumbago, cape ( <i>Plumbago auriculata</i> )	Royal cape	✓	✓	✓	✓
Pittosporum, Japan		✓	✓	✓	✓
Potentilla ( <i>Potentilla nepalensis</i> , <i>Potentilla fruticosa</i> )	Abbotswood		✓		✓
Privet ( <i>Ligustrum japonicum</i> )	Texanum	✓	✓	✓	✓
	golden vicary Regal Wax Yellow tipped		✓		✓
Privet glossy ( <i>Ligustrum lucidum</i> )			✓		✓
Pyracantha ( <i>Pyracantha koidzumii</i> )	Victory	✓	✓	✓	✓
	Gnome Lalandei		✓		✓
Queen palm ( <i>Arecastrum rammanzoffianum</i> )		✓	✓	✓	✓
Quince, Japanese *			✓		✓
Rhododendron ( <i>Rhododendron</i> spp.)	Album Cunningham white Fashion Hardy Pjm Purple gem Silvery pink		✓		✓
Rhododendron, Carolina ( <i>Rhododendron carolinianum</i> )			✓		✓
Rhododendron, Catawba ( <i>Rhododendron catawbiense</i> )			✓		✓
Ribbon grass ( <i>Phalaris arundinacea</i> )			✓		✓

		Recommended Application Method Noted by a Check (✓)		Recommended Application to Field- or Container-Grown Ornamentals Noted by a Check (✓)	
Name	Tolerant Cultivars	Over the top	Directed	Container grown	Field Grown
Rockcress ( <i>Arabis</i> spp.)	Snowcap		✓		✓
Rhodie max (rosebay) ( <i>Rhododendron maximum</i> )			✓		✓
Rose * ( <i>Rosa banksiae</i> )	Luta		✓		✓
Rose, Knockout Shrub ( <i>Rosa</i> spp. <i>Hybrid</i> )	Knockout	✓	✓	✓	✓
Rosemary * ( <i>Rosmarinus officinalis</i> )			✓		✓
Rosemary, bog ( <i>Andromeda polifolia</i> )	Nana		✓		✓
Salvia ( <i>Salvia farinacea</i> )	Rhea		✓		✓
Smoketree, royal purple ( <i>Cotinus coggygria</i> )	Royal purple	✓	✓	✓	✓
Sedum ( <i>Sedum spurium</i> )	Dragon blood red Red carpet Yellow		✓		✓
Snapdragon ( <i>Antirrhinum</i> spp.)			✓		✓
Sourwood ( <i>Oxydendrum arboretum</i> )			✓		✓
Spiraea ( <i>Astilbe X arendsii</i> )	Fanfall		✓		✓
Spiraea ( <i>Spiraea</i> spp.)	Anthony waterer red Dolchica Froebeli pink Goldenglame red Snowmound white Van houtte white		✓		✓
Spiraea garland ( <i>Spiraea</i> spp.)			✓		✓
Spruce, black hills ( <i>Picea glauca</i> )			✓		✓
Spruce, Colorado blue ( <i>Picea pungens</i> )	Glauca	✓	✓	✓	✓
Spruce, Norway ( <i>Picea abies</i> )		✓	✓	✓	✓
Spruce, white ( <i>Picea glauca</i> )	Conica		✓		✓
Sweetflag, grassy-le			✓		✓
Sweetgum ( <i>Liquidambar styraciflua</i> )			✓		✓
Sycamore ( <i>Platanus occidentalis</i> )			✓		✓

		Recommended Application Method Noted by a Check (✓)		Recommended Application to Field- or Container-Grown Ornamentals Noted by a Check (✓)	
Name	Tolerant Cultivars	Over the top	Directed	Container grown	Field Grown
Tree fern (tiki fern) ( <i>Asparagus virgatus</i> )			✓		✓
Trumpet flower, evening ( <i>Gelsemium sempervirens</i> )			✓		✓
Tulip ( <i>Tulip</i> spp.)	Apeldoorn		✓		✓
Tufted hairgrass ( <i>Deschampsia caespitosa</i> )			✓		✓
Verbena, shrub ( <i>Lantana sellowiana</i> )			✓		✓
Vervain ( <i>Verbena</i> spp.)	St. Paul		✓		✓
Viburnum ( <i>Viburnum</i> spp.)	Opulus sterile	✓	✓	✓	✓
	American cranberry bush				
	Arrowwood				
	Common snowball		✓		✓
	European Cranberry bush Linden Mohican Wright				
Vinca, periwinkle ( <i>Vinca minor</i> )		✓	✓	✓	✓
Windmill palm ( <i>Trachycarpus fortunei</i> )			✓		✓
Yarrow ( <i>Achillea</i> spp.)			✓		✓
Xylosma ( <i>Xylosma congestum</i> )			✓		✓
Yaupon ( <i>Ilex vomitoria</i> )	Dwarf		✓		✓
Yew ( <i>Taxus cuspidata</i> ) ( <i>Taxus cuspidate</i> <i>Taxus X media</i> )	<i>Capitata densiformis</i>	✓	✓	✓	✓
			✓		✓

#### Use Directions for Noncropland and Industrial Sites

Quali-Pro Dithiopyr 40 WSB controls listed annual grasses and broadleaf weeds in terrestrial noncrop areas including but not limited to farm yards, fence rows, highway or roadside utility and railroad rights-of-way, airports, recreation areas, campgrounds, and industrial sites such as lumber yards, tank farms, and storage areas. Refer to the tables below in the section on "Control of other Grasses and Broadleaf Weeds" for a list of weeds controlled.

Quali-Pro Dithiopyr 40 WSB is a preemergence herbicide and controls weeds as they germinate; it will not control established weeds. For optimum weed control, apply Quali-Pro Dithiopyr 40 WSB before weeds germinate or direct sprays to soil that is free of clods, weeds, and debris such as leaves. Prior to making an application, control existing vegetation by cultivation, hand weeding, or use of postemergence herbicide.

Quali-Pro Dithiopyr 40 WSB contains the active ingredient dithiopyr which is only effective in weed control after the product is activated. Activation

requires 1/2 inch or more of rainfall or irrigation applied to the weeds or soil before germination of target weeds. After activation of the treatment, do not disturb (i.e., mix) the soil surface to expose untreated soil.

**This product is not recommended for use by homeowners.**

**Note: In the state of New York, this product may be applied only by commercial applicators.**

### Control of Other Grass and Broadleaf Weeds

#### Weeds Controlled

Quali-Pro Dithiopyr 40 WSB will control or suppress the following annual grass and broadleaf weeds when applied according to the directions on this label and prior to weed emergence.

#### Grasses

Barley	<i>Hordeum</i> spp.
Barnyardgrass	<i>Echinochloa crus-galli</i>
Bluegrass, annual	<i>Poa annua</i>
Brome	<i>Bromus</i> spp.
Crabgrass, large	<i>Digitaria sanguinalis</i>
Crabgrass, smooth	<i>Digitaria ischaemum</i>
Crabgrass, Southern	<i>Digitaria ciliaris</i>
Crowfootgrass	<i>Dactyloctenium aegyptium</i>
Dallisgrass (seedling)	<i>Paspalum dilatatum</i>
Goosegrass	<i>Eleusine indica</i>
Foxtail, giant	<i>Setaria faberi</i>
Foxtail, green	<i>Setaria Verdi</i>
Foxtail, yellow	<i>Pennisetum dandestinum</i>
Kikuyugrass	<i>Pennisetum clandestinum</i>
Mary's grass	<i>Microstegium vimineum</i>
Oat, wild	<i>Avena fatua</i>
Ryegrass (annual & perennial)	<i>Lolium</i> spp.
Sandbur	<i>Cenchrus</i> spp.
Smutgrass	<i>Sporobolus indicus</i>

#### Broadleaf Weeds

Bittercress	<i>Cardamine</i> spp.
Carpetweed	<i>Mollugo verticillata</i>
Chickweed	<i>Stellaria</i> spp.
Coneflower, purple	<i>Rudbeckia purpurea</i>
Geranium, Carolina	<i>Geranium carolinianum</i>
Henbit	<i>Lamium</i> spp.
Knotted, prostrate	<i>Polygonum aviculare</i>
Lespedeza, common	<i>Lespedeza striata</i>
Marestail	<i>Conyza canadensis</i>
Medic, black	<i>Medicago lupulina</i>
Mustard	<i>Brassica</i> spp.
Oxalis, buttercup	<i>Oxalis pes-caprae</i>
Pineappleweed	<i>Matricaria matricarioides</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Parsley-piert	<i>Alchemilla arvensis</i>
Purslane, common	<i>Portulaca oleracea</i>
Rocket, London	<i>Sisymbrium irio</i>
Shepherdspurse	<i>Capsella bursa-pastoris</i>
Speedwell, corn	<i>Veronica arvensis</i>
Spurge, garden	<i>Euphorbia hirta</i>
Spurge, prostrate	<i>Euphorbia humistrata</i>
Spurge, spotted	<i>Euphorbia maculata</i>
Woodsorrel, creeping	<i>Oxalis corniculata</i>
Woodsorrel, yellow	<i>Oxalis stricta</i>

#### Mixing Instructions

**Handling of Water-Soluble Pouches:** The enclosed pouches are made of water-soluble materials. Do not use pouches to become wet before the pouches are placed in the spray tank. Do not handle the pouches with wet hands or wet gloves. Unused pouches can be protected by resealing the over-wrap bag and keeping unused pouches stored in this bag until ready to add to the spray tank.

#### Mixing Instructions

##### For Use of Quali-Pro Dithiopyr 40 WSB Alone with Water as the Carrier:

Do not use spray equipment unless it is clean from other pesticides before use. Follow these steps to mix Quali-Pro Dithiopyr 40 WSB with water:

1. Add 1/2 to 3/4 the amount of clean water needed in the mixing tank.
2. Begin agitation and check that the system works properly by ensuring the liquid surface shows rolling or rippling.
3. Add the required number of unopened water-soluble pouches into the tank. Before adding any other component to the tank, check that the pouches are dissolved and the product is completely mixed. Water temperature and vigorosity of agitation will determine how long the water-soluble pouches require to dissolve, but complete dissolution usually occurs within 10 minutes after addition to the spray tank. Add the rest of the required amount of water and then remove the hose from the mixing tank immediately after filling to avoid siphoning back into the water surface.
4. Continue agitation during application to ensure uniformity of the spray mixture and to prevent settling out of the product.

##### For Use of Quali-Pro Dithiopyr 40 WSB Alone with Fluid Fertilizer as the Carrier:

First, the compatibility of Quali-Pro Dithiopyr 40 WSB with the desired fluid fertilizer must be determined. Follow the directions below in the section "Test for Physical Compatibility." If compatibility is acceptable, follow the mixing procedure listed below in the "Tank Mixture" section.

#### Tank Mixtures

Follow the directions for "Test for Physical Compatibility" to ensure that Quali-Pro Dithiopyr 40 WSB is compatible with the desired tank mixture partner product(s) in the appropriate carrier (water or fluid fertilizer). Then use the following steps to mix the components:

Note: Although Quali-Pro Dithiopyr 40 WSB is compatible with boron and spray oils, complete dissolution of the water-soluble pouches must occur before addition of spray oils or products containing boron to the spray tank.

#### Mixing Procedures:

1. Cover the filling port with a 20- to 35-mesh screen or wetting basket.
2. Use clean spray equipment and fill with half the amount of carrier.
3. Begin agitation and continue agitation during the addition and mixing of components and during spray applications.
4. If a compatibility agent is needed, add it first. Read and follow the product label for the selected compatibility agent before using. Check to ensure that the agitation system is working properly.
5. Add Quali-Pro Dithiopyr 40 WSB to the tank. Allow sufficient time for the water-soluble pouches to dissolve and their contents to mix completely before adding other components.
6. Add wettable powders (WP) or dry flowables (DF). When mixing Quali-Pro Dithiopyr 40 WSB, WP, or DF formulations with fluid fertilizer, form a pre-mix of these products with water. This slurry is then slowly added to the spray.

- Similarly, make a pre-mix of flowable (F) pesticide formulations, if added, with one part water, and add slowly to tank.
- Add emulsifiable concentrates (EC) to the mixing tank.
- Add water-soluble liquid (SL) pesticide formulations, then any surfactants, marker dyes or foams, or drift control additives and then complete the filling process by addition of the rest of the carrier.
- To prevent siphoning of the tank mix into the carrier source, the hose from the mixing tank should be removed immediately after filling. Agitate the contents of the spray tank from the initial filling of the spray tank step through the application of the spray mixture. If the agitation is stopped and the spray mixture settles, ensure thorough agitation to re-suspend the spray mixture before continuing the application.

#### Test for Physical Compatibility

To check the compatibility of the tank mixture, test by mixing a proportionate amount of each component (including Quali-Pro Dithiopyr 40 WSB, fluid fertilizers, and other pesticides) in a small glass jar. Follow the instructions below.

#### Compatibility Test Mixing Instructions for 25 Gallons per Acre Spray Volumes

Type of Pesticide Formulation	If Rate per Acre is:	Amount of Pesticide Added to Test Jar:
		Level Teaspoons per Pint Jar of Carrier Solution
Dry	1 lb.	1 1/2
Liquid	1 qt.	1

#### Use this compatibility test when spray volume is 25 gallons per acre.

Use the table above to determine the ratios of pesticides to be tank mixed with this product. Refer to the pesticide label(s) for the approved use rate for the other pesticide(s) to be tank mixed with Quali-Pro Dithiopyr 40 WSB. Then, calculate the amount of each pesticide to add to the test jar. For example, for a use rate of 1 lb. per acre of a dry pesticide, add 1 1/2 teaspoons to the jar, while for a use rate of 1 quart per acre of a liquid pesticide, add 1 teaspoon to the jar. The amount of Quali-Pro Dithiopyr 40 WSB added should be based on the use rate ratios for dry pesticides (that is, for a use rate of 1 lb. per acre, add 1 1/2 teaspoons to the jar). If the spray volume or herbicide rate changes, make the appropriate changes in the amount of ingredients for the jar test. Cap the jar and shake the mixture well to mix.

Compatibility of the tested components is determined if the jar mixture does not form crystals, flakes, sludge, gels, oily films or layers within 5 minutes after mixing.

A compatibility agent is recommended if the components are incompatible. Check that the selected agent is compatible with the mixture by repeating the jar test. Use one-half teaspoon of the compatibility agent per pint jar (equivalent to 2 pints per 100 gallons of spray solution). Do not use compatibility agents in mixtures that fail the jar test.

#### Application Directions

**Application Equipment and Instructions:** Quali-Pro Dithiopyr 40 WSB can be applied using conventional liquid application equipment. Use a sufficient volume of carrier solution to ensure a thorough and uniform spray application. Use of hand-held spray guns are permitted. Because of the variability in application use rates and spray patterns, do not apply Quali-Pro Dithiopyr 40 WSB using liquid application equipment with cluster spray nozzles or other boomless spray equipment. Calibrate application equipment prior to usage. Avoid streaking, skips, or excess overlaps during application. Use marker dyes or foams to assist in making more accurate applications.

**Chemigation:** Do not apply this product through any type of irrigation system.

Quali-Pro Dithiopyr 40 WSB Application Rates	Use Directions and Precautions for Noncropland and Industrial Sites
Rate per Acre	20 oz
Rate per 1000 sq ft	0.46 oz
Sq ft per 1 water-soluble pouch	10,890
Timing of Application	Make sequential applications 3 to 4 months apart to extend preemergence weed control.
Maximum Use Rate	Do not apply more than 0.5 lb ai/a per application (equivalent to 4 water-soluble pouches per A or 0.46 oz/1000 sq ft). Do not apply more than 1.5 lb ai/a per year (equivalent to 12 water-soluble pouches per A or 1.375 oz/1000 sq ft). Do not apply when weather conditions favor drift to non-target areas. This product may injure foliage of non-target plants. Do not graze livestock or feed forage cut from areas treated with this product. To avoid injury to ornamentals within non-crop areas, apply only after transplanting when soil around roots has been thoroughly settled by rainfall or irrigation.

## STORAGE AND DISPOSAL

Do not contaminate water, foodstuffs, feed, or seed by storage or disposal.

**PESTICIDE STORAGE:** Store this product only in its original container in a dry, cool, secured storage area. Store this product above 32°F.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product that cannot be used or chemically reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures.

**CONTAINER DISPOSAL: Nonrefillable Container (flexible-bag-all weights):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Then dispose of empty outer bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

**Nonrefillable Container (rigid-fifty lbs. or less):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

**Refillable Container:** Refillable container. Refill this container with dithiopyr only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

#### **LIMITATION OF WARRANTY AND LIABILITY**

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **Conditions, Disclaimer of Warranties and Limitations of Liability**.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Control Solutions, Inc. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** To the extent consistent with applicable law, Control Solutions, Inc. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Control Solutions, Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Control Solutions, Inc. disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

**LIMITATIONS OF LIABILITY:** To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Control Solutions, Inc.'s election, the replacement of product.

Quali-Pro is a registered trademark of ADAMA Group.

## NOTES

**QUALI-PRO**

# DITHIOPYR 40WSB

Specialty Herbicide



PEEL BACK BOOK HERE

For control of listed annual grasses and broadleaf weeds in the following sites:

- established lawns
- commercial sod farms
- noncropland and industrial sites
- ornamental turf (including golf course fairways, roughs, tee boxes)
- landscape, field-grown and container ornamentals

In New York State, this product may only be used by commercial applicators at no more than 0.625 pounds per acre per year (10 ounces) or (2) 5 oz. water soluble pouches per acre per year (0.25 pounds active ingredient).

ACTIVE INGREDIENTS:	% BY WT.
Dithiopyr: 3,5-pyridinedicarbothioic acid, 2-(difluoromethyl)-4-(2-methylpropyl)-6-(trifluoromethyl)-S,S-dimethyl ester.....	40.0%
OTHER INGREDIENTS: .....	60.0%
TOTAL: .....	100.0%

Each 5 ounce water-soluble pouch contains 0.125 lb of active ingredient.

(4 X 5 Ounce Water-Soluble Bags)

**CONTENTS:  
20 OUNCES**



EPA 030810

**KEEP OUT OF  
REACH OF CHILDREN  
CAUTION**

For additional precautionary, handling, and use statements, see inside of this booklet.

EPA Reg. No.: 53883-374

EPA Est. No.: 65387-AR-001



ADAMA

Manufactured for:

**Control  
Solutions Inc.**

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