



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES, AND
TOXIC SUBSTANCES

March 27, 1996

Becky Rhodes
Regulatory Product Manager
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1800 Concord Pike
P.O. Box 15458
Wilmington, DE 19850-5458

Subject: Tolerances and Food/Feed Additive Regulations for the New
Uses (Stone Fruit Group and Soybeans) and Labeling
Amendments
Touchdown Herbicide
EPA Reg. No. 10182-324
PP#s 0F3860 and 3F4238
FAP#s 6H5740 and 6H5742
Your Letter Dated November 6, 1995

Dear Ms. Rhodes:

The final rule for the subject tolerances and food/feed additive regulations for the herbicide sulfonium, trimethyl-salt with N-(phosphonomethyl)glycine (1:1) for the subject new uses were approved on March 27, 1996 and will be published in the Federal Register. The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is conditionally amended and acceptable subject to the conditions below.

1. Submit/cite all data required for registration/reregistration of your product under FIFRA section 3(c)(5) or 4(a) when the Agency requires all registrants of similar products to submit such data.
2. To better understand the role that surfactants play in the toxicity of Touchdown Herbicide, the following preliminary information are required:
 - a. The name of the surfactant that was contained in the unregistered SC-0224LC product, and whether or not its use is currently recommended for application with this product.
 - b. A list of recommended surfactants.

- c. Any available ecotoxicity data utilizing surfactant plus sulfonium, trimethyl-salt with N-(phosphonomethyl) glycine (1:1).
 - d. The supplemental labeling referenced on page 14 of the label.
3. Assessments for chronic risk to birds and acute risk to aquatic plants were not performed since data are lacking. Please provide a timeframe for conducting and submitting the following studies to the Agency:
- a. Avian Reproduction (GLN 71-4) studies - required because of multiple applications.
 - b. Aquatic Plant (GLN 123-2) studies - required because only one plant species, *Selenastrum capricornatum*, was tested and this testing is required for five species.
4. Submit production information (pounds or gallons produced) for this product for the fiscal year in which the use in or on the raw agricultural commodities stone fruit group and soybeans and the processed commodities of prunes and soybean hulls are conditionally registered, in accordance with FIFRA Section 29. The fiscal year begins October 1 and ends September 30. Production information will be submitted to the Agency no later November 15, following the end of the preceding fiscal year. This information should be submitted to:
- U.S. Environmental Protection Agency
Office of Pesticide Programs (7404C)
Document Processing Desk (RSB)
401 M Street, SW., (CM #2)
Washington, DC 20460
5. The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, are acceptable subject to the conditions below.
- a. Since sulfosate is not an ANSI approved name, change "sulfosate" to "sulfonium, trimethyl-salt with N-(phosphonomethyl)glycine (1:1)" in the ingredient statement.
 - b. Under the **DIRECTIONS FOR USE** section, include the maximum annual use rate limitations.
 - c. Under the **Tankmixes** section, in all sections referring to tankmixes with other products include statements such as "Use in accordance with the most restrictive of label

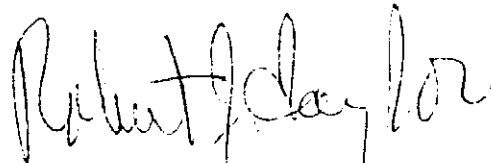
limitations and precautions. No label dosage rates should be exceeded. This product cannot be mixed with any product containing a label prohibition against such mixing."

- d. In the **Spot Treatments** section, directions for use for all the sites should read similarly to that which was proposed for wheat (i.e. Do not apply more than 4 lb ai/A per year as a combination of broadcast sprays prior to crop emergence and as spot spray applications.).
- f. Below the chart for **SPOT TREATMENT OF HARD TO CONTROL WEEDS**, please clarify if the statement "Repeat treatment may be required to provide control." should be marked with an asterisk * before this statement and after the names of the weeds in the chart.
- g. In the sections for postharvest use, specify that a maximum of 8.3 lbs. ai/A may be applied per calendar year.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6 (e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions. Submit one (1) copy each of the final printed labeling prior to releasing the product for shipment. Stamped copies of the labels are enclosed for your records.

If you have any questions, please contact Terri Stowe of my staff at (703) 305-7740.

Sincerely yours,



Robert J. Taylor
Product Manager (25)
Fungicide-Herbicide Branch
Registration Division (7505C)

Enclosures

BEST AVAILABLE COPY

TOUCHDOWN® Herbicide

**NONSELECTIVE FOLIAR SYSTEMIC HERBICIDE FOR WEED CONTROL
IN ~~CHEMICAL FALLOW-ECOFALLOW SYSTEMS, IN NONCROP AREAS~~
~~AROUND THE FARM AND IN NONBEARING TREES AND VINES~~**

COMPLETE DIRECTIONS FOR USE

**ACCEPTED
with COMMENTS
In EPA Letter Dated**

MAR 27 1996

**Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.**

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

10182-324

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 should 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 ZENECA or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ZENECA and Seller harmless for any claims relating to such factors.

ZENECA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or ZENECA, and Buyer and User assume the risk of any such use. ZENECA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall ZENECA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ZENECA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ZENECA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

ZENECA and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by a duly authorized representative of ZENECA.

Made in U.S.A.
ZENECA Ag Products
ZENECA Inc.
Wilmington, DE 19850-5458

TABLE OF CONTENTS

	Page
STATEMENT OF PRACTICAL TREATMENT	
PRECAUTIONARY STATEMENTS	
Hazards to Humans and Domestic Animals	
Personal Protective Equipment	
User Safety Recommendations	
Environmental Hazards	
Other Precautions	
DIRECTIONS FOR USE	
AGRICULTURAL USE REQUIREMENTS	
STORAGE AND DISPOSAL	
GENERAL INFORMATION	
APPLICATION DIRECTIONS	
Timing	
Rates	
Tankmixes	
Spray Additives	
Surfactants/Wetting Agents	
Ammonium Sulfate	
APPLICATION EQUIPMENT & TECHNIQUES	
Broadcast Application	
Spot Treatments	
Wiper Application	
GENERAL USE PRECAUTIONS	
CONSERVATION COMPLIANCE	
POST HARVEST USE	
CHEMICAL FALLOW-ECOFALLOW SYSTEMS	
General Information	
Application Directions for Chemical Fallow-EcoFallow Systems	
General Use Precautions for Chemical Fallow-EcoFallow Systems	
Tank Mixtures for Chemical Fallow-EcoFallow Systems	
Spray Additives for Chemical Fallow-EcoFallow Systems	
Application Volumes for Broadcast Application for Chemical Fallow-EcoFallow Systems	
STONE FRUIT (BEARING)	
NONBEARING CROPS	
APPLICATION DIRECTIONS FOR BEARING STONE FRUIT AND NONBEARING CROPS	
TANK MIXTURES FOR BEARING STONE FRUIT AND NONBEARING CROPS	
PERENNIAL GRASS SUPPRESSION IN ORCHARD FLOORS	
Bahagrass	
Bermudagrass	
Cool Season Grass Covers	
LOW VOLUME APPLICATION (FLORIDA AND TEXAS ONLY)	
GENERAL USE PRECAUTIONS FOR BEARING STONE FRUIT AND NONBEARING CROPS	
WEEDS CONTROLLED	
Annual Weed Control	
Perennial Weed Control	
NONAGRICULTURAL USE REQUIREMENTS	
Farmstead (noncrop)	

KEEP OUT OF REACH OF CHILDREN

CAUTION

ACTIVE INGREDIENT:

Trimethylsulfonium carboxymethylaminomethylphosphonate 57.6%

INERT INGREDIENTS: 42.4%

Total 100.0%

Contains 6 pounds ~~sulfosate~~ glyphosate-trimesium active ingredient per gallon.

EPA Reg. No. 10182-324

STATEMENT OF PRACTICAL TREATMENT

If a known exposure occurs or is suspected, immediately initiate the recommended procedures below. If further treatment is required, contact a POISON CONTROL CENTER, a physician, or the nearest hospital.

IF SWALLOWED: Immediately give several glasses of water and induce vomiting by gagging the victim with a finger placed on the back of the victim's tongue. Give fluids until vomitus is clear. Do not induce vomiting or give anything by mouth if victim is unconscious or convulsing.

IF ON SKIN: Flush with plenty of water for at least 15 minutes. Get medical attention if skin irritation occurs.

IF IN EYES: Hold eyelids apart and flush eyes with large amounts of running water for at least 15 minutes. Get medical attention if irritation persists.

IF INHALED: Remove to fresh air. Seek medical attention if respiratory irritation occurs or if breathing becomes difficult.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE, CALL 1-800-F-A-S-T-M-E-D
(327-8633).

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC
1-800-424-9300.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed, absorbed through the skin, or inhaled. Prolonged contact may cause skin irritation. May cause allergic skin reactions. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants.
- Waterproof gloves.
- Shoes plus socks.

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, 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:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
 - Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
 - 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

Keep out of lakes, ponds and streams. 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 washwaters.

In case of spill, ISOLATE the spill. Absorb spill with inert absorbent material such as clay or Fuller's earth. Sweep up used absorbent and place in an appropriate chemical waste container. Flush spill area with water. Observe all local, State and Federal laws and regulations regarding disposal, spill, cleanup, removal or discharge.

OTHER PRECAUTIONS

Caution must be taken when applying TOUCHDOWN® nonselective foliar systemic herbicide to avoid drift or contact with nontarget plant species. Such contact may result in plant injury.

Stainless steel plastic-lined steel, plastic or fiberglass containers are acceptable for mixing and storing TOUCHDOWN. TOUCHDOWN should not be mixed or stored in galvanized steel or unlined steel containers. TOUCHDOWN is not compatible with carbon steel and neoprene or butyl rubber.

DIRECTIONS FOR USE

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

- Apply this product only as specified on the label.
- Do not apply by aircraft.
- Do not apply this product through any type of irrigation system.

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 ~~4~~ 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.
- Waterproof gloves.
- Shoes plus socks.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food, feed, fertilizer, or seeds by storage or disposal.

STORAGE: Keep container tightly closed when not in use.

PESTICIDE DISPOSAL: Rinse spray equipment. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL:

Plastic - Triple rinse (or equivalent). Offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

FOR BULK/MINI-BULK CONTAINERS

Container Disposal: Reseal container and offer for reconditioning, or triple rinse (or equivalent) and offer for recycling or reconditioning, or clean in accordance with manufacturer's instructions.

Container Precautions: Before refilling, inspect thoroughly for damage such as cracks, punctures, bulges, dents, abrasions, and damaged or worn threads on closure devices.

~~REFILL ONLY WITH TOUCHDOWN. The contents of this container cannot be completely removed by cleaning. Refilling with materials other than TOUCHDOWN will result in contamination and may weaken container.~~

After filling and before transporting, check for leaks.

Do not refill or transport damaged or leaking container.

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!

GENERAL INFORMATION

TOUCHDOWN is a nonselective foliar systemic herbicide used to control a broad spectrum of emerged weeds. ~~TOUCHDOWN controls most grass and broadleaf weeds, both annual and perennial, in:~~ TOUCHDOWN may be used to control unwanted vegetation:

- ~~conservation compliance;~~
- in chemical fallow-ecofallow systems;
- ~~bearing apricot, cherry, nectarine, peach, plum, plumcot, and prune;~~
- in nonbearing groves, orchards, or vineyards up to 1 year of harvest; and
- in certain noncrop areas around the farm

TOUCHDOWN is formulated as a liquid concentrate containing 6 pounds active ingredient per gallon.

~~TOUCHDOWN requires a 6-hour rain-free period after application. Rain occurring within 6 hours of application may reduce weed control.~~

~~Rainfall or irrigation within 4 hours after application may reduce effectiveness. Heavy rainfall or irrigation within 2 hours may require retreatment.~~

APPLICATION DIRECTIONS

See CHEMICAL FALLOW-ECOFALLOW SYSTEMS Section for Use Directions specific for this use.

Timing

TOUCHDOWN should be applied to actively growing emerged weeds. ~~when they are small.~~ Annual weeds of 6 inches or less in height are typically the easiest to control. Larger weeds may be more difficult to control. The exception to this is johnsongrass or bermudagrass. These grasses. Generally, perennial weeds should be treated at the flowering or allowed to reach the seedhead stage, before application.

When annual weeds have been mowed or grazed, thus removing much of the green foliage, wait for 3-4 inches of new growth to appear before making an application of TOUCHDOWN. When perennial weeds have been mowed or grazed, allow new growth to reach the recommended stage prior to application.

Rates

Follow recommended rates for TOUCHDOWN listed in the WEEDS CONTROLLED section. Use the higher label rates when weeds are dense or large. Use higher application volumes and pressures when weed vegetation is dense.

Tankmixes

Refer to crop sections for recommended tankmixes. It is recommended that the compatibility of any tankmix combination be tested on a small scale such as a jar test before actual tank mixing. Tankmixes of TOUCHDOWN with other pesticides, fertilizers, or any other additive except as specified on this label or other approved Zeneca supplemental labeling may result in tankmix incompatibility or unsatisfactory performance.

When perennial broadleaf weeds such as Canada thistle, field bindweed, or difficult to control annual broadleaf weeds such as common ragweed or morningglory spp. are present, tankmixes with 2,4-D or Banvel® herbicide, where labeled, will help improve control.

In general, labeled TOUCHDOWN tankmixes with other products should be tank mixed as follows:

1. Fill spray tank 1/2 full with clean water.
2. Begin tank agitation and continue throughout mixing and spraying.
3. Add dry formulations (WP, DF, etc.) to tank.
4. Add liquid formulations (SC, EC, L, etc.) to tank.
5. Add TOUCHDOWN and nonionic surfactant to tank.
6. Fill remainder of spray tank.

Always refer to labels of other pesticide products for mixing directions and precautions which may differ from those outlined here.

SPRAY ADDITIVES

Surfactants/Wetting Agents

A nonionic surfactant or wetting agent (approved for use on growing crops) IS REQUIRED with TOUCHDOWN to improve coverage of weed foliage. All nonionic surfactants or wetting agents should contain at least 50% active ingredient unless otherwise indicated. (See Chemical Fallow-Ecofallow section for spray additive information specific for this use). The concentration of active ingredient in a particular surfactant will determine how much should be added to the tank. Refer to table below for specific recommendations:

Surfactant % Active Ingredient	Rate of Surfactant Per 1 Gallon of Water	Rate of Surfactant Per 100 Gallons of Water
75% or greater	3/4 fl oz	2 quarts*
50-74%	1-1/2 fl oz	4 quarts
Less than 50%	DO NOT USE	DO NOT USE

*2 quarts = 0.5% V/V

Ammonium Sulfate (Not for use in California)

Control of annual and perennial weeds with TOUCHDOWN may be improved by adding dry ammonium sulfate 2% by weight or 17 pounds per 100 gallons water in addition to nonionic surfactant. Use ammonium sulfate in conservation compliance programs, in chemical fallow-ecofallow systems, in noncrop areas, and in nonbearing crops. The addition of ammonium sulfate will generally improve control under conditions of adverse environmental stress. DO NOT reduce use rates of TOUCHDOWN or nonionic surfactant when using ammonium sulfate.

APPLICATION EQUIPMENT & TECHNIQUES

Broadcast Application

Apply TOUCHDOWN to actively growing weeds at the broadcast rates indicated in the WEEDS CONTROLLED section. Applications should be made in 10 to 30 gallons of water per acre with conventional spray equipment, or in 3 to 10 gallons per acre with low volume equipment and in chemical fallow-ecofallow systems. Increase volumes if weed foliage is dense.

The use of Flat-fan nozzles will result in the most effective application of TOUCHDOWN. Flat fans should be used at 30 to 50 psi. Flood nozzles are generally not as good as flat fans since they produce large uneven droplets. The use of Flood nozzles may result in reduced weed control due to inadequate coverage.

Spot Treatments

For annual control of the weeds less than 6 inches listed, use a 0.25% to 0.5% solution of (TOUCHDOWN plus nonionic surfactant in water) to weeds less than 6 inches in height or runner length. For annual weeds over 6 inches, use a 0.5% to 1% solution. For best results, Use a 1.5% to 2% solution on harder-to-control for most perennials except as noted in the SPOT TREATMENT OF HARD TO CONTROL WEEDS table, such as hemp dogbane, field bindweed, dock, bermudagrass, milkweed, and Canada thistle. Refer to the WEEDS CONTROLLED section for a list of hard to control weeds (Tables 4 and 5). Use a 3% solution When using motorized spot spray equipment (rider bar), use a 3% solution. Spray the solution on actively growing foliage weeds until uniformly wet but not to the point of runoff. Retreat 14-21 days later if regrowth occurs.

SPOT TREATMENT OF HARD TO CONTROL WEEDS

WEED SPECIES	SCIENTIFIC NAMES	HANDGUN % SOLUTION	APPLICATION TIMING AND REMARKS
Balsamapple	<i>Momordica charantia</i>	1%	Actively growing
Guineagrass	<i>Panicum maximum</i>	1%	Actively growing, 7-leaf stage
Lantana-largeleaf	<i>Lantana camara</i>	1%	Actively growing, at bloom
Paragrass	<i>Brachiaria mutica</i>	1%	Actively growing, seedhead
Pampasgrass	<i>Erianthus ravennae</i>	2%	Actively growing, at or beyond boot
Sweet Potato, Wild	<i>Ipomoea pandurata</i>	2%	Actively growing, at or beyond bloom
Torpedograss	<i>Panicum repens</i>	1%	Actively growing at or beyond seedhead
Vaseygrass	<i>Paspalum urvillei</i>	1%	Actively growing, at seedhead

Repeat treatment may be required to provide control.

Prepare the desired volume of spray solution by mixing the amount of this product in water as shown in the following table:

Spot-Spray Recommendations

Amount of TOUCHDOWN Herbicide for Hand-Directed Spot Spray Dilution Table*

Solution Strength	To Make This Volume				
	1 gallon	2 gallons	10 gallons	25 gallons	100 gallons
0.25%	1/3 fl oz	2/3 fl oz	3 1/3 fl oz	8 fl oz	2 pints
0.5%	2/3 fl oz	1 1/3 fl oz	6 2/3 fl oz	1 pint	4 pints
1%	1 1/3 fl oz	2 1/2 fl oz	12 1/2 fl oz	2 pints	1 gallon
1.5%	2 fl oz	4 fl oz	19 1/3 fl oz	3 pints	1 1/2 gallons
2%	2 2/3 fl oz	5 1/3 fl oz	1 1/2 pints	4 pints	2 gallons
3%	4 fl oz	8 fl oz	2 1/2 pints	8 pints	3 gallons
5%	6 1/2 fl oz	13 fl oz	4 pints	10 pints	5 gallons

*See **SPRAY ADDITIVES** directions for surfactants and amounts which can be used.

1/3 fl. oz. = 2 teaspoons 8 fl. oz. or 1/2 pint = 1 cup
1/2 fl. oz. = 1 tablespoon 16 fl. oz. = 1 pint
1 fl. oz. = 2 tablespoons 1 gallon = 8 pints

Wiper Application

TOUCHDOWN may be applied using a wiper or "wick" applicator for selective control or suppression of annual and perennial weeds which become taller than the crop or desirable vegetation. Mix 1 quart of TOUCHDOWN in 1 gallon of water. Add nonionic surfactant at 1% v/v. To prevent injury to the crop or desirable vegetation, precautions should be taken to avoid contact with crops or desirable vegetation, these plants. Equipment should be operated at speeds of 5 mph or less. Use slower speeds where weeds are dense. For improved control, make two applications in opposite directions.

Mixing Directions

Mix 2 quarts of TOUCHDOWN in 2 gallons of water. Apply this mixture to target weeds, while avoiding contact with desirable vegetation.

GENERAL USE PRECAUTIONS

- TOUCHDOWN requires actively growing green plant tissue to function. Application to drought-stressed weeds or weeds with little green foliage (i.e., mowed or cut weeds), may result in reduced weed control.
- Do not till or mow within 3 days following application.
- DO NOT spray if conditions of thermal inversion exist, or if wind direction and speed may cause spray to drift onto adjacent areas. Drift minimization is the responsibility of the

- DO NOT spray if conditions of thermal inversion exist, or if wind direction and speed may cause spray to drift onto adjacent areas. Drift minimization is the responsibility of the applicator. Consult with local and State agricultural authorities for information regarding avoiding or minimizing spray drift.

~~It is recommended that the spray system be thoroughly cleaned with water and a commercial tank cleaner after each use.~~

- Rotational crops may be planted back into TOUCHDOWN treated areas 35 days after application.

~~Do not exceed a total of 5 1/2 pints of TOUCHDOWN per acre per year.~~

~~Do not graze or harvest treated cover crops for feed.~~

~~Do not tank mix TOUCHDOWN with other pesticides or any other additives except as specified on this label or other supplemental labeling.~~

~~Do not apply TOUCHDOWN if rain is expected within 6 hours.~~

~~Thoroughly clean spray tank after each use.~~

CONSERVATION COMPLIANCE OR FEDERAL SET-ASIDE PROGRAMS

(For use in compliance with the Federal Conservation Compliance or Federal set-aside Programs).

- Apply to annual and perennial grass and broadleaf weeds according to the WEEDS CONTROLLED section of this label.
- TOUCHDOWN may be tank mixed with other herbicides registered for this use.

POST HARVEST USE

TOUCHDOWN may be applied to fields following harvest to control annual and perennial weeds. Use 24 to 48 fl. ounces of TOUCHDOWN herbicide per acre. Repeat applications may be necessary to control weeds emerging after application. Use the higher rate on heavy or sodded infestations. Allow sufficient time for regrowth to occur after harvest prior to application. Avoid application after plants have been exposed to severe frost.

CHEMICAL FALLOW - ECOFALLOW SYSTEMS

GENERAL INFORMATION

TOUCHDOWN applied at 6 to 16 ounces per acre may be used in chemical fallow and ecofallow systems for control of grasses and broadleaf weeds. Apply to actively growing weeds only after maximum germination period. Weeds emerging after application will not be controlled. Repeat treatments may be necessary to control late germinating weeds. Reduced control may result from applications made to drought stressed or dust covered plants. Allow a minimum of 3 days after application before tillage.

APPLICATION DIRECTIONS FOR CHEMICAL FALLOW - ECOFALLOW SYSTEMS

RATES AND WEEDS CONTROLLED

Weed Species		Maximum Plant Height	TOUCHDOWN Rate (ounces/acre)
Foxtail, Green	<i>Setaria viridis</i>	12"	6 oz
Foxtail, Yellow	<i>Setaria lutescens</i>	12"	
Barley	<i>Hordeum vulgare</i>	12"	8 to 12 oz
Barnyardgrass	<i>Echinochloa crus-galli</i>	6"	
Bluegrass, Annual	<i>Poa annua</i>	6"	
Bluegrass, Bulbous	<i>Poa bulbosa</i>	6"	
Brome, Downy	<i>Bromus tectorum</i>	6"	
Chickweed	<i>Stellaria media</i>	6"	
Rye	<i>Secale cereale</i>	12"	
Ryegrass, Italian	<i>Lolium multiflorum</i>	12"	
Wheat	<i>Triticum aestivum</i>	18"	
Witchgrass	<i>Panicum capillare</i>	12"	12 to 16 oz
Crabgrass	<i>Digitaria spp.</i>	12"	
Kochia	<i>Kochia scoparia</i>	6"	
Lambsquarters, Common	<i>Chenopodium album</i>	6"	
Oats, Wild	<i>Avena fatua</i>	12"	
Mustard	<i>Brassica spp.</i>	6"	
Shepherdspurse	<i>Capsella bursa-pastori</i>	6"	8 oz + 2,4-D or Banvel
Kochia	<i>Kochia scoparia</i>	6"	
Lambsquarters, Common	<i>Chenopodium album</i>	6"	
Lettuce, Prickly	<i>Lactuca serriola</i>	6"	
Pigweed, Redroot	<i>Amaranthus retroflexus</i>	6"	
Thistle, Russian	<i>Salsola kali</i>	6"	

Weed Species		Maximum Plant Height	TOUCHDOWN Rate (ounces/acre)
Barnyardgrass	<i>Echinochloa crus-galli</i>	6"	8 to 12 oz + Atrazine or Bladex
Brome, Downy	<i>Bromus tectorum</i>	6"	
Foxtail, Green	<i>Setaria viridis</i>	12"	
Kochia	<i>Kochia scoparia</i>	6"	
Lambsquarters, Common	<i>Chenopodium album</i>	6"	
Lettuce, Prickly	<i>Lactuca serriola</i>	6"	
Mustard, Tansy	<i>Descurainia pinnata</i>	6"	
Pigweed, Redroot	<i>Amaranthus retroflexus</i>	6"	
Sandbur, Field	<i>Cenchrus spp.</i>	12"	
Stinkgrass	<i>Eragrostis cilianensis</i>	12"	
Thistle, Russian	<i>Salsola kali</i>	6"	
Wheat	<i>Triticum aestivum</i>	18"	
Witchgrass	<i>Panicum capillare</i>	12"	

GENERAL USE PRECAUTIONS FOR CHEMICAL FALLOW - ECOFALLOW SYSTEMS

- Do not apply more than 5-1/3 pints of TOUCHDOWN per acre per year.
- Make application at least 35 days prior to seeding.

Winter Wheat or Winter Wheat-Row Crop Rotations

Post-Harvest Application; 2 to 3 Month Recropping Interval

Apply TOUCHDOWN at 8 to 16 ounces per acre post-harvest to wheat stubble (June to September) for control of actively growing emerged weeds. Weeds should be allowed to regrow after harvest. Best control will occur when grasses are treated before the heading stage and broadleaf weeds do not exceed 24 inches in height. Tankmixes with Banvel or 2,4-D are recommended for enhanced broadleaf weed control (see Tankmix section).

Post-Harvest Application; 12 to 14 Month Recropping Interval

Apply TOUCHDOWN at 8 to 16 ounces per acre post-harvest to wheat stubble (June to September) for control of actively growing emerged weeds and volunteer wheat. Weeds should be allowed to regrow after harvest. Repeat applications may be necessary for fall germinating Downy brome, winter wheat and winter annual broadleaf weeds. Tankmixes with atrazine or Bladex are recommended for residual control of many weeds (see Tankmix section).

Spring Application

Apply TOUCHDOWN at 8 to 12 ounces per acre to actively growing Downy brome and volunteer wheat prior to seedhead formation. Early applications will improve moisture conservation. Tankmix with Banvel or 2,4-D to improve control of winter annual and spring germinating broadleaf weeds (see Tankmix section). Repeat applications may be necessary throughout the summer months to control newly germinating weeds prior to crop seeding.

Spring Grain (Wheat or Barley) Rotations and Spring Grain-Row Crop Rotations

Post-Harvest Application

Apply TOUCHDOWN at 8 to 12 ounces per acre to actively growing grasses and volunteer grain. Tankmix with Banvel or 2,4-D to improve control of large kochia, redroot pigweed, Russian thistle and lambsquarters (see Tankmix section).

Alternate Year Application

Apply TOUCHDOWN at 6 to 12 ounces per acre in the spring of the fallow year after germination of foxtail species and volunteer grain. Tankmixes of Banvel or 2,4-D will improve control of spring and winter annual broadleaf weeds (see Tankmix section). Repeat applications may be necessary as new weeds germinate.

TANKMIXTURES FOR CHEMICAL FALLOW - ECOFALLOW SYSTEMS

Tankmixes of TOUCHDOWN with other herbicides may improve control of some emerged weeds. Tankmixes with some residual herbicides provide preemergence control of weeds listed on the individual product labels. The following herbicides may be tankmixed with TOUCHDOWN at rates indicated.

Product	Rate/Acre
Banvel	0.25 lb ai
2,4-D	0.5 lb ai
Atrazine	1 to 3 lb ai
Bladex	2.4 to 4 lb ai

Refer to individual product labels for precautionary statements, restrictions, recropping intervals and a list of weeds controlled.

SPRAY ADDITIVES FOR CHEMICAL FALLOW - ECOFALLOW SYSTEMS

Surfactants

A nonionic surfactant (NIS) of 70% or higher active ingredient IS REQUIRED to improve coverage of weed foliage. Use NIS concentration of 1 to 2 percent of total spray volume (4 to 8 quarts per 100 gallons of spray solution).

Ammonium Sulfate

Control of weeds with TOUCHDOWN may be improved by adding ammonium sulfate to the spray solution. See Spray Additives Section for rates and other information.

APPLICATION VOLUMES FOR BROADCAST APPLICATION FOR CHEMFALLOW - ECOFALLOW SYSTEMS

Apply TOUCHDOWN to actively growing weeds at the broadcast rates indicated in the APPLICATION DIRECTIONS for CHEMICAL FALLOW - ECOFALLOW SYSTEMS SECTION. Application should be made in 3 to 10 gallons of water per acre with conventional ground spray equipment. Increase volumes if weed foliage is dense.

STONE FRUIT (BEARING) AND NONBEARING CROPS

TOUCHDOWN can be used to control annual and perennial weeds in the following stone fruit crops and in the following nonbearing groves, orchards, and vineyards:

STONE FRUIT (BEARING)

Apricot	Plum, Chickasaw
Cherry, Sweet	Plum, Damsel
Cherry, Tart	Plum, Japanese
Nectarine	Plumcot
Peach	Prune (fresh)
Plum (<i>Prunus domestica</i> , <i>Prunus</i> spp.)	

NONBEARING CROPS*

GENERAL INFORMATION

Acerola (West Indian Cherry)	Huckleberry
Almonds	Joboba
Apple	Kiwi
Apricots	Lemons
Artichokes	Limes
Asparagus	Loganberry
Avocados	Macadamia
Bananas	Mango
Blackberry	Nectarines
Blueberry	Olives
Boysenberry	Oranges
Cherries	Papayas
Coffee	Passion Fruit
Crabapple	Peaches
Cranberry	Pears
Dates	Pecans
Dewberry	Persimmons
Elderberry	Pistachios
Figs	Plantains
Filberts	Plums
Ginseng	Pomegranates
Gooseberry	Prunes
Grapes	Raspberry
Grapefruit	Tangelos
Guava	Tangerines
	Walnuts

*TOUCHDOWN can be used to control annual and perennial weeds in nonbearing groves, orchards, or vineyards. Use TOUCHDOWN during site preparation prior to planting and up to 1 year of harvest. TOUCHDOWN is recommended on the following nonbearing crops:

APPLICATION DIRECTIONS FOR BEARING STONE FRUIT AND NONBEARING CROPS

Applications may be made with boom equipment, GDA, shielded sprayers, hand-held and high-volume wands, lances, orchard sprayers, or with wiper application equipment. See the **APPLICATION DIRECTIONS** section of this label for specific information on use of equipment, carriers, and nozzles. Follow directions listed in the **APPLICATION DIRECTIONS, SPRAY ADDITIVES, and APPLICATIONS EQUIPMENT AND TECHNIQUES** sections of this label. Refer to the **WEEDS CONTROLLED** section for application rates and timing. For hard to control weeds, refer to the **SPOT TREATMENT** section.

Multiple applications may be necessary to control certain perennial weeds, and weeds originating from underground parts (rhizomes, stolons, tubers) that are initially untreated, but do not apply more than 5 1/2 pints of TOUCHDOWN per acre per year. TOUCHDOWN does not provide residual weed control, and as such, weeds emerging after application will not be controlled. For residual weed control, tank mix TOUCHDOWN with residual herbicides as prescribed in the **TANK MIXTURES FOR BEARING STONE FRUIT AND NONBEARING CROPS** section, or make multiple applications.

If annual weeds have been mowed or grazed, allow 3-4 inches of new growth to appear prior to application. If perennial weeds have been mowed or grazed, allow new growth to reach recommended stage prior to application.

TANK MIXTURES WITH RESIDUAL HERBICIDES FOR BEARING STONE FRUIT AND NONBEARING CROPS

TOUCHDOWN can be tank mixed with the following herbicides for control or suppression of emerged annual and perennial weeds. The following residual herbicides provide preemergence control of weeds listed on the individual product labels.

TANK MIXTURES FOR NONBEARING CROPS

TOUCHDOWN plus:

- * DEVRINOL® 50-DF herbicide
- * Direx® 4L herbicide[†]
- * Goal® 1.6E herbicide
- * Karmex® DF herbicide[‡]
- * Krovar® I herbicide[‡]
- * Krovar II[‡]
- * Prowl® herbicide[‡]
- * Prowl® 3.3 EC herbicide[‡]
- * Simazine/Caliber® 90 herbicide[‡]
- * Simazine (80W, 4L, or Caliber 90)[‡] plus Surflan® herbicide (AS or 75W)
- * Simazine 4L[†]
- * Simazine 80W[†]
- * Sim-Trol® 4L[†]

- * Solicam® DF
- * Surflan AS
- * Surflan 75W
- * Goal 1.6E plus Surflan (AS or 75W)
- * Goal 1.6E plus Simazine (80W, 4L, or Caliber 90)[‡]
- * Goal 1.6E plus Surflan (AS or 75W) plus Simazine (80W, 4L, or Caliber 90)[‡]

[‡]A tankmix of TOUCHDOWN and Caliber, Direx, Krovar, Prowl, Simazine and Sim-Trol cannot be used in bearing stone fruit.

Refer to the individual product labels for precautionary statements, restrictions, recommended rates and a list of weeds controlled.

For Control of Emerged Weeds in a Tankmix with Residual Herbicides:

Annual Weeds: Apply Use TOUCHDOWN at 1½ pints (24 fl.oz.) for the control of annual weeds that are less than 12 inches tall and actively growing. When annual weeds are taller than 12 inches or under stress, use 2 pints (32 fl.oz.) of TOUCHDOWN herbicide.

Perennial Weeds: Apply Use TOUCHDOWN at 2-2/3 pints (42 fl.oz.) to 5-1/3 pints (85 fl.oz.) for the control or suppression of perennial weeds. Refer to the **WEEDS CONTROLLED** section for application rates and timing for specific perennial weeds. Perennial weeds may require multiple applications for control. If multiple applications are required, then no more than 5½ pints of TOUCHDOWN should be applied per year.

Add an agriculturally approved nonionic surfactant when tank mixing TOUCHDOWN with residual herbicides. See the **SPRAY ADDITIVES** section of this label for recommendations.

PERENNIAL GRASS SUPPRESSION IN ORCHARD FLOORS

BAHIAGRASS

TOUCHDOWN can be used to inhibit seedhead emergence and suppress vegetative growth for approximately 40 to 50 days with a single application. By using a sequential application, suppression of vegetative growth and inhibition of seedhead emergence can be extended to 120 days. Applications must be made prior to seedhead emergence. Apply TOUCHDOWN at 20 to 30 days after complete green-up or after mowing to 4 inches tall. When a single application is planned, use 4 fluid ounces of TOUCHDOWN per acre plus 0.5 to 1.0% v/v nonionic surfactant in 10 to 25 gallons of water. When a sequential application is planned, use 3 fluid ounces per acre for the first application followed by another application of 3 fluid ounces per acre 40 to 50 days later.

BERMUDAGRASS

For Suppression Only:

East of the Rocky Mountains

Apply 4 to 10 fluid ounces of TOUCHDOWN plus 0.5 to 1.0% v/v nonionic surfactant in 3 to 20 gallons of water per acre. Make the application 2 weeks after complete green-up or after 3 to 4 inches of regrowth following mowing. Use 4 to 6-1/2 fluid ounces per acre if a lesser degree of suppression is desired. A sequential application can be used when regrowth occurs.

West of the Rocky Mountains

Apply 10 fluid ounces of TOUCHDOWN plus 0.5 to 1.0% v/v nonionic surfactant per acre in 3 to 10 gallons of water per acre. Make the application 2 weeks after complete green-up or after 3 to 4 inches of regrowth following mowing. A sequential application can be used when regrowth occurs.

Partial Control and Burndown:

TOUCHDOWN can be used for burndown and partial control of bermudagrass at 1-1/3 pints (21 fl.oz.) to 2-2/3 pints (42 fl.oz.) plus 0.5 to 1.0% v/v nonionic surfactant in 3 to 20 gallons of water per acre. Use 1-1/3 pints east of the Rocky Mountains and 2-2/3 pints west of the Rocky Mountains.

Use this treatment only if reduction of the bermudagrass stand can be tolerated. Allow at least 21 days for complete burndown.

COOL SEASON GRASS COVERS

For suppression of orchardgrass, fine fescue, tall fescue, and quackgrass apply 5 fluid ounces of TOUCHDOWN. Add a nonionic surfactant at 0.5 to 1.0% v/v in 10 to 20 gallons of water. Add ammonium sulfate at 2% by weight or 17 pounds per 100 gallons of spray mix. For suppression of Kentucky bluegrass, use 4 fluid ounces of TOUCHDOWN plus 0.5 to 1.0% v/v nonionic surfactant. Do not add ammonium sulfate for suppression of Kentucky bluegrass.

LOW VOLUME APPLICATION (FLORIDA AND TEXAS ONLY)

To control or suppress the perennial weeds listed in the following table, apply the recommended rate of TOUCHDOWN plus 0.5 to 1.0% v/v nonionic surfactant in 3 to 20 gallons of water per acre. Use 10-20 gallons per acre higher gallonage if weed foliage is dense. Apply when the weeds have 3 to 4 inches of regrowth after mowing and are actively growing. Refer to the WEEDS CONTROLLED section for application timing for specific perennial weeds. If perennial weeds have been mowed or grazed, allow new growth to reach recommended growth stage prior to application.

**USES FOR TOUCHDOWN IN LOW VOLUME APPLICATIONS
IN FLORIDA AND TEXAS ONLY**

WEED SPECIES	RATE OF TOUCHDOWN (Pints per Acre)			
	1-1/3	2-2/3	4	5-1/3
Bermudagrass	B	NR	PC	C
Guineagrass	B	C	C	C
Texas and Florida Ridge	NR	B	C	C
Florida Flatwoods				
Paragrass	B	C	C	C
Torpedograss	NR S	S NR	PC	PC G

S = Suppression B = Burndown
PC = Partial Control C = Control
NR = Not Recommended

GENERAL USE PRECAUTIONS FOR ~~BEARING STONE FRUIT AND~~ NONBEARING CROPS

~~Do not apply more than 5 1/3 pints of TOUCHDOWN per acre per year.~~

- Do not allow the spray, spray drift, or mist to contact green foliage or green bark on the trunk, suckers, open wounds, or other green parts of trees and vines. Contact with any tree or vine part other than mature brown woody bark may cause crop injury.

~~• Allow at least 13 days from the last application to harvest of stone fruit.~~

- Avoid contact with stumps as injury to adjacent trees may occur from root grafting.

~~If annual or perennial weeds have been mowed or grazed, wait for 3 to 4 inches of new growth to appear before making an application of TOUCHDOWN. See the WEEDS CONTROLLED section for specific rates of application.~~

WEEDS CONTROLLED

All weeds listed below are controlled by spray and hand-directed spot applications of TOUCHDOWN. For spray application use the indicated rates. See DIRECTIONS FOR USE for mixing and application instructions.

TABLE 1
ANNUAL WEED CONTROL - TOUCHDOWN RATES

WEED SPECIES	SCIENTIFIC NAMES	MAXIMUM HEIGHT/LENGTH	PINTS PER ACRE
Foxtails	<i>Setaria</i> sp.	12"	1/3
Barnyardgrass	<i>Echinochloa crus-galli</i>	6"	1/2
			1 ¹
Mustard, blue Mustard, fensy Mustard, tumble Mustard, wild Wheat	<i>Chorispora tenella</i> <i>Descurainia pinnata</i> <i>Sisymbrium officinale</i> <i>Brassica kaber</i> <i>Triticum aestivum</i>	6"	1/2
Barley Rye Sandbur, field Shattercane Stinkgrass	<i>Hordeum vulgare</i> <i>Secale cereale</i> <i>Cenchrus incertus</i> <i>Sorghum bicolor</i> <i>Eragrostis ciliaris</i>	12"	1/2
Morningglory Sicklepod	<i>Ipomoea</i> sp. <i>Cassia obtusifolia</i>	2"	2/3
Black nightshade Bluegrass, annual Bluegrass, bulbous Brome, downy Cheat Chickweed, common Chickweed, mouseear Cocklebur Corn Goatgrass, jointed Groundsel, common Henbit Kochia Lambquarters, common Marestail-horseweed Pennycress, field Rocket, London Spurge, Annual Woody Cupgrass	<i>Solanum</i> sp. <i>Poa annua</i> <i>Poa bulbosa</i> <i>Bromus tectorum</i> <i>Bromus secalinus</i> <i>Stellaria media</i> <i>Cerastium vulgatum</i> <i>Xanthium strumarium</i> <i>Zea mays</i> <i>Aegilops cylindrica</i> <i>Senecio vulgaris</i> <i>Lamium amplexicaule</i> <i>Kochia scoparia</i> <i>Chenopodium album</i> <i>Gnaphalium canadense</i> <i>Thlaspi arvense</i> <i>Sisymbrium irio</i> <i>Euphorbia</i> sp. <i>Eriochloa villosa</i>	6"	2/3

Crabgrass Johnsongrass, seedling Oats, wild Panicum, fall Panicum, Texas Pigweed, redroot Pigweed, smooth Witchgrass Wheat	Digitaria sp. Sorghum halepense Avena fatua Panicum dichotomiflorum Panicum texanum Amaranthus retrofractus Amaranthus hybridus Panicum capillare Echinochloa crusgalli	12"	2/3
Ryegrass, Italian Shepherd's-purse Sicklepod Signalgrass, broadleaf	Lolium multiflorum Cassia bursa-pastoris Cassia obtusifolia Brassica napus	6"	1
Amaranth, ivy Amaranth, slender Amaranth, spiny Lambsquarters, common Marestail/Horseweed	Amaranthus ivy Amaranthus slender Amaranthus spinosus Chenopodium album Coryza canadensis	12"	1
Red rice Tawweed	Oryza sativa Sida spinosa	4"	1 1/3
Fleabane, rough Pusley, Florida Sowthistle, annual Sprangletop Sunflower, common Thistle, Russian	Erigeron strigosus Richardia scabra Sonchus oleraceus Leptochloa sp. Helianthus annuus Salsola iberica	6"	1 1/3
Goosegrass Sicklepod Spanishneedles Spurge, annual	Echinochloa indica Cassia obtusifolia Biddens bipinnata Euphorbia sp.	6-12"	1 1/3
Velvetleaf	Abrus precatorius	6"	2
Fleabane, rough Kochia Sowthistle, annual Sunflower, common Thistle, Russian	Erigeron strigosus Kochia scoparia Sonchus oleraceus Helianthus annuus Salsola iberica	6-12"	2
Flaree Sprangletop	Erodium sp. Leptochloa sp.	12"	2
Goatgrass	Aegilops cylindrica	6"	4

¹Use these rates in Alabama, Arkansas, Mississippi, Missouri, Louisiana, Texas and the Pacific Coastal states

TABLE 2
ANNUAL WEED CONTROL - TOUCHDOWN RATES IN A TANKMIX
WITH 0.25 LBS A/A OF BANVEL OR 0.3 LBS A/A OF 2,4-D

Weed Species	Scientific Name	Maximum Height Range	TOUCHDOWN PINTS PER ACRE
Lettuce, prickly Morningglory Ragweed, common Ragweed, giant Smartweed, Pennsylvania Velvetleaf	<i>Lactuca scariola</i> <i>Ipomoea</i> sp. <i>Ambrosia artemisiifolia</i> <i>Ambrosia trifida</i> <i>Polygonum pennsylvanicum</i> <i>Achillea theophrasti</i>	5"	20
Fleabane, rough Horseweed Lambquarters, common Marestail	<i>Erigeron strigosus</i> <i>Conyza canadensis</i> <i>Chenopodium album</i> <i>Hypochaeris vulgaris</i>	6-12"	
Cocklebur, common Kochia Thistle, Russian	<i>Xanthium strumarium</i> <i>Kochia scoparia</i> <i>Salsola iberica</i>	12"	

Read and follow Banvel and 2,4-D labels

TABLE 3
PERENNIAL WEED CONTROL - TOUCHDOWN RATES

WEED SPECIES	SCIENTIFIC NAMES	POINTS PER ACRE	APPLICATION TIMING AND REMARKS
Alfalfa	<i>Medicago sativa</i>	2	At 6 to 8" or more after first cutting in fall. Deep till after 7 days.
Artichoke, Jerusalem*	<i>Helianthus tuberosus</i>	5 1/3	Actively growing, at or after flowering
Bahiagrass	<i>Paspalum notatum</i>	4	Actively growing, seed head stage
Bermudagrass	<i>Cynodon dactylon</i>	5 1/3	Actively growing, seed heads present
Bindweed, field	<i>Convolvulus arvensis</i>	5 1/3	Actively growing, beyond full bloom
Bluegrass, Kentucky	<i>Poa pratensis</i>	2 2/3	Actively growing, boot to early seed head
Brackenfern	<i>Pteridium aquilinum</i>	5 1/3	Fronds fully expanded and at least 18" long
Bromegrass, smooth	<i>Bromus inermis</i>	2 2/3	Actively growing, boot to early seed head
Canarygrass, reed	<i>Phalaris arundinacea</i>	4	Actively growing, boot to head
Whe. grass, Western	<i>Agropyron smithi</i>	4	Actively growing, boot to head
Cattail	<i>Typha</i> sp.	5 1/3	Actively growing, early head to early bud
Clover, Red	<i>Trifolium pratense</i>	5 1/3	Actively growing, early head to early bud
Clover, White	<i>Trifolium repens</i>	5 1/3	Actively growing, early head to early bud
Cogongrass*	<i>Imperata cylindrica</i>	5 1/3	Actively growing, late summer/fall greater than 18"
Crowfootgrass	<i>Dactyloctenium aegyptium</i>	2	Actively growing, less than 6"
Dandelion	<i>Taraxacum officinale</i>	3	Actively growing, early bud
Dock, curly	<i>Rumex crispus</i>	3	Actively growing, early bud
Dogbane, hemp	<i>Apocynum cannabinum</i>	5 1/3	Actively growing, late bud to flower
Fescue	<i>Festuca</i> sp.	4	Actively growing, boot to early seedhead
Goatweed	<i>Scoraria dulcis</i>	4	Actively growing, less than 7" tall
Guineagrass	<i>Pennisetum maximum</i>	4	Actively growing, 7 leaf
Horsenettle	<i>Solanum carolinense</i>	5 1/3	Actively growing, early head to early bud
Johnsongrass	<i>Sorghum halepense</i>	2	Actively growing, boot to head or prior to boot
Milkweed, common	<i>Asclepias syriaca</i>	4	Actively growing, late bud to flower
Mulch, wrenstem	<i>Muhlenbergia frondosa</i>	2 2/3	Actively growing, 8" in height or more, actively growing
Mullein, common	<i>Verbascum thapsus</i>	5 1/3	Early head to early bud
Nutsedge, purple Nutsedge, yellow	<i>Cyperus rotundus</i> <i>Cyperus esculentus</i>	4 2+2	Actively growing, flower Make sequential applications when actively growing, 3-5 leaf, less than 6" tall
Orchardgrass	<i>Dactylis glomerata</i>	2 2/3	Actively growing, minimum height of 12" in spring, 6" in fall

Paragrass	<i>Brachiaria mutica</i>	2 2/3	Actively growing, seedhead stage
Phaseybean*	<i>Phaseolus latifolius</i>	5 1/3	Actively growing, less than 8" tall
Quackgrass	<i>Agropyron repens</i>	1 1/3	Actively growing, less than 8" tall - retreatment may be required
		3 1/3	Actively growing, greater than 8" tall
Redvine*	<i>Smilax ovata</i>	2	Actively growing, greater than 18" tall in September/October
Ryegrass, perennial	<i>Lolium perenne</i>	2	Actively growing, boot to head or prior to boot
Smartweed, swamp	<i>Polygonum excoecum</i>	2	Actively growing, early bud
Spurge, leafy	<i>Euphorbia esula</i>	2	Actively growing, greater than 12" tall in late summer or fall
Thistle, Canada	<i>Cirsium arvense</i>	4	Actively growing beyond bud stage
Tenothy	<i>Phleum pratense</i>	4	Actively growing boot to head
Torpedograss*	<i>Panicum repens</i>	5 1/3	Actively growing at or beyond seedhead
Trumpetcreeper*	<i>Campsis radicans</i>	2 2/3	Actively growing late September/October
Vaseygrass	<i>Paspalum urvillei</i>	2	Actively growing, less than 12 inches in height

*Partial Control

TABLE 4
PERENNIAL WEED CONTROL - TOUCHDOWN RATES IN A TANKMIX WITH
0.25 LBS A/A OF BANVEL OR 0.5 LBS A/A OF 2,4-D

WEED SPECIES	SCIENTIFIC NAMES	PINTS PER ACRE	APPLICATION TIMING AND REMARKS
Dandelion	<i>Taraxacum officinale</i>	2/3	Actively growing, early bud
Dock, curly	<i>Rumex crispus</i>	2/3	Actively growing, early bud
Dogbane, hemp	<i>Apocynum cannabinum</i>	1 1/3	Actively growing, late bud to flower
Milkweed, common	<i>Asclepias syriaca</i>	1 1/3	Actively growing, late bud to flower
Milkweed, honeyvine	<i>Ampelamus sibiricus</i>	2 2/3	Actively growing, late bud to flower
Smartweed, swamp	<i>Polygonum coccineum</i>	2/3	Actively growing, early bud
Spurge, leafy*	<i>Euphorbia esula</i>	2/3	Actively growing, greater than 12" tall in late summer or fall

*Partial Control
Read and follow Banvel and 2,4-D labels

NONAGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker 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 people and pets off treated areas until spray solution has dried

Farmstead (Noncrop)

- Applications can be made in noncrop areas around the farm such as:

Farmyards	Rights-of-way
Soil Bank Land	Barrier Strips
Farm Buildings	Equipment Areas
Fuel Storage Areas	Fence Rows

- Apply to annual and perennial grass and broadleaf weeds according to the **WEEDS CONTROLLED** section of this label.
- Avoid contact with the foliage of ornamentals or other desirable plants.
- Repeat applications may be necessary.

This product is sold only for uses stated on its label. No express or implied license is granted to use or sell this product under any patent in any country except as specified. Country: United States of America. U.S. Patent No. 4,315,765.

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